Full wwPDB X-ray Structure Validation Report ⓘ

Jun 4, 2026 – 12:07 PM EDT

PDB ID	:	10BT / pdb_000010bt
Title	:	X-ray Crystal Structure of A High-Affinity Monoclonal Antibody Sequesters Xylazine
Authors	:	Shi, K.; Moller, N.; Aihara, H.
Deposited on	:	2026-01-10
Resolution	:	1.99 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:

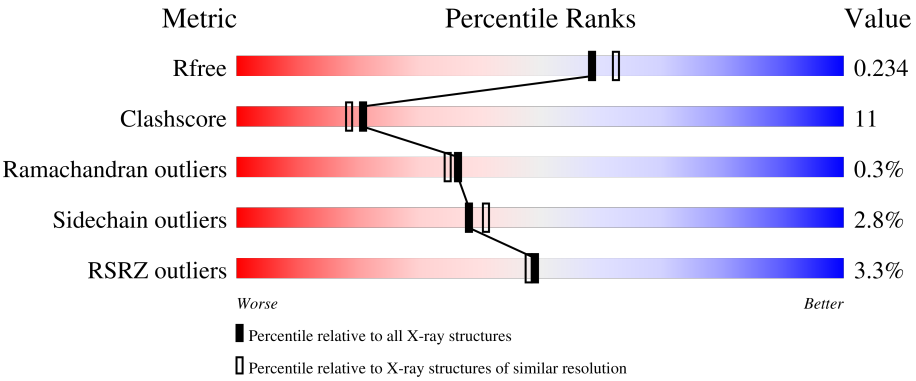
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 1.99 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.



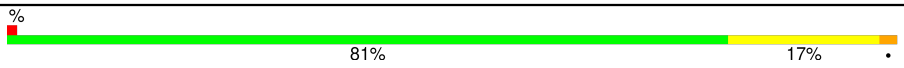
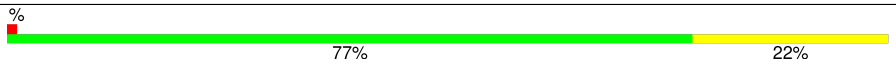
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	10052 (2.00-2.00)
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

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	234	5% 71% 23% • 5%
1	B	234	5% 71% 22% • 6%
1	C	234	5% 66% 24% • 9%
1	D	234	5% 74% 19% • 6%
2	E	215	% 83% 16% •

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
2	F	215	
2	G	215	
2	H	215	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 14334 atoms, of which 64 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.

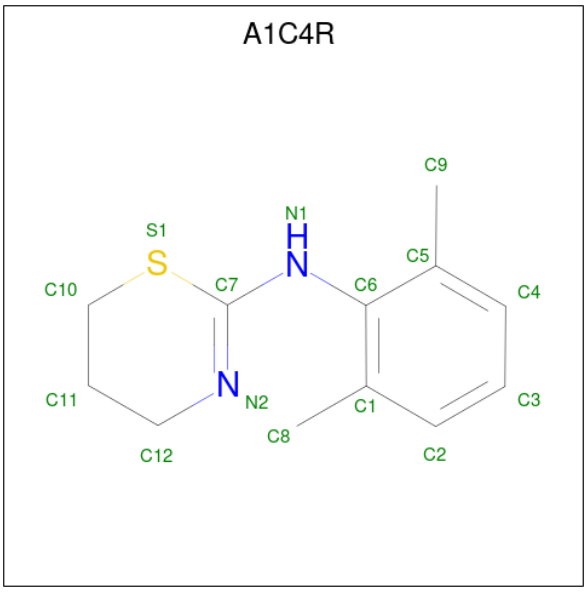
- Molecule 1 is a protein called Antibody Heavy Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	223	Total	C	N	O	S	0	0	0
			1690	1061	282	339	8			
1	B	220	Total	C	N	O	S	0	0	0
			1669	1049	278	334	8			
1	C	214	Total	C	N	O	S	0	0	0
			1633	1029	271	325	8			
1	D	220	Total	C	N	O	S	0	1	0
			1680	1056	281	335	8			

- Molecule 2 is a protein called Antibody Light Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	215	Total	C	N	O	S	0	0	0
			1661	1041	282	332	6			
2	F	215	Total	C	N	O	S	0	0	0
			1661	1041	282	332	6			
2	G	215	Total	C	N	O	S	0	0	0
			1661	1041	282	332	6			
2	H	215	Total	C	N	O	S	0	0	0
			1661	1041	282	332	6			

- Molecule 3 is N-(2,6-dimethylphenyl)-5,6-dihydro-4H-1,3-thiazin-2-amine (CCD ID: A1C4R) (formula: $C_{12}H_{16}N_2S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C H N S 31 12 16 2 1	0	0
3	C	1	Total C H N S 31 12 16 2 1	0	0
3	D	1	Total C H N S 31 12 16 2 1	0	0
3	F	1	Total C H N S 31 12 16 2 1	0	0

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total Cl 1 1	0	0
4	B	1	Total Cl 1 1	0	0
4	C	1	Total Cl 1 1	0	0
4	D	1	Total Cl 1 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	122	Total O 122 122	0	0

Continued on next page...

Continued from previous page...

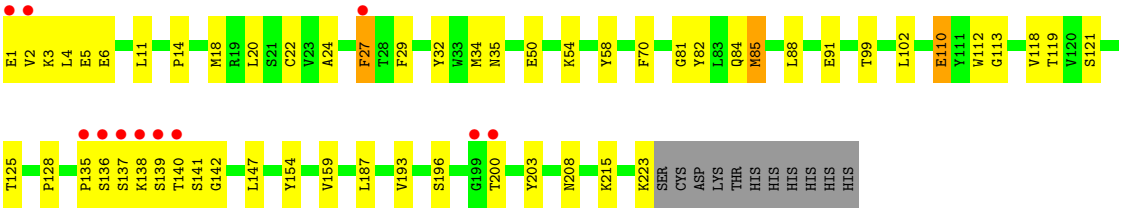
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	108	Total O 108 108	0	0
5	C	98	Total O 98 98	0	0
5	D	124	Total O 124 124	0	0
5	E	121	Total O 121 121	0	0
5	F	128	Total O 128 128	0	0
5	G	89	Total O 89 89	0	0
5	H	100	Total O 100 100	0	0

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.

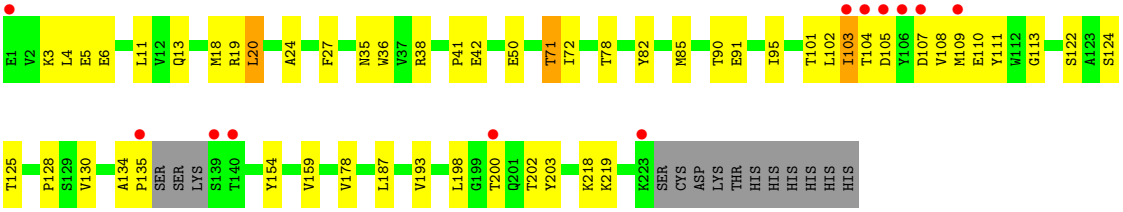
• Molecule 1: Antibody Heavy Chain

Chain A:



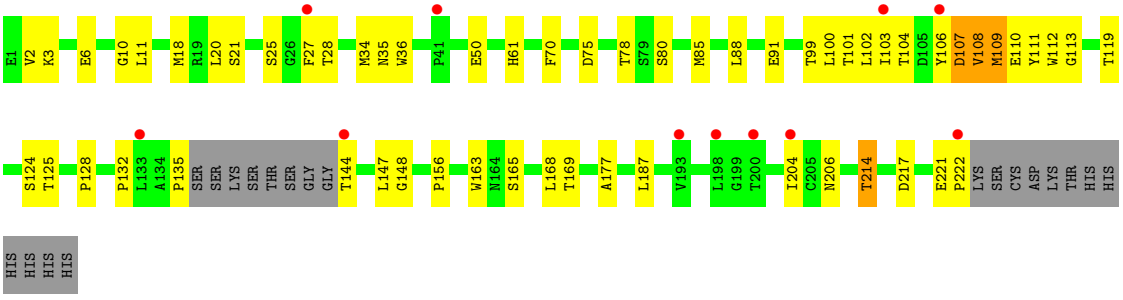
• Molecule 1: Antibody Heavy Chain

Chain B:



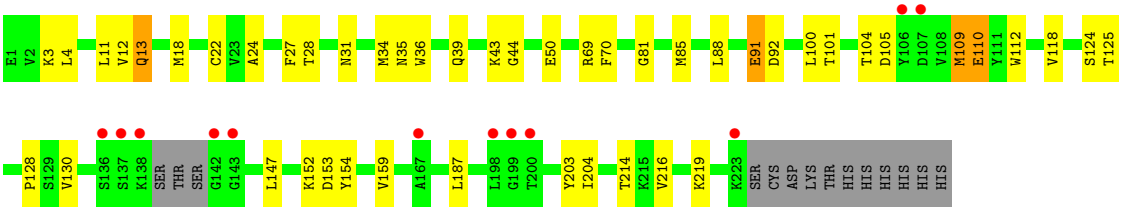
• Molecule 1: Antibody Heavy Chain

Chain C:

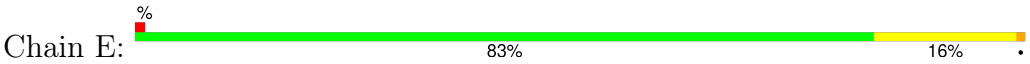


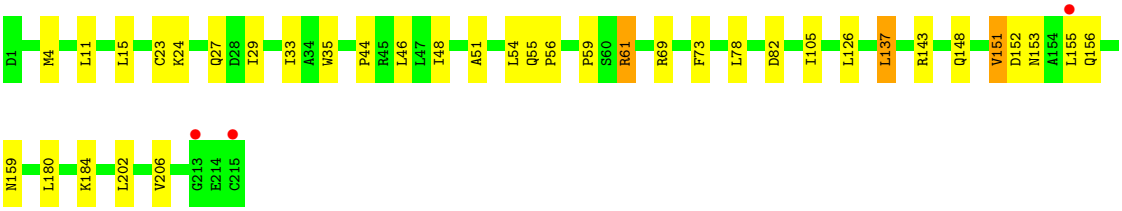
• Molecule 1: Antibody Heavy Chain

Chain D:

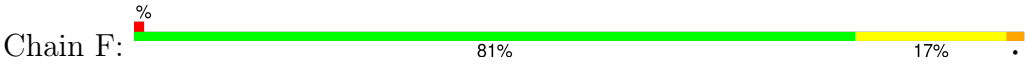


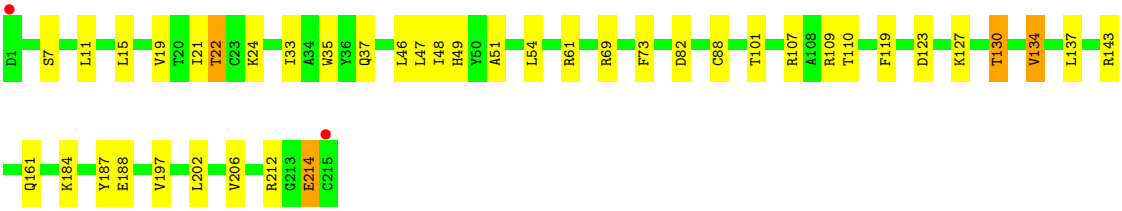
• Molecule 2: Antibody Light Chain



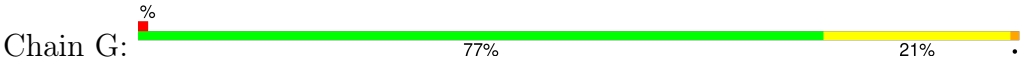


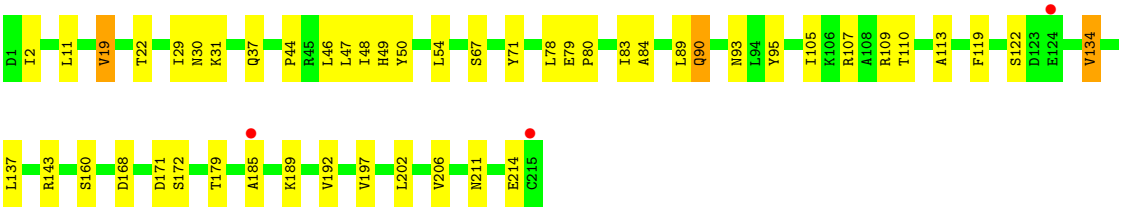
• Molecule 2: Antibody Light Chain



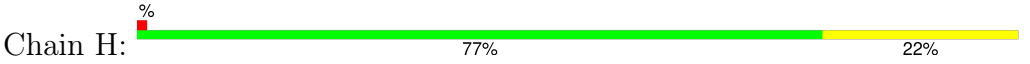


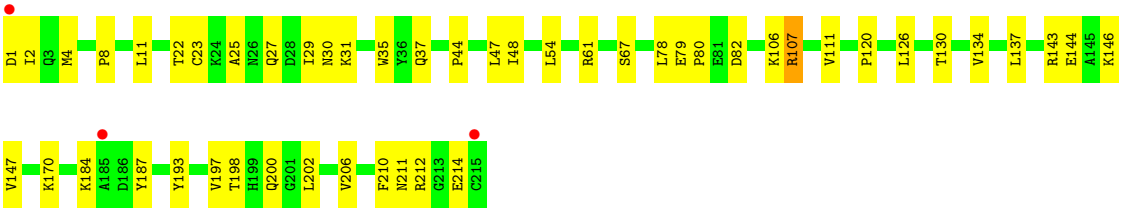
• Molecule 2: Antibody Light Chain





• Molecule 2: Antibody Light Chain





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	89.18Å 121.03Å 95.62Å 90.00° 112.45° 90.00°	Depositor
Resolution (Å)	41.99 – 1.99 41.99 – 1.99	Depositor EDS
% Data completeness (in resolution range)	53.7 (41.99-1.99) 50.0 (41.99-1.99)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.93 (at 2.00Å)	Xtriage
Refinement program	PHENIX v1.21.2	Depositor
R, R_{free}	0.177 , 0.233 0.177 , 0.234	Depositor DCC
R_{free} test set	3376 reflections (2.63%)	wwPDB-VP
Wilson B-factor (Å^2)	25.0	Xtriage
Anisotropy	0.046	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 37.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	14334	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 6.48% 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: CL, A1C4R

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	0.39	0/1730	0.59	0/2355
1	B	0.41	0/1708	0.61	0/2325
1	C	0.34	0/1672	0.54	0/2278
1	D	0.38	0/1719	0.60	0/2339
2	E	0.39	0/1698	0.60	0/2302
2	F	0.39	0/1698	0.58	0/2302
2	G	0.34	0/1698	0.58	0/2302
2	H	0.36	0/1698	0.56	0/2302
All	All	0.38	0/13621	0.58	0/18505

