Full wwPDB X-ray Structure Validation Report ⓘ

Oct 23, 2023 – 05:03 AM EDT

PDB ID	:	3GZJ
Title	:	Crystal Structure of Polyneuridine Aldehyde Esterase Complexed with 16-epi-Vellosimine
Authors	:	Yang, L.; Hill, M.; Wang, M.; Panjikar, S.; Stoeckigt, J.
Deposited on	:	2009-04-07
Resolution	:	2.19 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:

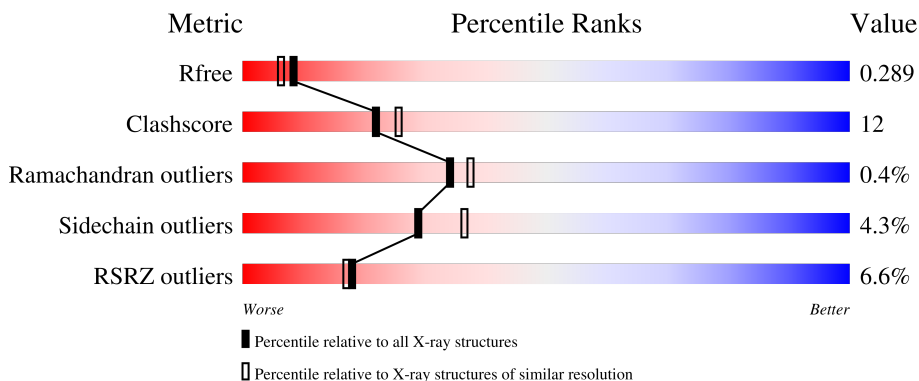|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.19 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	Percentile Ranks	Value
Rfree		0.289
Clashscore		12
Ramachandran outliers		0.4%
Sidechain outliers		4.3%
RSRZ outliers		6.6%

Worse　　　　　　　　　　　　　　　　　*Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

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	258	2% / 82% / 16% / ••
1	B	258	3% / 75% / 21% / ••
1	C	258	2% / 71% / 26% / ••
1	D	258	.% / 79% / 19% / ••
1	E	258	26% / 62% / 31% / 5% •

2 Entity composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 10318 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.
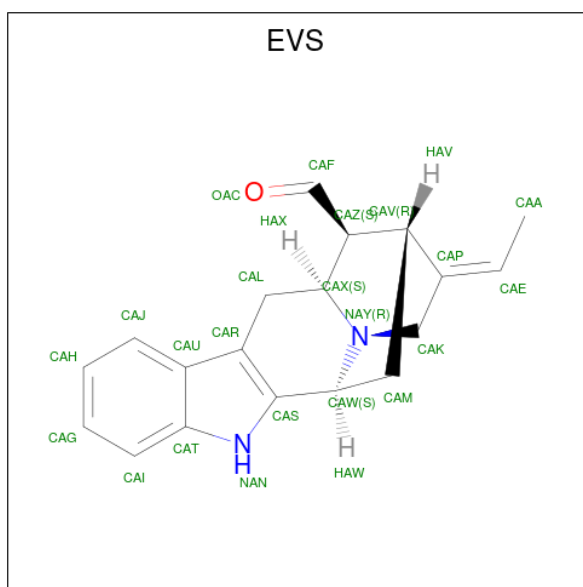
- Molecule 1 is a protein called Polyneuridine-aldehyde esterase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	254	Total	C	N	O	S	0	0	0
			1997	1282	324	369	22			
1	B	254	Total	C	N	O	S	0	0	0
			1997	1282	324	369	22			
1	C	254	Total	C	N	O	S	0	0	0
			1997	1282	324	369	22			
1	D	254	Total	C	N	O	S	0	0	0
			1997	1282	324	369	22			
1	E	254	Total	C	N	O	S	0	0	0
			1997	1282	324	369	22			

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	244	ALA	HIS	engineered mutation	UNP Q9SE93
B	244	ALA	HIS	engineered mutation	UNP Q9SE93
C	244	ALA	HIS	engineered mutation	UNP Q9SE93
D	244	ALA	HIS	engineered mutation	UNP Q9SE93
E	244	ALA	HIS	engineered mutation	UNP Q9SE93

- Molecule 2 is 16-epi-Vellosimine (three-letter code: EVS) (formula: $C_{19}H_{20}N_2O$).

EVS

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total 22	C 19	N 2	O 1	0	0
2	B	1	Total 22	C 19	N 2	O 1	0	0
2	C	1	Total 22	C 19	N 2	O 1	0	0
2	D	1	Total 22	C 19	N 2	O 1	0	0

- Molecule 3 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	56	Total 56	O 56	0	0
3	B	52	Total 52	O 52	0	0
3	C	56	Total 56	O 56	0	0
3	D	59	Total 59	O 59	0	0
3	E	22	Total 22	O 22	0	0

3 Residue-property plots ⓘ

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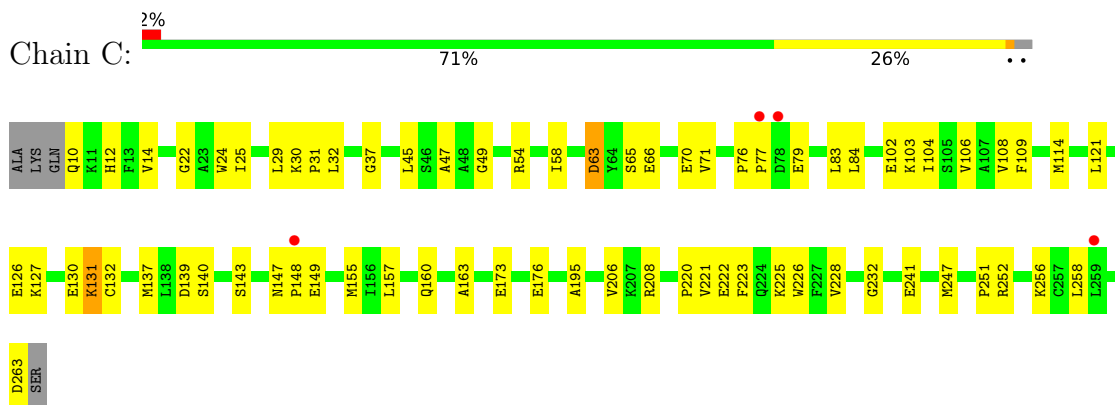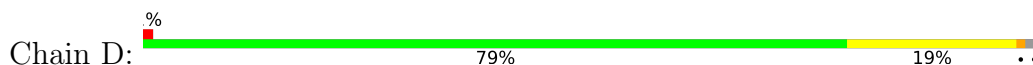
• Molecule 1: Polyneuridine-aldehyde esterase
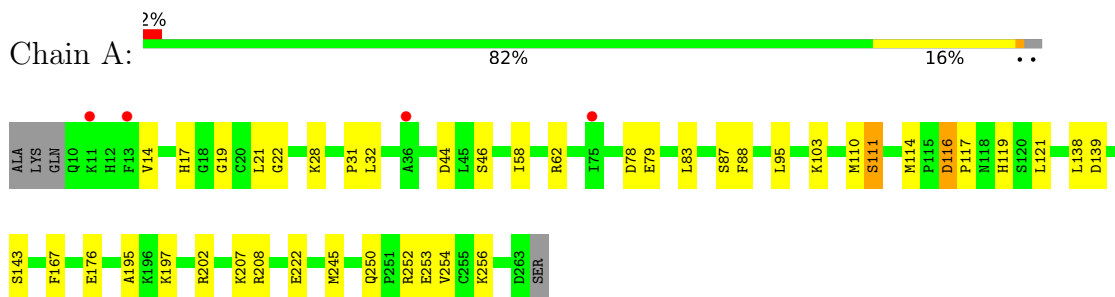
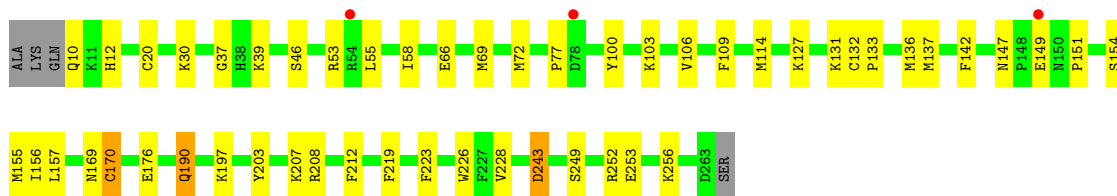• Molecule 1: Polyneuridine-aldehyde esterase
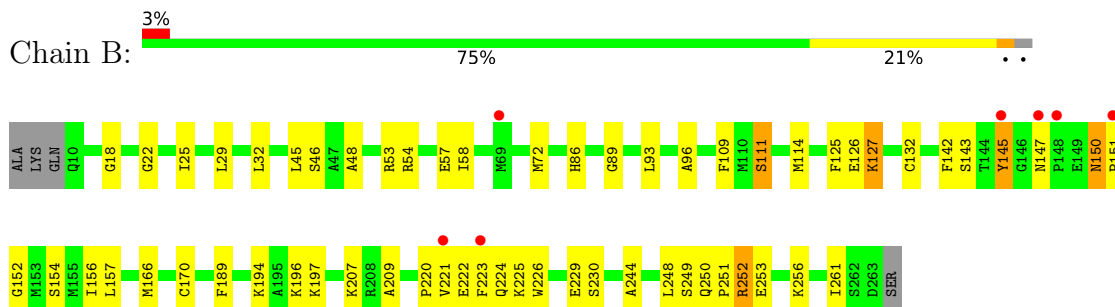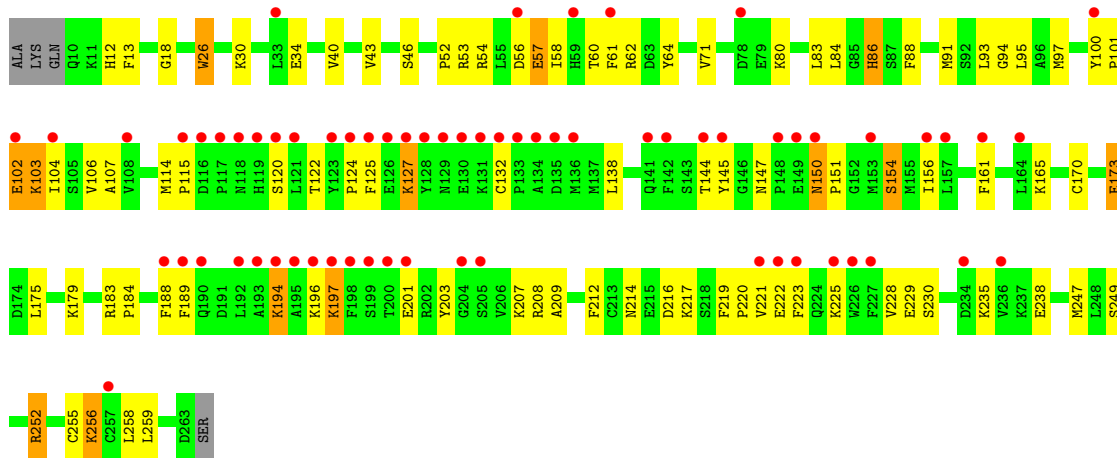