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	106	TYR	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	1690	0	1642	43	0
1	B	1669	0	1618	40	0
1	C	1633	0	1582	52	0
1	D	1680	0	1632	42	0
2	E	1661	0	1613	26	0
2	F	1661	0	1613	28	0
2	G	1661	0	1613	40	0
2	H	1661	0	1613	36	0
3	A	15	16	0	0	0
3	C	15	16	0	0	0
3	D	15	16	0	1	0
3	F	15	16	0	1	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	122	0	0	2	0
5	B	108	0	0	5	0
5	C	98	0	0	1	0
5	D	124	0	0	2	0
5	E	121	0	0	0	0
5	F	128	0	0	4	0
5	G	89	0	0	1	0
5	H	100	0	0	5	0
All	All	14270	64	12926	292	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 (292) 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:1:GLU:HG3	1:A:2:VAL:H	1.23	1.00
1:D:18:MET:HE1	1:D:118:VAL:HG13	1.54	0.90
2:H:211:ASN:HB2	2:H:214:GLU:CG	2.02	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:104:THR:OG1	1:C:107:ASP:HB3	1.74	0.86
2:H:211:ASN:HB2	2:H:214:GLU:HG2	1.61	0.81
1:A:135:PRO:HG3	1:A:147:LEU:HB3	1.64	0.80
1:A:24:ALA:HB1	1:A:27:PHE:CE1	2.18	0.78
2:H:106:LYS:HG2	5:H:332:HOH:O	1.85	0.77
1:D:18:MET:CE	1:D:118:VAL:HG13	2.15	0.76
2:G:202:LEU:HD13	2:G:206:VAL:HG23	1.68	0.74
2:G:109:ARG:HG2	2:G:110:THR:N	2.02	0.73
2:H:211:ASN:HB2	2:H:214:GLU:HG3	1.71	0.72
2:E:202:LEU:HD13	2:E:206:VAL:HG23	1.70	0.72
1:B:20:LEU:HD13	1:B:85:MET:HE2	1.72	0.71
1:A:2:VAL:HG13	1:A:27:PHE:CZ	2.26	0.71
1:C:125:THR:HG22	1:C:156:PRO:HD3	1.74	0.70
1:D:27:PHE:HE2	1:D:100:LEU:HD13	1.56	0.69
2:G:119:PHE:HB2	2:G:134:VAL:HG13	1.74	0.69
1:A:85:MET:HE3	1:A:88:LEU:HD21	1.75	0.69
1:D:154:TYR:CE2	1:D:159:VAL:HG13	2.28	0.69
1:A:208:ASN:HD22	1:A:215:LYS:HG3	1.58	0.68
1:C:221:GLU:HB2	1:C:222:PRO:HD2	1.75	0.68
2:F:202:LEU:HD13	2:F:206:VAL:HG23	1.75	0.68
2:G:107:ARG:HD2	2:G:172:SER:OG	1.92	0.67
2:H:120:PRO:HB3	2:H:210:PHE:CZ	2.29	0.67
1:C:2:VAL:HG13	1:C:27:PHE:HE1	1.60	0.66
1:B:130:VAL:O	1:B:218:LYS:HE3	1.96	0.66
1:D:27:PHE:CE2	1:D:100:LEU:HD13	2.31	0.65
1:B:71:THR:HG23	5:B:445:HOH:O	1.96	0.65
1:B:202:THR:HG22	1:B:219:LYS:HZ1	1.60	0.65
1:B:187:LEU:HA	5:B:484:HOH:O	1.95	0.65
2:G:185:ALA:O	2:G:189:LYS:HG3	1.97	0.65
1:B:103:ILE:HD12	1:B:103:ILE:H	1.61	0.65
1:A:1:GLU:HG3	1:A:2:VAL:N	2.04	0.64
1:B:110:GLU:HG3	2:F:46:LEU:HD22	1.78	0.64
1:C:27:PHE:HE2	1:C:100:LEU:CD1	2.10	0.64
2:G:192:VAL:HG22	2:G:211:ASN:OD1	1.97	0.64
1:B:82:TYR:CZ	2:H:144:GLU:HG2	2.33	0.64
1:C:35:ASN:OD1	1:C:50:GLU:HB2	1.98	0.64
2:H:111:VAL:HG23	5:H:314:HOH:O	1.98	0.64
2:E:55:GLN:HG3	2:E:56:PRO:HD2	1.81	0.63
1:C:144:THR:HA	5:C:426:HOH:O	1.99	0.62
1:C:2:VAL:HG13	1:C:27:PHE:CE1	2.33	0.62
1:D:69:ARG:NH2	1:D:92:ASP:OD2	2.28	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:202:LEU:HD13	2:G:206:VAL:CG2	2.30	0.62
2:G:137:LEU:HD21	2:G:197:VAL:HG21	1.81	0.62
2:G:211:ASN:HB2	2:G:214:GLU:HG2	1.82	0.61
1:B:104:THR:HG22	5:B:422:HOH:O	2.01	0.60
2:F:48:ILE:HG12	2:F:54:LEU:HD23	1.84	0.60
1:A:24:ALA:HB1	1:A:27:PHE:HE1	1.67	0.60
1:A:6:GLU:OE2	1:A:113:GLY:HA3	2.02	0.60
1:A:140:THR:C	1:A:142:GLY:H	2.10	0.59
2:F:22:THR:CG2	5:F:417:HOH:O	2.51	0.59
1:D:112:TRP:CE3	2:H:44:PRO:HD2	2.39	0.58
2:G:109:ARG:HG2	2:G:110:THR:H	1.67	0.58
2:H:187:TYR:O	2:H:212:ARG:HD3	2.03	0.58
1:C:102:LEU:HD23	1:C:104:THR:HG23	1.84	0.58
2:G:11:LEU:HD13	2:G:19:VAL:HG13	1.83	0.58
1:D:203:TYR:O	1:D:204:ILE:HD13	2.04	0.58
1:C:27:PHE:HE2	1:C:100:LEU:HD12	1.68	0.57
1:D:35:ASN:OD1	1:D:50:GLU:HB2	2.04	0.57
2:G:31:LYS:NZ	2:G:67:SER:HB3	2.20	0.57
2:H:4:MET:HE3	2:H:23:CYS:SG	2.44	0.57
2:F:109:ARG:HG2	2:F:110:THR:N	2.19	0.57
1:D:24:ALA:HB1	1:D:27:PHE:CZ	2.39	0.57
1:C:27:PHE:CE2	1:C:100:LEU:HD12	2.40	0.56
2:G:137:LEU:CD2	2:G:197:VAL:HG21	2.34	0.56
1:D:91:GLU:HG3	5:D:475:HOH:O	2.04	0.56
2:E:61:ARG:NH2	2:E:82:ASP:OD2	2.38	0.56
2:H:137:LEU:HD22	2:H:197:VAL:HG21	1.88	0.56
2:H:137:LEU:HD11	2:H:147:VAL:HG22	1.88	0.56
2:G:78:LEU:HB3	2:G:105:ILE:HD13	1.88	0.56
2:H:126:LEU:O	2:H:184:LYS:HD2	2.06	0.56
1:A:85:MET:CE	1:A:88:LEU:HD21	2.35	0.55
1:D:91:GLU:CD	1:D:91:GLU:H	2.14	0.55
1:D:11:LEU:HD23	1:D:125:THR:HG22	1.87	0.55
2:E:59:PRO:HB2	2:E:61:ARG:HG3	1.88	0.55
1:A:27:PHE:CD1	1:A:27:PHE:N	2.75	0.55
1:A:85:MET:HE1	1:A:118:VAL:HG11	1.89	0.55
1:B:187:LEU:HD12	1:B:187:LEU:C	2.32	0.55
1:B:82:TYR:CE1	2:H:144:GLU:HG2	2.41	0.55
1:C:3:LYS:HB2	1:C:25:SER:OG	2.06	0.55
1:B:35:ASN:OD1	1:B:50:GLU:HB2	2.06	0.54
5:B:448:HOH:O	2:F:130:THR:HG21	2.07	0.54
1:A:11:LEU:HD23	1:A:125:THR:HG22	1.90	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:137:LEU:HD21	2:G:197:VAL:CG2	2.36	0.54
1:A:2:VAL:HG13	1:A:27:PHE:CE2	2.41	0.54
1:A:112:TRP:CE3	2:E:44:PRO:HD2	2.42	0.54
1:C:112:TRP:CE3	2:G:44:PRO:HD2	2.43	0.54
1:A:187:LEU:C	1:A:187:LEU:HD12	2.33	0.54
2:H:31:LYS:HE2	2:H:67:SER:HB3	1.90	0.54
1:A:29:PHE:CZ	1:A:34:MET:HE3	2.43	0.54
1:D:101:THR:HA	1:D:109:MET:O	2.08	0.54
1:B:18:MET:HB3	1:B:85:MET:HE3	1.89	0.53
2:H:137:LEU:CD2	2:H:197:VAL:HG21	2.38	0.53
1:A:110:GLU:HG3	2:E:46:LEU:HD22	1.91	0.53
1:D:18:MET:CE	1:D:118:VAL:HG22	2.39	0.53
1:C:102:LEU:CD2	1:C:104:THR:HG23	2.39	0.53
1:D:187:LEU:C	1:D:187:LEU:HD12	2.34	0.53
2:H:79:GLU:HB3	2:H:80:PRO:HD2	1.92	0.52
2:F:184:LYS:HE2	2:F:188:GLU:OE1	2.09	0.52
2:F:214:GLU:O	2:F:214:GLU:HG2	2.08	0.52
1:C:168:LEU:HD12	1:C:169:THR:N	2.25	0.52
1:A:128:PRO:HB3	1:A:154:TYR:HB3	1.91	0.52
1:B:19:ARG:HD3	5:B:481:HOH:O	2.10	0.51
1:C:204:ILE:CG2	1:C:217:ASP:HB3	2.40	0.51
1:D:70:PHE:CE2	1:D:85:MET:HE3	2.45	0.51
2:H:1:ASP:CG	2:H:2:ILE:H	2.18	0.51
2:H:170:LYS:HG2	5:H:321:HOH:O	2.11	0.51
1:B:36:TRP:HD1	1:B:72:ILE:HD12	1.74	0.51
2:E:78:LEU:HB3	2:E:105:ILE:HD13	1.92	0.51
1:B:6:GLU:OE2	1:B:113:GLY:HA3	2.11	0.51
1:B:11:LEU:HD23	1:B:125:THR:HG23	1.91	0.51
1:D:18:MET:HE3	1:D:118:VAL:HG22	1.91	0.51
2:E:4:MET:HE3	2:E:23:CYS:SG	2.51	0.51
1:A:2:VAL:CG1	1:A:27:PHE:CE2	2.94	0.50
1:A:154:TYR:CE1	1:A:159:VAL:HG13	2.46	0.50
1:D:43:LYS:HD3	5:D:505:HOH:O	2.12	0.50
2:G:113:ALA:HB1	2:G:202:LEU:HD21	1.93	0.50
2:E:137:LEU:N	2:E:137:LEU:HD12	2.26	0.50
1:D:110:GLU:OE2	3:D:301:A1C4R:N2	2.45	0.50
2:F:22:THR:HG23	5:F:417:HOH:O	2.11	0.50
1:C:148:GLY:HA2	1:C:163:TRP:CZ2	2.47	0.50
2:E:126:LEU:O	2:E:184:LYS:HD2	2.11	0.50
2:F:7:SER:HB3	2:F:22:THR:HG22	1.94	0.49
1:C:6:GLU:OE1	1:C:113:GLY:HA3	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:101:THR:HA	1:C:109:MET:O	2.12	0.49
2:H:61:ARG:NH2	2:H:82:ASP:OD2	2.45	0.49
2:E:48:ILE:HG12	2:E:54:LEU:HD23	1.94	0.49
2:G:113:ALA:HB1	2:G:202:LEU:CD2	2.42	0.49
2:H:187:TYR:CZ	2:H:212:ARG:HG3	2.47	0.49
2:F:35:TRP:CZ3	2:F:88:CYS:HB3	2.47	0.49
1:D:3:LYS:O	1:D:24:ALA:HA	2.13	0.49
2:F:11:LEU:HD13	2:F:19:VAL:HB	1.94	0.49
2:G:80:PRO:HG2	5:G:303:HOH:O	2.11	0.49
1:C:11:LEU:HD23	1:C:125:THR:HG23	1.94	0.49
1:A:136:SER:O	1:A:138:LYS:N	2.46	0.49
1:A:140:THR:C	1:A:142:GLY:N	2.70	0.49
2:G:48:ILE:HG12	2:G:54:LEU:HD23	1.95	0.49
2:H:187:TYR:CE2	2:H:212:ARG:HG3	2.47	0.49
2:E:27:GLN:O	2:E:29:ILE:HG23	2.13	0.48
2:F:123:ASP:O	2:F:127:LYS:HG3	2.13	0.48
2:G:30:ASN:O	2:G:71:TYR:OH	2.24	0.48