• Molecule 1: Polyneuridine-aldehyde esterase

• Molecule 1: Polyneuridine-aldehyde esterase

• Molecule 1: Polyneuridine-aldehyde esterase

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	171.21Å 44.61Å 180.41Å 90.00° 104.44° 90.00°	Depositor
Resolution (Å)	20.00 – 2.19 43.68 – 2.19	Depositor EDS
% Data completeness (in resolution range)	97.2 (20.00-2.19) 97.2 (43.68-2.19)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.08	Depositor
$< I/\sigma(I) >$ [1]	2.11 (at 2.20Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.209 , 0.278 0.233 , 0.289	Depositor DCC
R_{free} test set	3407 reflections (5.09%)	wwPDB-VP
Wilson B-factor (Å^2)	37.5	Xtriage
Anisotropy	0.111	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 47.5	EDS
L-test for twinning[2]	$< |L| > = 0.42, < L^2 > = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	10318	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.31% 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 (i)

5.1 Standard geometry (i)

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

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	0.87	1/2047 (0.0%)	0.88	2/2760 (0.1%)
1	B	0.89	1/2047 (0.0%)	0.87	1/2760 (0.0%)
1	C	0.82	0/2047	0.84	2/2760 (0.1%)
1	D	0.93	2/2047 (0.1%)	0.87	2/2760 (0.1%)
1	E	0.82	2/2047 (0.1%)	0.82	1/2760 (0.0%)
All	All	0.87	6/10235 (0.1%)	0.85	8/13800 (0.1%)

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	196	LYS	CE-NZ	6.97	1.66	1.49
1	E	196	LYS	CE-NZ	6.53	1.65	1.49
1	E	26	TRP	CE3-CZ3	6.11	1.48	1.38
1	D	170	CYS	CB-SG	-5.25	1.73	1.81
1	A	222	GLU	CG-CD	5.18	1.59	1.51
1	D	66	GLU	CB-CG	5.06	1.61	1.52

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	127	LYS	CD-CE-NZ	9.23	132.94	111.70
1	A	44	ASP	CB-CG-OD1	6.29	123.97	118.30
1	A	116	ASP	CB-CG-OD1	5.89	123.60	118.30
1	D	243	ASP	CB-CG-OD1	5.63	123.37	118.30
1	C	63	ASP	CB-CA-C	5.50	121.40	110.40
1	B	127	LYS	CA-CB-CG	-5.18	102.00	113.40
1	C	208	ARG	NE-CZ-NH1	5.17	122.89	120.30
1	D	69	MET	CG-SD-CE	-5.06	92.10	100.20

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	1997	0	1976	28	0
1	B	1997	0	1976	41	0
1	C	1997	0	1976	65	0
1	D	1997	0	1976	48	0
1	E	1997	0	1977	60	1
2	A	22	0	18	1	0
2	B	22	0	19	1	0
2	C	22	0	19	1	0
2	D	22	0	19	1	0
3	A	56	0	0	2	0
3	B	52	0	0	6	0
3	C	56	0	0	21	0
3	D	59	0	0	5	0
3	E	22	0	0	3	0
All	All	10318	0	9956	237	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 12.

All (237) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:49:GLY:HA2	3:C:318:HOH:O	1.11	1.25
1:B:93:LEU:HD13	3:B:267:HOH:O	1.38	1.19
1:D:133:PRO:HD2	1:D:136:MET:CE	1.79	1.12
1:B:252:ARG:HG2	1:B:252:ARG:HH11	1.23	1.00
1:D:133:PRO:HD2	1:D:136:MET:HE1	1.43	0.99
1:C:108:VAL:HG23	3:C:282:HOH:O	1.61	0.97
1:D:132:CYS:HB3	1:D:136:MET:HE2	1.50	0.93
1:E:252:ARG:O	1:E:256:LYS:HG2	1.74	0.88
1:D:133:PRO:HD2	1:D:136:MET:HE2	1.57	0.86
1:E:252:ARG:HD3	3:E:281:HOH:O	1.76	0.86

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:84:LEU:HD22	1:C:258:LEU:HD22	1.59	0.85
1:B:32:LEU:HD21	1:B:252:ARG:HH12	1.42	0.83
1:B:126:GLU:HG3	3:B:289:HOH:O	1.81	0.81
1:B:253:GLU:HG2	3:B:305:HOH:O	1.82	0.78
1:D:169:ASN:HB2	3:D:294:HOH:O	1.85	0.77
1:C:106:VAL:HA	3:C:304:HOH:O	1.85	0.76
1:C:66:GLU:O	1:C:70:GLU:HG3	1.87	0.75
1:D:132:CYS:HB3	1:D:136:MET:CE	2.16	0.74
1:D:137:MET:CE	1:D:155:MET:HE1	2.18	0.74
1:E:114:MET:HE2	1:E:208:ARG:HD2	1.69	0.74
1:E:114:MET:CE	1:E:208:ARG:HD2	2.18	0.73
1:A:79:GLU:O	1:A:103:LYS:NZ	2.16	0.71
1:C:127:LYS:HD3	1:C:226:TRP:CZ2	2.25	0.71
1:A:46:SER:HB3	1:A:58:ILE:CD1	2.21	0.71
1:D:10:GLN:HG3	1:D:37:GLY:O	1.90	0.70
1:E:84:LEU:HD22	1:E:258:LEU:HD22	1.71	0.70
1:C:173:GLU:OE2	3:C:308:HOH:O	2.10	0.69
1:B:252:ARG:HH11	1:B:252:ARG:CG	2.03	0.69
1:A:46:SER:HB3	1:A:58:ILE:HD11	1.73	0.68
1:E:138:LEU:HD11	1:E:165:LYS:HE2	1.76	0.68
1:C:220:PRO:HD2	1:C:223:PHE:CD2	2.29	0.68
1:C:147:ASN:C	1:C:149:GLU:H	1.98	0.67
1:C:14:VAL:HG22	3:C:279:HOH:O	1.94	0.67
1:D:253:GLU:HG2	3:D:314:HOH:O	1.94	0.66
1:E:220:PRO:HD2	1:E:223:PHE:CD2	2.30	0.66
1:D:55:LEU:HD12	3:D:310:HOH:O	1.95	0.65
1:E:93:LEU:O	1:E:97:MET:HG3	1.96	0.64
1:E:225:LYS:O	1:E:229:GLU:HG3	1.98	0.64
1:B:220:PRO:HD2	1:B:223:PHE:CD2	2.33	0.64
1:B:250:GLN:HB3	1:B:253:GLU:HG3	1.79	0.64
1:D:46:SER:HB3	1:D:58:ILE:HD11	1.80	0.63
1:D:137:MET:HE3	1:D:155:MET:HE1	1.81	0.63
1:C:228:VAL:O	1:C:232:GLY:HA2	1.99	0.63
1:D:77:PRO:HG2	3:D:305:HOH:O	1.98	0.62
1:B:225:LYS:O	1:B:229:GLU:HG3	1.99	0.62
1:D:190:GLN:CD	1:D:190:GLN:H	2.02	0.62
1:B:32:LEU:HD21	1:B:252:ARG:NH1	2.13	0.62
1:E:91:MET:HE1	1:E:124:PRO:HG3	1.82	0.62
1:D:127:LYS:HG3	1:D:226:TRP:CH2	2.34	0.62
1:C:83:LEU:HD11	1:C:104:ILE:HD13	1.81	0.61
1:D:46:SER:HB3	1:D:58:ILE:CD1	2.31	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:83:LEU:HD13	1:E:93:LEU:HG	1.82	0.60
1:B:253:GLU:CG	3:B:305:HOH:O	2.47	0.60
1:C:252:ARG:O	1:C:256:LYS:HG2	2.01	0.60
1:A:253:GLU:HG2	3:A:292:HOH:O	2.02	0.59
1:D:149:GLU:O	1:D:151:PRO:HD3	2.02	0.59
1:E:145:TYR:CD2	1:E:154:SER:HB3	2.37	0.59
1:E:175:LEU:O	1:E:179:LYS:HG3	2.03	0.59
1:A:32:LEU:HD21	1:A:252:ARG:HH11	1.67	0.59
1:A:114:MET:HE2	1:A:208:ARG:HB3	1.84	0.58
1:D:137:MET:SD	1:D:155:MET:CE	2.92	0.58
1:A:176:GLU:OE2	1:D:30:LYS:HE3	2.04	0.58
1:B:127:LYS:HD2	1:B:226:TRP:CE2	2.38	0.58
1:E:43:VAL:CG2	1:E:71:VAL:HG21	2.33	0.58
1:A:46:SER:CB	1:A:58:ILE:HD13	2.34	0.58
1:B:251:PRO:HD2	3:B:302:HOH:O	2.04	0.58
1:A:121:LEU:HD12	1:A:195:ALA:HB3	1.86	0.57
1:E:209:ALA:HA	1:E:235:LYS:O	2.04	0.57
1:C:106:VAL:HG13	3:C:282:HOH:O	2.04	0.57
1:E:132:CYS:SG	1:E:223:PHE:CE2	2.97	0.57
1:C:47:ALA:CB	1:C:58:ILE:HD12	2.35	0.56
1:C:83:LEU:HD11	1:C:104:ILE:CD1	2.36	0.56
1:B:170:CYS:SG	1:B:249:SER:HB3	2.45	0.56
1:D:137:MET:CE	1:D:155:MET:CE	2.83	0.56
1:C:220:PRO:HD2	1:C:223:PHE:CE2	2.41	0.56
1:B:252:ARG:O	1:B:256:LYS:HG2	2.05	0.56
1:C:83:LEU:CD1	1:C:104:ILE:HD13	2.35	0.56
1:C:76:PRO:HB2	1:C:79:GLU:OE2	2.05	0.55
1:E:132:CYS:SG	1:E:223:PHE:HE2	2.29	0.55
1:B:125:PHE:HA	2:B:1000:EVS:HAG	1.89	0.55
1:B:252:ARG:HG2	1:B:252:ARG:NH1	2.05	0.55
1:D:252:ARG:O	1:D:256:LYS:HE2	2.07	0.55
1:C:132:CYS:SG	1:C:223:PHE:CZ	3.00	0.54
1:E:120:SER:HA	1:E:197:LYS:HD3	1.89	0.54
1:C:127:LYS:HD3	1:C:226:TRP:CE2	2.43	0.54
1:E:80:LYS:HE2	1:E:102:GLU:O	2.07	0.54
1:B:46:SER:HB3	1:B:58:ILE:HD13	1.88	0.54
1:C:24:TRP:CD1	3:C:318:HOH:O	2.53	0.54
1:C:221:VAL:O	1:C:225:LYS:HD2	2.07	0.54
1:C:121:LEU:HD12	1:C:195:ALA:HB3	1.90	0.54
1:C:131:LYS:HD2	1:C:222:GLU:OE2	2.09	0.53