1:C:78:THR:CG2	1:C:80:SER:OG	2.61	0.48
1:D:128:PRO:HD2	1:D:214:THR:HG21	1.94	0.48
1:C:101:THR:HG22	1:C:103:ILE:HD11	1.95	0.48
2:G:11:LEU:HD13	2:G:19:VAL:CG1	2.44	0.48
1:A:81:GLY:C	1:A:82:TYR:CD1	2.92	0.48
1:A:35:ASN:OD1	1:A:50:GLU:HB2	2.14	0.48
2:E:148:GLN:OE1	2:E:155:LEU:HD13	2.14	0.48
2:F:61:ARG:NH2	2:F:82:ASP:OD1	2.47	0.48
1:A:29:PHE:CZ	1:A:34:MET:CE	2.96	0.48
1:B:3:LYS:HD3	1:B:5:GLU:OE2	2.14	0.48
2:E:15:LEU:HD23	2:E:105:ILE:HG21	1.96	0.47
2:H:30:ASN:O	2:H:31:LYS:HB2	2.14	0.47
2:H:27:GLN:O	2:H:29:ILE:HG23	2.14	0.47
1:B:101:THR:HA	1:B:109:MET:O	2.15	0.47
1:D:13[A]:GLN:CD	1:D:13[A]:GLN:H	2.22	0.47
1:C:101:THR:HG22	1:C:103:ILE:CD1	2.45	0.47
2:E:33:ILE:HG23	2:E:51:ALA:HA	1.97	0.47
1:C:10:GLY:CA	1:C:18:MET:HE1	2.46	0.47
2:F:33:ILE:CG2	2:F:51:ALA:HA	2.45	0.47
1:B:78:THR:HG22	2:H:200:GLN:NE2	2.31	0.46
1:C:75:ASP:CG	1:C:78:THR:HG22	2.40	0.46
1:C:11:LEU:HD12	1:C:119:THR:O	2.16	0.46
1:C:34:MET:HE3	1:C:36:TRP:HE1	1.79	0.46
1:D:27:PHE:HZ	1:D:100:LEU:HD12	1.79	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:168:ASP:HB3	2:G:171:ASP:OD1	2.15	0.46
2:E:137:LEU:N	2:E:137:LEU:CD1	2.78	0.46
1:C:10:GLY:N	1:C:18:MET:HE1	2.31	0.46
1:C:135:PRO:HG3	1:C:147:LEU:HB3	1.96	0.46
1:D:4:LEU:HD22	1:D:22:CYS:SG	2.56	0.46
1:B:193:VAL:HG11	1:B:203:TYR:CE1	2.50	0.46
1:C:110:GLU:HG3	2:G:46:LEU:HD22	1.98	0.46
1:C:128:PRO:HD2	1:C:214:THR:HG21	1.97	0.46
1:D:39:GLN:NE2	1:D:44:GLY:HA2	2.30	0.46
2:E:159:ASN:O	2:E:180:LEU:HD12	2.16	0.46
1:B:134:ALA:HA	1:B:135:PRO:HD3	1.71	0.45
1:C:78:THR:HG23	1:C:80:SER:OG	2.17	0.45
1:C:101:THR:CG2	1:C:103:ILE:HD11	2.47	0.45
1:D:104:THR:O	1:D:105:ASP:HB2	2.16	0.45
1:D:152:LYS:HG2	1:D:153:ASP:CG	2.41	0.45
2:E:143:ARG:O	2:E:143:ARG:HG2	2.15	0.45
2:H:8:PRO:HG3	2:H:11:LEU:HD21	1.99	0.45
1:C:2:VAL:HG22	1:C:27:PHE:CD1	2.51	0.45
1:C:27:PHE:CE2	1:C:100:LEU:CD1	2.96	0.45
1:B:38:ARG:HA	1:B:95:ILE:O	2.17	0.45
1:A:136:SER:HB2	1:A:139:SER:OG	2.16	0.45
1:D:100:LEU:O	1:D:110:GLU:HA	2.17	0.45
1:B:91:GLU:CD	1:B:91:GLU:H	2.25	0.45
1:C:11:LEU:CD2	1:C:125:THR:HG23	2.47	0.45
1:D:34:MET:HE1	1:D:81:GLY:HA3	1.99	0.45
2:E:35:TRP:CE2	2:E:73:PHE:HB2	2.51	0.45
2:E:55:GLN:CG	2:E:56:PRO:HD2	2.47	0.45
1:B:24:ALA:HB1	1:B:27:PHE:CD2	2.52	0.45
2:H:37:GLN:HB2	2:H:47:LEU:HD11	1.99	0.45
1:B:102:LEU:CD2	1:B:104:THR:HG23	2.46	0.45
1:B:128:PRO:HB3	1:B:154:TYR:HB3	1.98	0.45
1:C:27:PHE:HE2	1:C:100:LEU:HD13	1.79	0.45
1:D:27:PHE:CZ	1:D:100:LEU:HD12	2.52	0.45
2:G:160:SER:HA	2:G:179:THR:O	2.16	0.45
1:C:6:GLU:CD	1:C:113:GLY:HA3	2.42	0.45
1:C:177:ALA:HA	1:C:187:LEU:HB3	1.98	0.45
2:E:33:ILE:CG2	2:E:51:ALA:HA	2.47	0.45
2:F:15:LEU:HD11	2:F:107:ARG:NH1	2.32	0.44
1:A:4:LEU:HD22	1:A:22:CYS:SG	2.57	0.44
1:B:178:VAL:HG11	2:F:161:GLN:CD	2.43	0.44
1:B:11:LEU:HD23	1:B:125:THR:CG2	2.47	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:41:PRO:O	1:B:42:GLU:HB2	2.17	0.44
1:A:32:TYR:CE2	1:A:102:LEU:HB2	2.53	0.44
1:C:108:VAL:HG12	2:G:49:HIS:CE1	2.52	0.44
1:C:99:THR:HA	1:C:111:TYR:O	2.18	0.44
2:G:89:LEU:HD11	2:G:95:TYR:HB3	2.00	0.44
2:H:120:PRO:HB3	2:H:210:PHE:CE1	2.51	0.44
1:A:54:LYS:HB2	1:A:58:TYR:CZ	2.52	0.44
1:B:27:PHE:HE1	1:B:111:TYR:CD2	2.36	0.44
2:E:61:ARG:HH22	2:E:82:ASP:CG	2.26	0.44
1:C:108:VAL:HG11	2:G:49:HIS:CG	2.53	0.43
2:E:24:LYS:HA	2:E:69:ARG:O	2.18	0.43
2:F:21:ILE:HD13	2:F:101:THR:HB	2.00	0.43
2:G:90:GLN:O	2:G:95:TYR:HA	2.18	0.43
1:A:14:PRO:HD3	1:A:121:SER:C	2.44	0.43
1:D:204:ILE:CD1	1:D:219:LYS:HA	2.48	0.43
2:G:79:GLU:HB3	2:G:80:PRO:HD2	2.00	0.43
1:C:2:VAL:HG22	1:C:27:PHE:HD1	1.83	0.43
2:E:152:ASP:O	2:E:153:ASN:HB2	2.19	0.43
2:H:48:ILE:HG12	2:H:54:LEU:HD23	2.00	0.43
1:D:70:PHE:CZ	1:D:85:MET:HE2	2.53	0.43
1:D:159:VAL:CG2	1:D:187:LEU:HD21	2.48	0.43
2:F:137:LEU:HD22	2:F:197:VAL:HG21	2.00	0.43
1:B:13:GLN:HG2	1:B:122:SER:HA	2.01	0.43
2:H:198:THR:HG23	5:H:358:HOH:O	2.17	0.43
1:A:18:MET:HB2	1:A:18:MET:HE3	1.65	0.43
1:D:28:THR:HG21	1:D:31:ASN:ND2	2.33	0.43
2:H:23:CYS:HB2	2:H:35:TRP:CH2	2.54	0.43
2:G:143:ARG:O	2:G:143:ARG:HG2	2.18	0.43
1:C:168:LEU:HD12	1:C:168:LEU:C	2.43	0.42
1:A:3:LYS:HE2	1:A:5:GLU:OE2	2.18	0.42
1:A:125:THR:HG23	5:A:446:HOH:O	2.18	0.42
1:A:196:SER:HA	5:A:410:HOH:O	2.18	0.42
1:C:187:LEU:C	1:C:187:LEU:HD12	2.43	0.42
2:E:151:VAL:HG13	2:E:156:GLN:CD	2.44	0.42
1:D:130:VAL:CG2	1:D:216:VAL:HG21	2.50	0.42
2:H:202:LEU:HD13	2:H:206:VAL:HG23	2.01	0.42
1:A:70:PHE:HA	1:A:84:GLN:O	2.20	0.42
1:A:112:TRP:CZ3	2:E:44:PRO:HG2	2.54	0.42
1:C:85:MET:HE2	1:C:88:LEU:HD21	2.01	0.42
1:D:130:VAL:HG21	1:D:216:VAL:CG2	2.50	0.42
2:F:24:LYS:HA	2:F:69:ARG:O	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:214:GLU:O	2:F:214:GLU:CG	2.67	0.42
1:A:54:LYS:HB2	1:A:58:TYR:OH	2.19	0.42
1:C:75:ASP:HB3	1:C:78:THR:HG22	2.01	0.42
1:B:154:TYR:CE1	1:B:159:VAL:HG13	2.55	0.42
1:A:11:LEU:HA	1:A:119:THR:O	2.20	0.42
1:A:29:PHE:HZ	1:A:34:MET:CE	2.33	0.42
1:C:165:SER:HA	1:C:206:ASN:OD1	2.19	0.42
2:F:119:PHE:HD2	2:F:134:VAL:HG22	1.85	0.42
2:G:31:LYS:O	2:G:50:TYR:HA	2.19	0.42
2:G:31:LYS:HZ3	2:G:67:SER:HB3	1.84	0.42
2:H:4:MET:SD	2:H:25:ALA:HB2	2.60	0.42
1:B:4:LEU:HD23	1:B:24:ALA:HB2	2.02	0.42
2:G:11:LEU:CD1	2:G:19:VAL:HG13	2.48	0.42
1:D:147:LEU:C	1:D:147:LEU:HD12	2.45	0.41
2:F:37:GLN:HB2	2:F:47:LEU:HD11	2.02	0.41
2:G:29:ILE:C	2:G:30:ASN:O	2.61	0.41
2:G:211:ASN:HB2	2:G:214:GLU:CG	2.48	0.41
1:C:70:PHE:CE2	1:C:85:MET:HE3	2.55	0.41
1:D:34:MET:HE3	1:D:36:TRP:HE1	1.86	0.41
2:G:37:GLN:HB2	2:G:47:LEU:HD11	2.01	0.41
1:B:110:GLU:OE2	3:F:301:A1C4R:N2	2.53	0.41
2:F:143:ARG:O	2:F:143:ARG:HG2	2.20	0.41
2:H:143:ARG:NH2	5:H:307:HOH:O	2.53	0.41
1:B:104:THR:OG1	1:B:107:ASP:HB3	2.21	0.41
2:F:35:TRP:CE2	2:F:73:PHE:HB2	2.55	0.41
2:F:61:ARG:NH1	5:F:413:HOH:O	2.54	0.41
2:H:187:TYR:HA	2:H:193:TYR:OH	2.20	0.41
1:D:70:PHE:N	1:D:70:PHE:CD1	2.88	0.41
2:G:2:ILE:HD12	2:G:93:ASN:HB3	2.02	0.41
1:A:193:VAL:HG11	1:A:203:TYR:CE1	2.55	0.41
1:C:61:HIS:HD2	5:F:516:HOH:O	2.03	0.41
1:A:223:LYS:HA	1:A:223:LYS:HD3	1.87	0.41
1:B:198:LEU:C	1:B:200:THR:H	2.29	0.41
1:D:27:PHE:CZ	1:D:100:LEU:CD1	3.04	0.41
2:H:107:ARG:HB3	2:H:107:ARG:NH1	2.35	0.41
1:C:132:PRO:HD2	2:G:122:SER:CB	2.50	0.41
1:B:102:LEU:HD23	1:B:104:THR:HG23	2.03	0.40
1:B:108:VAL:HG23	2:F:49:HIS:CE1	2.56	0.40
1:C:147:LEU:HD12	1:C:147:LEU:C	2.46	0.40
2:F:187:TYR:CE2	2:F:212:ARG:HD3	2.57	0.40
1:B:103:ILE:H	1:B:103:ILE:CD1	2.26	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:12:VAL:HG11	1:D:88:LEU:CD1	2.52	0.40
2:G:83:ILE:O	2:G:84:ALA: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	221/234 (94%)	209 (95%)	10 (4%)	2 (1%)	14 9
1	B	216/234 (92%)	209 (97%)	6 (3%)	1 (0%)	24 21
1	C	210/234 (90%)	199 (95%)	9 (4%)	2 (1%)	12 8
1	D	217/234 (93%)	207 (95%)	10 (5%)	0	100 100
2	E	213/215 (99%)	204 (96%)	9 (4%)	0	100 100
2	F	213/215 (99%)	205 (96%)	8 (4%)	0	100 100
2	G	213/215 (99%)	205 (96%)	8 (4%)	0	100 100
2	H	213/215 (99%)	207 (97%)	6 (3%)	0	100 100
All	All	1716/1796 (96%)	1645 (96%)	66 (4%)	5 (0%)	36 35