1:D:133:PRO:CD	1:D:136:MET:HE1	2.28	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:46:SER:HB2	1:E:64:TYR:HA	1.91	0.53
1:E:145:TYR:HD2	1:E:154:SER:HB3	1.74	0.53
1:D:127:LYS:O	1:D:131:LYS:HG3	2.09	0.53
1:C:47:ALA:HB2	1:C:58:ILE:CD1	2.39	0.52
1:C:108:VAL:CG2	3:C:282:HOH:O	2.36	0.52
1:D:137:MET:SD	1:D:155:MET:HE1	2.49	0.52
1:E:97:MET:O	1:E:101:PRO:HB3	2.10	0.52
1:A:119:HIS:O	1:A:197:LYS:HD2	2.10	0.52
1:C:222:GLU:HB3	3:C:306:HOH:O	2.11	0.51
1:A:114:MET:CE	1:A:208:ARG:HB3	2.41	0.51
1:D:131:LYS:HD2	1:D:223:PHE:CE1	2.46	0.51
1:D:203:TYR:C	1:D:203:TYR:CD2	2.84	0.51
1:A:62:ARG:HG3	1:A:95:LEU:HD21	1.93	0.51
1:A:78:ASP:HB2	3:A:297:HOH:O	2.10	0.51
1:D:147:ASN:C	1:D:149:GLU:H	2.14	0.50
1:E:30:LYS:HG3	1:E:40:VAL:HG11	1.94	0.50
1:E:94:GLY:HA3	1:E:115:PRO:HG2	1.93	0.50
1:A:250:GLN:O	1:A:254:VAL:HG23	2.12	0.50
1:C:126:GLU:HG2	3:C:286:HOH:O	2.11	0.50
1:C:47:ALA:HB2	1:C:58:ILE:HD12	1.94	0.50
1:D:12:HIS:CD2	1:D:39:LYS:HG2	2.46	0.50
1:C:220:PRO:HD2	1:C:223:PHE:HD2	1.77	0.49
1:E:91:MET:HE3	1:E:124:PRO:HG2	1.93	0.49
1:E:97:MET:HA	1:E:104:ILE:HD12	1.94	0.49
1:E:62:ARG:HH12	1:E:95:LEU:HD11	1.78	0.49
1:E:170:CYS:SG	1:E:249:SER:HB3	2.53	0.49
1:C:49:GLY:CA	3:C:318:HOH:O	1.96	0.49
1:C:47:ALA:CB	1:C:58:ILE:CD1	2.91	0.48
1:C:24:TRP:HD1	3:C:318:HOH:O	1.91	0.48
1:C:10:GLN:HG3	1:C:37:GLY:O	2.13	0.48
1:C:22:GLY:O	1:C:25:ILE:HG12	2.12	0.48
1:C:102:GLU:CD	1:C:102:GLU:H	2.16	0.48
1:D:147:ASN:OD1	1:D:149:GLU:HG2	2.13	0.48
1:B:150:ASN:N	1:B:151:PRO:HD3	2.28	0.48
1:B:22:GLY:O	1:B:25:ILE:HG12	2.14	0.48
1:E:214:ASN:ND2	1:E:238:GLU:OE1	2.42	0.48
1:D:114:MET:HE2	1:D:208:ARG:HB3	1.96	0.48
1:E:91:MET:HE1	1:E:124:PRO:CG	2.44	0.48
1:E:91:MET:CE	1:E:124:PRO:CG	2.92	0.48
1:D:142:PHE:HA	1:D:154:SER:O	2.14	0.47
1:C:126:GLU:HA	3:C:286:HOH:O	2.13	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:109:PHE:CD2	1:B:114:MET:HE2	2.49	0.47
1:D:72:MET:HB3	1:D:100:TYR:CD2	2.49	0.47
1:B:157:LEU:HD13	1:B:166:MET:SD	2.54	0.47
1:C:139:ASP:CG	1:C:160:GLN:HB2	2.35	0.47
1:C:126:GLU:N	3:C:286:HOH:O	2.47	0.47
1:E:125:PHE:CD1	1:E:189:PHE:HD1	2.33	0.47
1:E:212:PHE:CZ	1:E:228:VAL:HG21	2.50	0.46
1:A:167:PHE:CE1	1:A:245:MET:HG3	2.50	0.46
1:C:31:PRO:HB2	3:E:265:HOH:O	2.15	0.46
1:A:46:SER:HB2	1:A:58:ILE:HD13	1.98	0.46
1:B:72:MET:HG3	1:B:96:ALA:HB1	1.98	0.46
1:C:109:PHE:HB2	1:C:114:MET:HE3	1.99	0.45
1:C:126:GLU:CA	3:C:286:HOH:O	2.64	0.45
1:C:147:ASN:C	1:C:149:GLU:N	2.68	0.45
1:A:19:GLY:O	1:A:21:LEU:CD2	2.64	0.45
1:A:88:PHE:H	2:A:1000:EVS:CAF	2.29	0.45
1:B:45:LEU:O	1:B:48:ALA:HB3	2.17	0.45
1:D:109:PHE:CD2	1:D:114:MET:HE2	2.51	0.45
1:E:80:LYS:HA	1:E:103:LYS:O	2.17	0.45
1:B:209:ALA:HB1	1:B:261:ILE:HD13	1.98	0.45
1:A:138:LEU:HB3	1:A:139:ASP:H	1.59	0.45
1:E:97:MET:HA	1:E:104:ILE:CD1	2.47	0.45
1:A:19:GLY:O	1:A:21:LEU:HD23	2.17	0.45
1:A:110:MET:O	1:A:111:SER:C	2.55	0.45
1:C:84:LEU:HD22	1:C:258:LEU:CD2	2.38	0.45
1:B:109:PHE:CD2	1:B:114:MET:CE	3.00	0.45
1:C:12:HIS:CE1	3:C:279:HOH:O	2.70	0.45
1:D:106:VAL:HG23	1:D:207:LYS:HG2	1.99	0.45
1:E:53:ARG:HB3	1:E:57:GLU:OE1	2.17	0.45
1:E:122:THR:O	1:E:125:PHE:HB2	2.17	0.45
1:E:150:ASN:N	1:E:151:PRO:HD3	2.33	0.44
1:B:46:SER:HB3	1:B:58:ILE:CD1	2.45	0.44
1:D:190:GLN:CD	1:D:190:GLN:N	2.71	0.44
1:E:61:PHE:O	1:E:64:TYR:HB3	2.17	0.44
1:C:45:LEU:HD22	1:C:65:SER:HA	1.99	0.44
1:E:84:LEU:HD22	1:E:258:LEU:CD2	2.43	0.44
1:E:30:LYS:HE3	1:E:34:GLU:OE2	2.17	0.44
1:C:47:ALA:HB3	1:C:58:ILE:HD12	1.99	0.44
1:E:18:GLY:H	1:E:86:HIS:CD2	2.36	0.44
1:A:202:ARG:NH1	1:A:202:ARG:HG2	2.33	0.44
1:B:89:GLY:O	3:B:267:HOH:O	2.21	0.44

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:77:PRO:HA	1:D:103:LYS:NZ	2.32	0.44
1:B:132:CYS:SG	1:B:223:PHE:CE2	3.11	0.44
1:E:138:LEU:HD12	1:E:161:PHE:HA	1.99	0.44
1:B:166:MET:HA	1:B:244:ALA:HB3	2.00	0.43
1:C:206:VAL:CG1	3:C:304:HOH:O	2.65	0.43
1:B:53:ARG:HB3	1:B:58:ILE:HD11	2.01	0.43
1:E:100:TYR:HB3	1:E:103:LYS:HG3	1.98	0.43
1:A:14:VAL:HB	1:A:83:LEU:HD23	2.00	0.43
1:A:31:PRO:HD3	1:D:176:GLU:HG2	2.00	0.43
1:D:147:ASN:O	1:D:149:GLU:N	2.51	0.43
1:E:144:THR:HB	1:E:151:PRO:HB2	2.00	0.43
1:E:173:GLU:H	1:E:173:GLU:CD	2.21	0.43
1:B:25:ILE:O	1:B:248:LEU:HD21	2.19	0.43
1:C:22:GLY:HA3	3:C:318:HOH:O	2.18	0.43
1:C:247:MET:O	1:C:251:PRO:HB3	2.18	0.43
1:C:30:LYS:HB3	1:C:31:PRO:HD3	2.01	0.43
1:C:176:GLU:OE2	1:E:30:LYS:HE2	2.17	0.43
1:B:29:LEU:O	1:B:32:LEU:HB2	2.19	0.43
1:C:137:MET:CE	1:C:155:MET:CE	2.96	0.42
1:B:32:LEU:HD23	1:B:32:LEU:HA	1.85	0.42
1:C:163:ALA:O	3:C:295:HOH:O	2.22	0.42
1:E:203:TYR:CD2	1:E:203:TYR:C	2.92	0.42
1:A:252:ARG:O	1:A:256:LYS:HD3	2.19	0.42
1:A:138:LEU:HA	1:B:142:PHE:HB2	2.02	0.42
1:B:111:SER:HB3	1:B:224:GLN:CD	2.40	0.42
1:D:243:ASP:N	3:D:294:HOH:O	2.53	0.42
1:A:116:ASP:HA	1:A:117:PRO:HD2	1.87	0.42
1:B:54:ARG:O	1:B:57:GLU:HG2	2.20	0.42
1:D:147:ASN:C	1:D:149:GLU:N	2.73	0.42
1:E:26:TRP:CE3	1:E:247:MET:HG3	2.55	0.41
1:E:30:LYS:HG3	1:E:40:VAL:CG1	2.50	0.41
1:E:54:ARG:O	1:E:57:GLU:CG	2.67	0.41
1:D:170:CYS:SG	1:D:249:SER:HB3	2.60	0.41
1:E:12:HIS:C	1:E:12:HIS:CD2	2.93	0.41
1:B:18:GLY:H	1:B:86:HIS:CD2	2.36	0.41
1:E:58:ILE:HG22	1:E:188:PHE:CZ	2.55	0.41
1:E:83:LEU:HB2	1:E:107:ALA:HA	2.02	0.41
1:B:125:PHE:CD1	1:B:189:PHE:HD1	2.38	0.41
1:C:137:MET:HB3	1:C:140:SER:HB2	2.02	0.41
1:C:147:ASN:O	1:C:149:GLU:N	2.48	0.41
1:C:54:ARG:CZ	1:E:52:PRO:HB3	2.49	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:20:CYS:HB2	1:D:157:LEU:HD11	2.03	0.41
1:D:157:LEU:HD21	2:D:1000:EVS:HAA	2.02	0.41
1:E:183:ARG:HB2	3:E:277:HOH:O	2.20	0.41
1:D:114:MET:CE	1:D:208:ARG:HB3	2.50	0.41
1:D:156:ILE:O	1:D:156:ILE:HG13	2.21	0.41
1:E:255:CYS:O	1:E:259:LEU:HG	2.20	0.41
1:C:29:LEU:O	1:C:32:LEU:HB2	2.21	0.41
1:C:157:LEU:HD21	2:C:1000:EVS:CAE	2.50	0.41
1:D:109:PHE:CD2	1:D:114:MET:HG3	2.56	0.41
1:B:145:TYR:HE2	1:B:152:GLY:HA3	1.86	0.41
1:C:77:PRO:HA	1:C:103:LYS:HZ2	1.86	0.41
1:B:32:LEU:CD2	1:B:252:ARG:HH12	2.24	0.41
1:C:77:PRO:HA	1:C:103:LYS:NZ	2.36	0.41
1:C:71:VAL:CG1	3:C:279:HOH:O	2.69	0.40
1:C:206:VAL:HG13	3:C:304:HOH:O	2.21	0.40
1:E:216:ASP:OD1	1:E:217:LYS:N	2.54	0.40
1:D:252:ARG:O	1:D:256:LYS:HG2	2.21	0.40
1:E:156:ILE:HG22	1:E:184:PRO:HA	2.03	0.40
1:A:17:HIS:CD2	1:A:22:GLY:HA2	2.56	0.40
1:C:256:LYS:HD3	1:C:256:LYS:HA	1.86	0.40
1:E:13:PHE:CE1	1:E:258:LEU:HG	2.55	0.40
1:D:212:PHE:CZ	1:D:228:VAL:HG21	2.57	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:194:LYS:NZ	1:E:201:GLU:O[4_555]	1.71	0.49