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	105	ASP
1	A	137	SER
1	A	141	SER
1	C	28	THR
1	C	107	ASP

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	193/204 (95%)	186 (96%)	7 (4%)	31	31
1	B	190/204 (93%)	185 (97%)	5 (3%)	40	44
1	C	186/204 (91%)	179 (96%)	7 (4%)	29	29
1	D	191/204 (94%)	185 (97%)	6 (3%)	35	37
2	E	186/186 (100%)	182 (98%)	4 (2%)	45	50
2	F	186/186 (100%)	182 (98%)	4 (2%)	45	50
2	G	186/186 (100%)	182 (98%)	4 (2%)	45	50
2	H	186/186 (100%)	180 (97%)	6 (3%)	34	35
All	All	1504/1560 (96%)	1461 (97%)	43 (3%)	38	40

All (43) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	20	LEU
1	A	27	PHE
1	A	85	MET
1	A	91	GLU
1	A	99	THR
1	A	110	GLU
1	A	200	THR
1	B	20	LEU
1	B	71	THR
1	B	90	THR
1	B	103	ILE
1	B	124	SER
1	C	20	LEU
1	C	21	SER
1	C	91	GLU
1	C	108	VAL
1	C	109	MET
1	C	124	SER
1	C	214	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	13[A]	GLN
1	D	13[B]	GLN
1	D	91	GLU
1	D	109	MET
1	D	110	GLU
1	D	124	SER
2	E	11	LEU
2	E	61	ARG
2	E	137	LEU
2	E	151	VAL
2	F	22	THR
2	F	130	THR
2	F	134	VAL
2	F	214	GLU
2	G	19	VAL
2	G	22	THR
2	G	90	GLN
2	G	134	VAL
2	H	22	THR
2	H	78	LEU
2	H	107	ARG
2	H	130	THR
2	H	134	VAL
2	H	146	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	208	ASN
1	B	39	GLN
1	C	61	HIS
1	D	31	ASN
1	D	39	GLN
1	D	84	GLN
2	E	30	ASN
2	E	139	ASN
2	E	200	GLN
2	F	30	ASN
2	F	161	GLN
2	G	161	GLN
2	H	27	GLN
2	H	30	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	H	125	GLN
2	H	153	ASN
2	H	161	GLN
2	H	167	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 8 ligands modelled in this entry, 4 are monoatomic - leaving 4 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	$\#\|Z\| > 2$
3	A1C4R	A	301	-	15,16,16	0.46	0	20,21,21	0.62	0
3	A1C4R	C	301	-	15,16,16	0.52	0	20,21,21	0.56	0
3	A1C4R	D	301	-	15,16,16	0.50	0	20,21,21	0.66	0
3	A1C4R	F	301	-	15,16,16	0.52	0	20,21,21	0.66	0

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
3	A1C4R	A	301	-	-	4/4/12/12	0/2/2/2
3	A1C4R	C	301	-	-	4/4/12/12	0/2/2/2
3	A1C4R	D	301	-	-	4/4/12/12	0/2/2/2
3	A1C4R	F	301	-	-	4/4/12/12	0/2/2/2

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	301	A1C4R	C5-C6-N1-C7
3	C	301	A1C4R	C5-C6-N1-C7
3	C	301	A1C4R	N2-C7-N1-C6
3	D	301	A1C4R	C5-C6-N1-C7
3	F	301	A1C4R	C5-C6-N1-C7
3	F	301	A1C4R	N2-C7-N1-C6
3	A	301	A1C4R	C1-C6-N1-C7
3	C	301	A1C4R	C1-C6-N1-C7
3	D	301	A1C4R	C1-C6-N1-C7
3	F	301	A1C4R	C1-C6-N1-C7
3	A	301	A1C4R	N2-C7-N1-C6
3	D	301	A1C4R	N2-C7-N1-C6
3	A	301	A1C4R	S1-C7-N1-C6
3	C	301	A1C4R	S1-C7-N1-C6
3	D	301	A1C4R	S1-C7-N1-C6
3	F	301	A1C4R	S1-C7-N1-C6

There are no ring outliers.