5.3   Torsion angles ⓘ

5.3.1   Protein backbone ⓘ

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

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	252/258 (98%)	244 (97%)	8 (3%)	0	100	100
1	B	252/258 (98%)	241 (96%)	10 (4%)	1 (0%)	34	37
1	C	252/258 (98%)	241 (96%)	10 (4%)	1 (0%)	34	37
1	D	252/258 (98%)	240 (95%)	12 (5%)	0	100	100
1	E	252/258 (98%)	238 (94%)	11 (4%)	3 (1%)	13	10
All	All	1260/1290 (98%)	1204 (96%)	51 (4%)	5 (0%)	34	37

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	57	GLU
1	E	56	ASP
1	E	88	PHE
1	B	111	SER
1	C	148	PRO

5.3.2　Protein sidechains ⓘ

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

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	220/223 (99%)	215 (98%)	5 (2%)	50	63
1	B	220/223 (99%)	207 (94%)	13 (6%)	19	23
1	C	220/223 (99%)	214 (97%)	6 (3%)	44	57
1	D	220/223 (99%)	216 (98%)	4 (2%)	59	72
1	E	220/223 (99%)	201 (91%)	19 (9%)	10	10
All	All	1100/1115 (99%)	1053 (96%)	47 (4%)	29	36

All (47) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	28	LYS
1	A	87	SER
1	A	111	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	143	SER
1	A	207	LYS
1	B	143	SER
1	B	145	TYR
1	B	147	ASN
1	B	150	ASN
1	B	154	SER
1	B	156	ILE
1	B	194	LYS
1	B	197	LYS
1	B	207	LYS
1	B	221	VAL
1	B	222	GLU
1	B	230	SER
1	B	252	ARG
1	C	63	ASP
1	C	130	GLU
1	C	131	LYS
1	C	143	SER
1	C	241	GLU
1	C	263	ASP
1	D	53	ARG
1	D	190	GLN
1	D	197	LYS
1	D	219	PHE
1	E	60	THR
1	E	86	HIS
1	E	102	GLU
1	E	103	LYS
1	E	106	VAL
1	E	127	LYS
1	E	147	ASN
1	E	150	ASN
1	E	154	SER
1	E	173	GLU
1	E	194	LYS
1	E	197	LYS
1	E	207	LYS
1	E	219	PHE
1	E	221	VAL
1	E	222	GLU
1	E	230	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	252	ARG
1	E	256	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	E	190	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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

4 ligands are modelled in this entry.

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	EVS	D	1000	-	22,26,26	3.60	11 (50%)	26,40,40	2.75	8 (30%)
2	EVS	C	1000	-	22,26,26	3.29	9 (40%)	26,40,40	2.45	9 (34%)
2	EVS	A	1000	-	22,26,26	3.51	11 (50%)	26,40,40	2.75	8 (30%)
2	EVS	B	1000	-	22,26,26	3.73	12 (54%)	26,40,40	2.88	9 (34%)

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	EVS	D	1000	-	-	1/4/40/40	-
2	EVS	C	1000	-	-	1/4/40/40	-
2	EVS	A	1000	-	-	1/4/40/40	-
2	EVS	B	1000	-	-	2/4/40/40	-