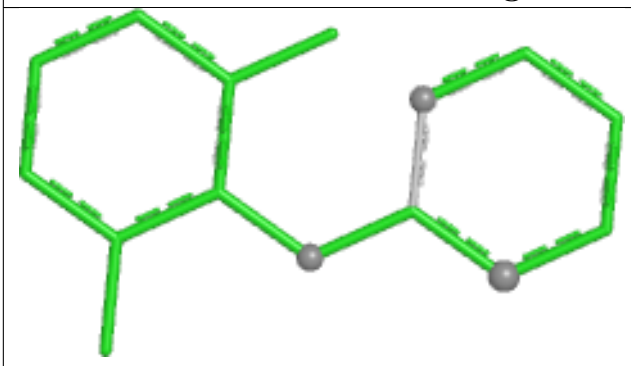
2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	301	A1C4R	1	0
3	F	301	A1C4R	1	0

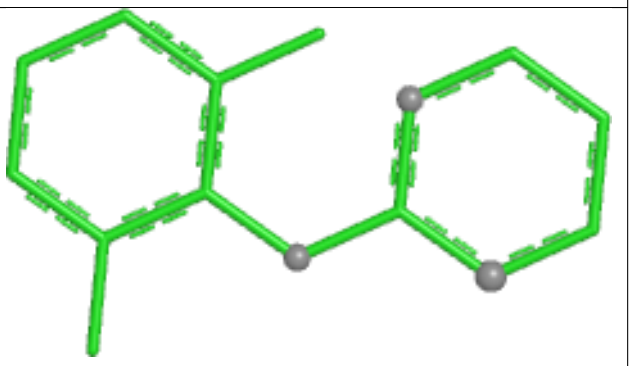
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be

highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

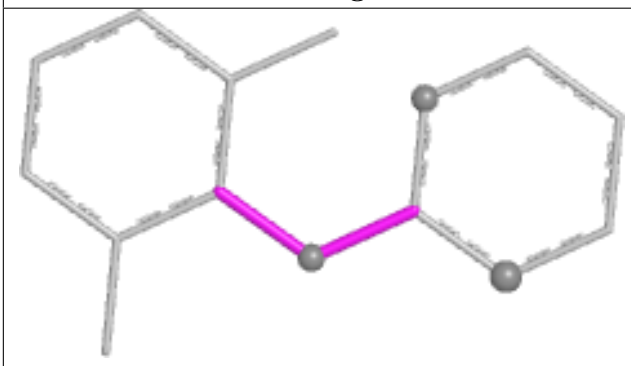
Ligand A1C4R A 301



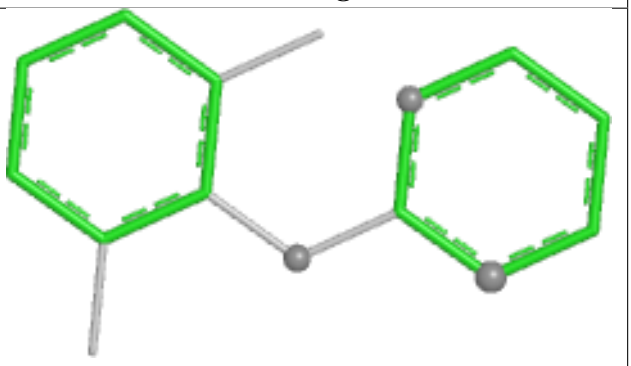
Bond lengths



Bond angles

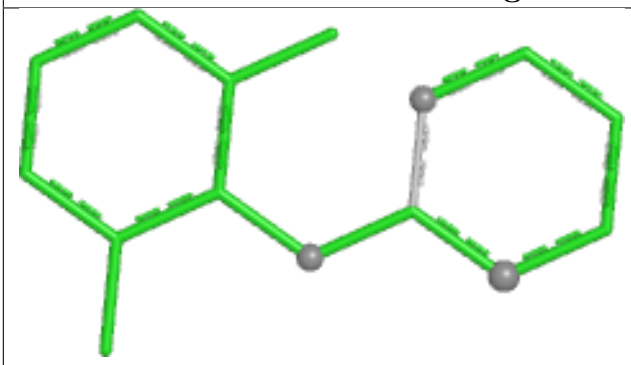


Torsions

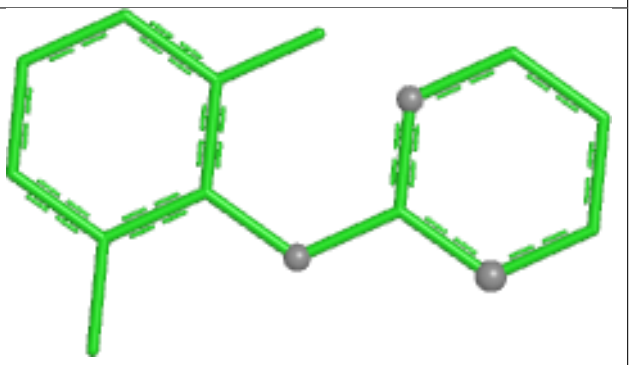


Rings

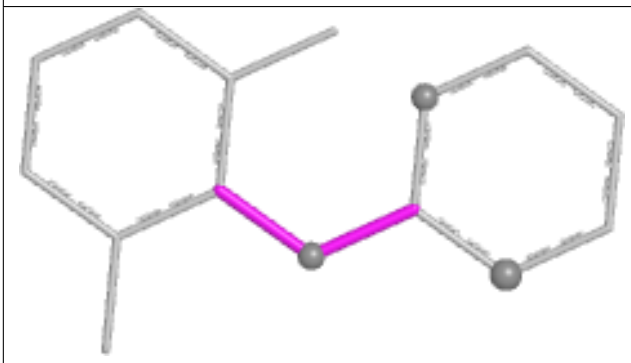
Ligand A1C4R C 301



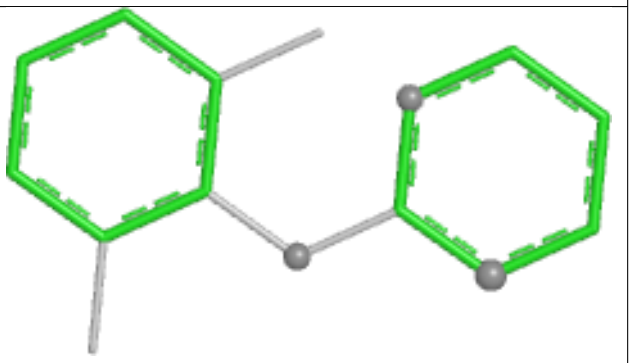
Bond lengths



Bond angles

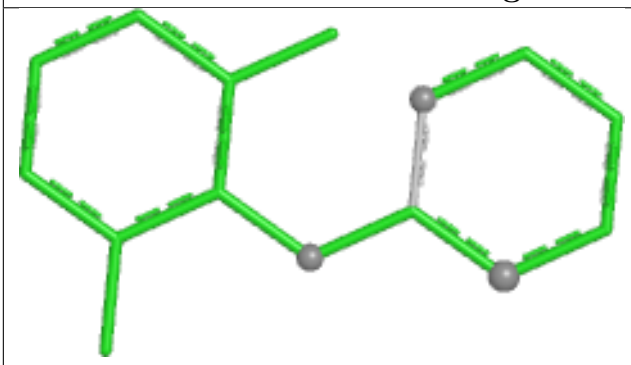


Torsions

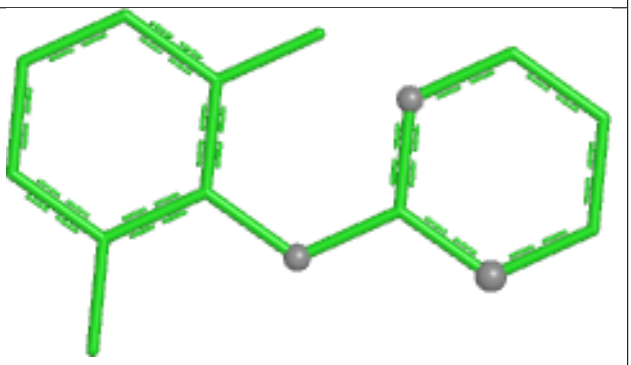


Rings

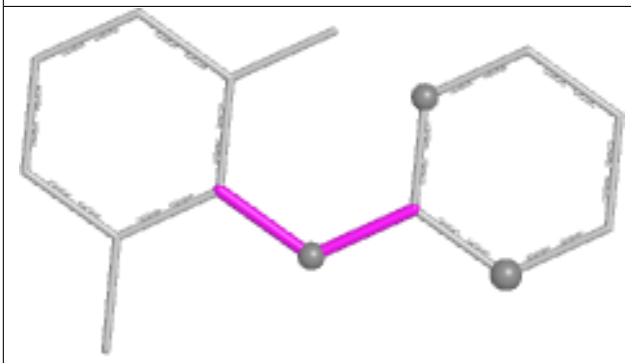
Ligand A1C4R D 301



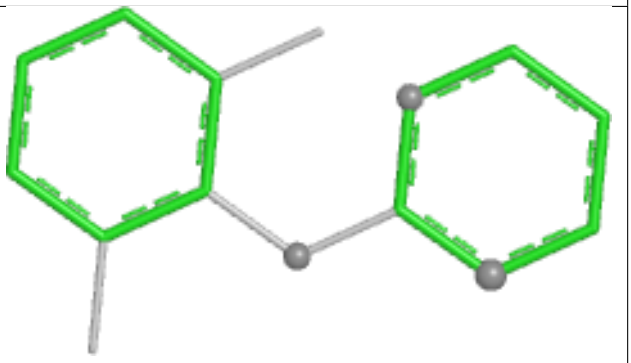
Bond lengths



Bond angles

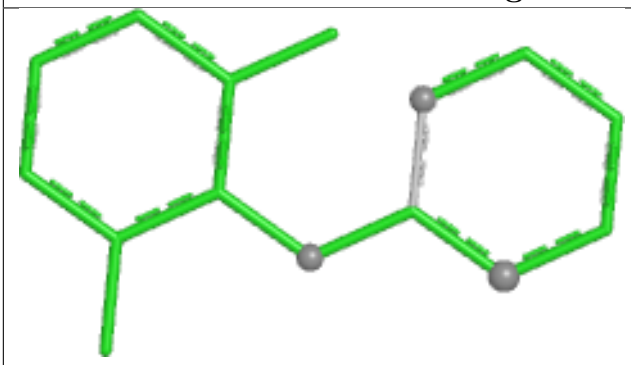


Torsions

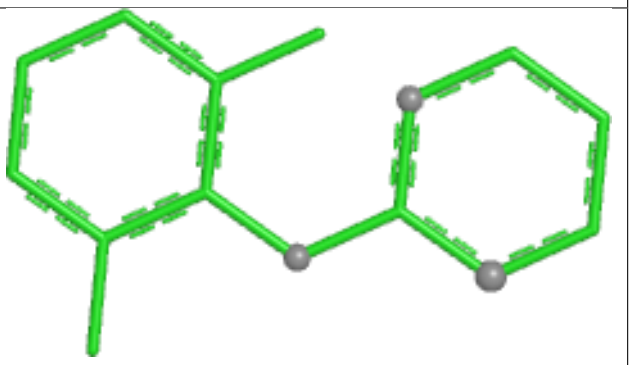


Rings

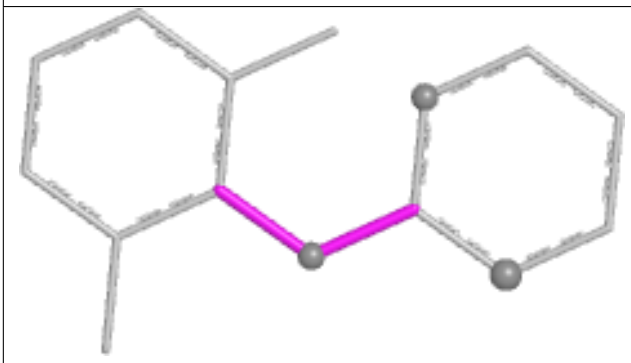
Ligand A1C4R F 301



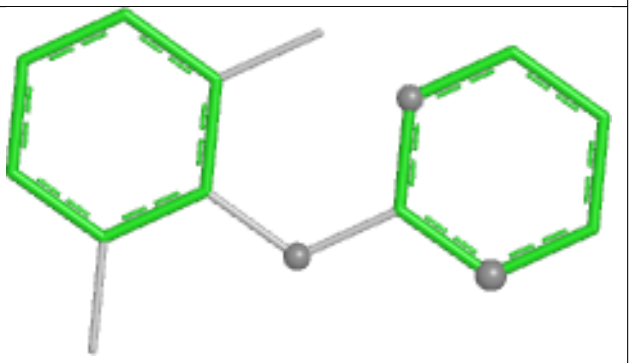
Bond lengths



Bond angles



Torsions



Rings

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	223/234 (95%)	0.11	11 (4%)	35	34	22, 33, 55, 112	0
1	B	220/234 (94%)	0.11	12 (5%)	30	29	23, 32, 59, 116	0
1	C	214/234 (91%)	0.43	11 (5%)	33	32	21, 41, 77, 95	0
1	D	220/234 (94%)	0.25	12 (5%)	30	29	16, 36, 69, 103	1 (0%)
2	E	215/215 (100%)	-0.03	3 (1%)	73	73	21, 32, 55, 93	0
2	F	215/215 (100%)	-0.10	2 (0%)	81	80	22, 32, 45, 100	0
2	G	215/215 (100%)	0.34	3 (1%)	73	73	25, 43, 72, 114	0
2	H	215/215 (100%)	0.26	3 (1%)	73	73	24, 39, 67, 88	0
All	All	1737/1796 (96%)	0.17	57 (3%)	49	48	16, 35, 68, 116	1 (0%)

All (57) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	106	TYR	6.0
1	B	106	TYR	4.3
2	E	215	CYS	4.3
1	C	200	THR	4.1
1	A	140	THR	3.6
2	F	215	CYS	3.5
1	C	106	TYR	3.3
2	G	185	ALA	3.3
1	D	199	GLY	3.2
1	B	107	ASP	3.2
1	C	144	THR	3.1
1	A	137	SER	3.1
1	B	139	SER	3.1
1	A	138	LYS	3.0
1	A	1	GLU	3.0
1	A	139	SER	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	1	GLU	2.9
1	C	103	ILE	2.9
1	D	142	GLY	2.8
1	B	104	THR	2.7
1	B	140	THR	2.7
1	C	198	LEU	2.7
1	A	27	PHE	2.7
2	H	215	CYS	2.7
1	B	200	THR	2.7
1	A	2	VAL	2.7
1	A	136	SER	2.6
1	B	103	ILE	2.6
1	C	27	PHE	2.5
1	D	107	ASP	2.5
1	C	204	ILE	2.5
1	D	200	THR	2.5
1	A	200	THR	2.4
1	C	41	PRO	2.4
1	B	223	LYS	2.4
1	D	223	LYS	2.4
2	G	215	CYS	2.3
2	E	213	GLY	2.2
2	H	185	ALA	2.2
2	F	1	ASP	2.2
2	H	1	ASP	2.2
1	D	167	ALA	2.2
1	C	133	LEU	2.2
2	E	155	LEU	2.2
1	A	135	PRO	2.2
1	C	222	PRO	2.2
2	G	124	GLU	2.2
1	A	199	GLY	2.2
1	D	143	GLY	2.1
1	B	105	ASP	2.1
1	D	136	SER	2.1
1	D	138	LYS	2.1
1	B	109	MET	2.1
1	C	193	VAL	2.1
1	D	198	LEU	2.0
1	D	137	SER	2.0
1	B	135	PRO	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 oligosaccharides in this entry.

6.4 Ligands (i)

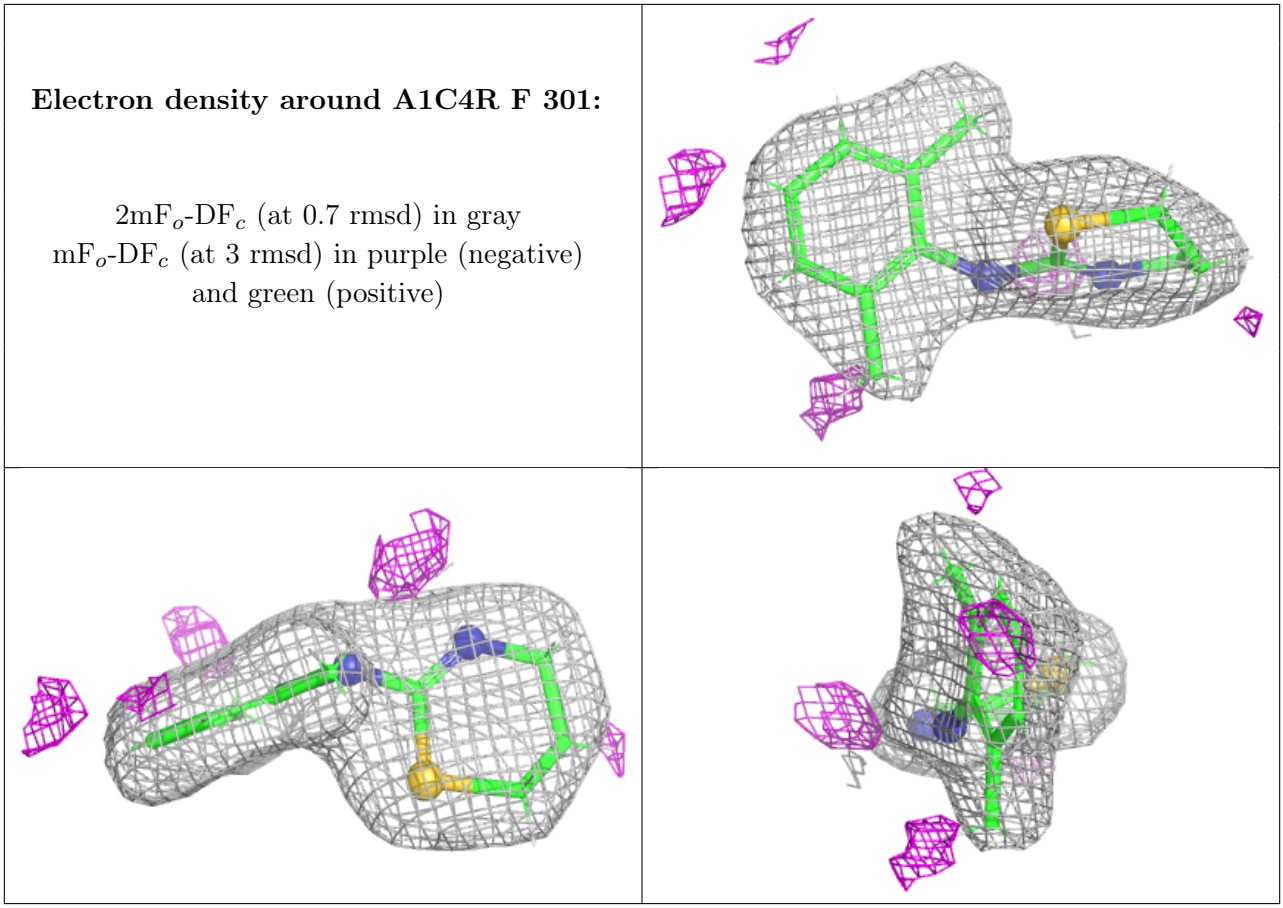
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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
3	A1C4R	F	301	15/15	0.95	0.07	25,32,36,37	0
3	A1C4R	A	301	15/15	0.96	0.06	22,31,36,36	0
3	A1C4R	D	301	15/15	0.97	0.05	21,28,37,37	0
3	A1C4R	C	301	15/15	0.97	0.06	25,33,40,41	0
4	CL	B	301	1/1	0.98	0.04	31,31,31,31	0
4	CL	C	302	1/1	0.98	0.04	32,32,32,32	0
4	CL	D	302	1/1	0.99	0.03	33,33,33,33	0
4	CL	A	302	1/1	1.00	0.02	23,23,23,23	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

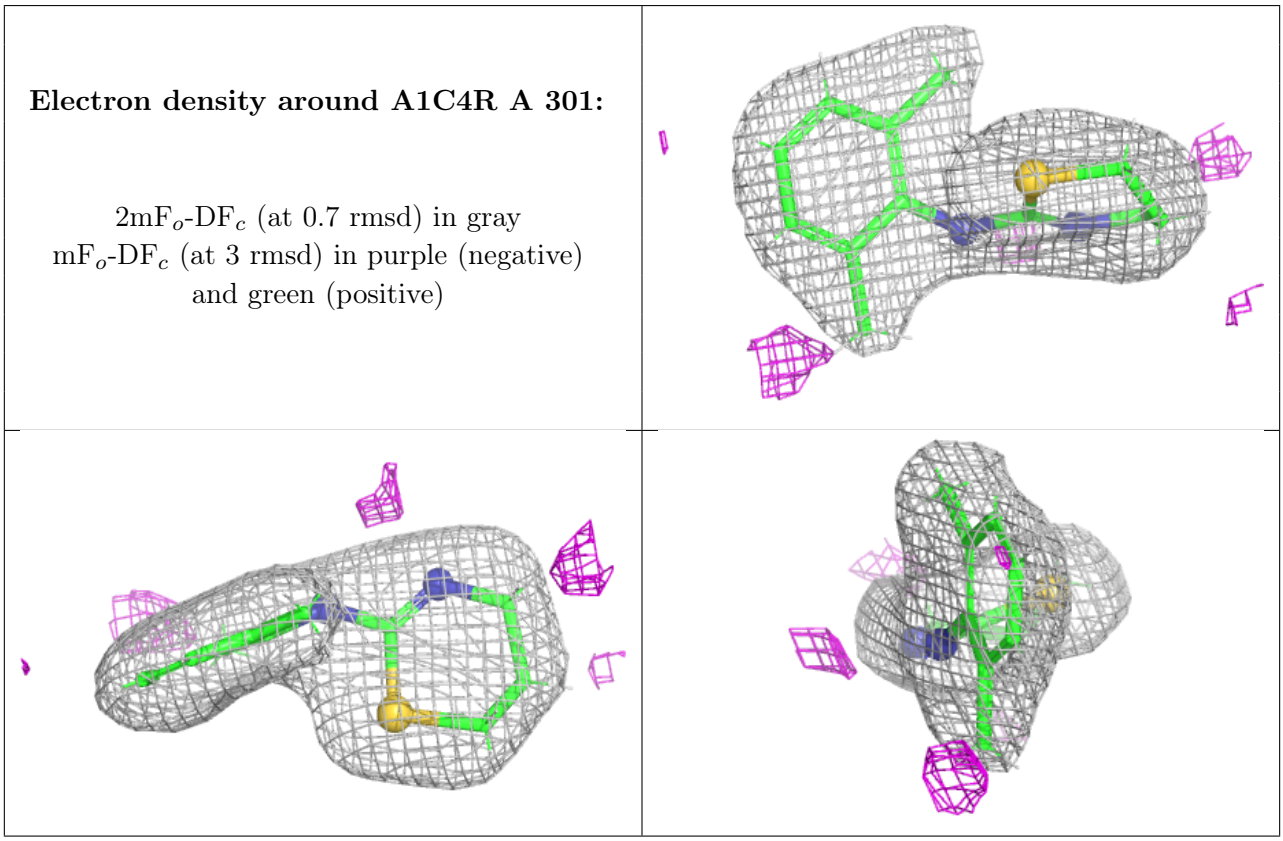
Electron density around A1C4R F 301:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



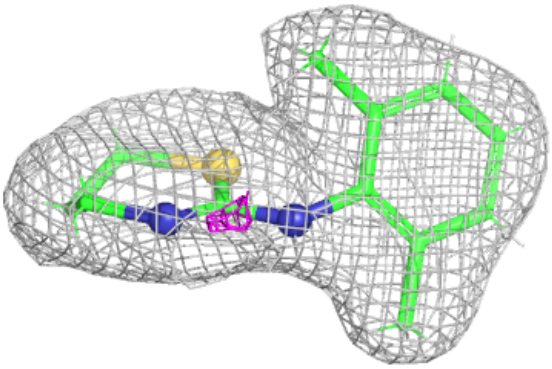
Electron density around A1C4R A 301:

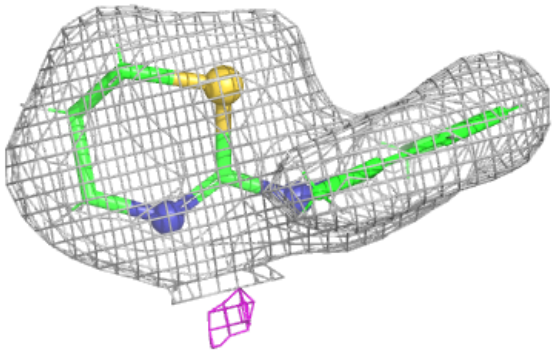
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

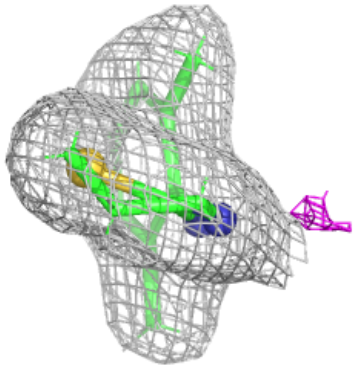


Electron density around A1C4R D 301:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

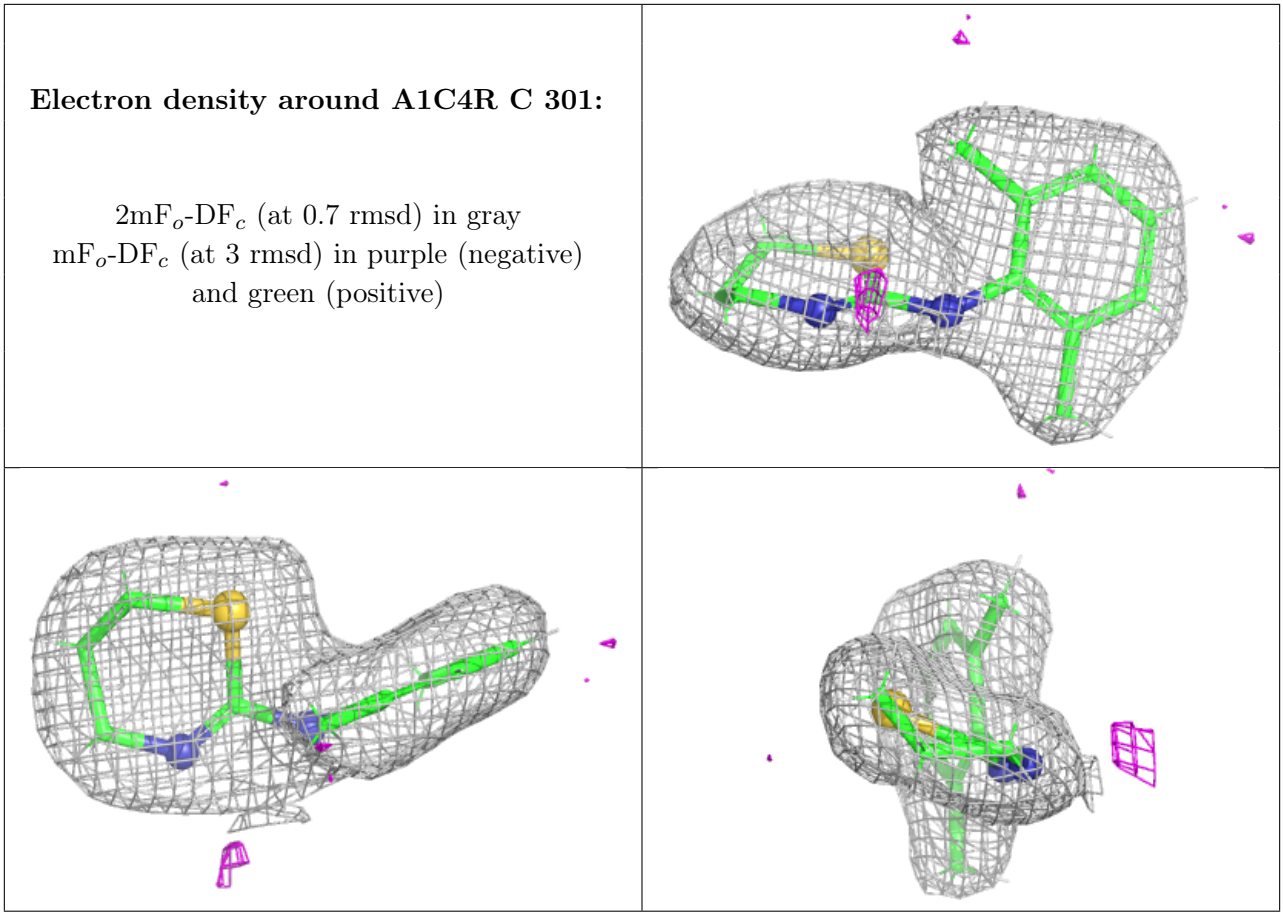






Electron density around A1C4R C 301:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers

There are no such residues in this entry.