All (43) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1000	EVS	CAL-CAR	-9.09	1.40	1.51
2	D	1000	EVS	CAL-CAR	-8.49	1.41	1.51
2	B	1000	EVS	CAV-CAP	-8.21	1.38	1.52
2	A	1000	EVS	CAV-CAP	-7.51	1.39	1.52
2	C	1000	EVS	CAV-CAP	-7.33	1.39	1.52
2	C	1000	EVS	CAL-CAR	-7.29	1.42	1.51
2	D	1000	EVS	CAV-CAP	-6.92	1.40	1.52
2	A	1000	EVS	OAC-CAF	6.77	1.47	1.19
2	D	1000	EVS	OAC-CAF	6.61	1.46	1.19
2	D	1000	EVS	CAE-CAP	6.56	1.41	1.33
2	A	1000	EVS	CAL-CAR	-6.21	1.44	1.51
2	A	1000	EVS	CAE-CAP	6.13	1.41	1.33
2	C	1000	EVS	OAC-CAF	6.00	1.43	1.19
2	B	1000	EVS	OAC-CAF	5.79	1.43	1.19
2	B	1000	EVS	CAI-CAT	-5.16	1.32	1.41
2	C	1000	EVS	CAK-CAP	-4.52	1.42	1.51
2	C	1000	EVS	CAE-CAP	4.51	1.39	1.33
2	B	1000	EVS	CAE-CAP	4.13	1.38	1.33
2	C	1000	EVS	CAI-CAT	-4.08	1.34	1.41
2	A	1000	EVS	CAI-CAT	-4.01	1.34	1.41
2	A	1000	EVS	CAK-CAP	-3.72	1.44	1.51
2	B	1000	EVS	CAK-CAP	-3.62	1.44	1.51
2	D	1000	EVS	CAK-CAP	-3.62	1.44	1.51
2	A	1000	EVS	CAU-CAT	-3.56	1.33	1.42
2	A	1000	EVS	CAJ-CAU	-3.30	1.35	1.42
2	B	1000	EVS	CAR-CAS	-3.29	1.34	1.39
2	D	1000	EVS	CAU-CAT	-3.26	1.33	1.42
2	B	1000	EVS	CAM-CAW	3.17	1.57	1.53
2	C	1000	EVS	CAJ-CAU	-3.15	1.35	1.42
2	D	1000	EVS	CAJ-CAU	-2.95	1.36	1.42
2	B	1000	EVS	CAG-CAI	2.95	1.43	1.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1000	EVS	CAW-NAY	2.89	1.52	1.48
2	D	1000	EVS	CAW-NAY	2.86	1.52	1.48
2	D	1000	EVS	CAH-CAJ	2.72	1.42	1.36
2	D	1000	EVS	CAI-CAT	-2.72	1.37	1.41
2	C	1000	EVS	CAU-CAT	-2.66	1.35	1.42
2	B	1000	EVS	CAJ-CAU	-2.57	1.37	1.42
2	B	1000	EVS	CAZ-CAF	2.54	1.54	1.50
2	D	1000	EVS	CAK-NAY	2.50	1.52	1.48
2	C	1000	EVS	CAR-CAS	-2.25	1.35	1.39
2	A	1000	EVS	CAZ-CAF	2.22	1.53	1.50
2	A	1000	EVS	CAL-CAX	2.20	1.58	1.54
2	B	1000	EVS	CAU-CAT	-2.16	1.36	1.42

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	1000	EVS	OAC-CAF-CAZ	-7.78	105.56	125.23
2	D	1000	EVS	CAL-CAX-CAZ	7.40	124.92	113.55
2	B	1000	EVS	CAV-CAZ-CAF	7.21	116.81	109.58
2	B	1000	EVS	OAC-CAF-CAZ	-7.11	107.25	125.23
2	D	1000	EVS	OAC-CAF-CAZ	-6.99	107.56	125.23
2	A	1000	EVS	OAC-CAF-CAZ	-6.64	108.43	125.23
2	A	1000	EVS	CAA-CAE-CAP	-5.85	115.94	127.22
2	C	1000	EVS	CAA-CAE-CAP	-5.81	116.02	127.22
2	A	1000	EVS	CAV-CAZ-CAF	5.75	115.34	109.58
2	A	1000	EVS	CAZ-CAV-CAP	-5.61	96.37	110.01
2	B	1000	EVS	CAA-CAE-CAP	-5.41	116.79	127.22
2	B	1000	EVS	CAZ-CAV-CAP	-5.26	97.22	110.01
2	D	1000	EVS	CAA-CAE-CAP	-4.97	117.65	127.22
2	D	1000	EVS	CAZ-CAV-CAP	-4.07	100.12	110.01
2	A	1000	EVS	CAL-CAX-CAZ	3.73	119.27	113.55
2	B	1000	EVS	CAL-CAX-CAZ	3.69	119.22	113.55
2	C	1000	EVS	CAV-CAZ-CAF	3.47	113.06	109.58
2	C	1000	EVS	CAZ-CAV-CAP	-3.40	101.76	110.01
2	D	1000	EVS	CAK-NAY-CAW	3.32	113.73	108.80
2	B	1000	EVS	CAM-CAV-CAP	-3.03	105.64	109.13
2	D	1000	EVS	CAV-CAZ-CAF	2.93	112.52	109.58
2	B	1000	EVS	CAJ-CAU-CAT	2.86	121.96	118.17
2	D	1000	EVS	CAH-CAG-CAI	-2.79	116.53	120.44
2	A	1000	EVS	CAG-CAH-CAJ	-2.59	116.81	120.44
2	C	1000	EVS	CAL-CAX-CAZ	2.52	117.43	113.55
2	A	1000	EVS	CAJ-CAU-CAT	2.38	121.32	118.17

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	1000	EVS	CAV-CAP-CAE	-2.36	120.81	124.84
2	D	1000	EVS	CAG-CAI-CAT	2.30	123.39	120.08
2	B	1000	EVS	CAG-CAH-CAJ	-2.23	117.32	120.44
2	C	1000	EVS	CAG-CAH-CAJ	-2.20	117.36	120.44
2	C	1000	EVS	CAJ-CAU-CAT	2.18	121.06	118.17
2	C	1000	EVS	CAM-CAV-CAP	-2.10	106.71	109.13
2	B	1000	EVS	CAV-CAP-CAE	-2.04	121.36	124.84
2	C	1000	EVS	CAV-CAP-CAE	-2.01	121.42	124.84

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	1000	EVS	OAC-CAF-CAZ-CAV
2	B	1000	EVS	OAC-CAF-CAZ-CAX
2	C	1000	EVS	OAC-CAF-CAZ-CAX
2	A	1000	EVS	OAC-CAF-CAZ-CAX
2	D	1000	EVS	OAC-CAF-CAZ-CAX

There are no ring outliers.

4 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	1000	EVS	1	0
2	C	1000	EVS	1	0
2	A	1000	EVS	1	0
2	B	1000	EVS	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.

Full wwPDB X-ray Structure Validation Report

Ligand EVS D 1000

Bond lengths

Bond angles

Torsions

Rings

Ligand EVS C 1000

Bond lengths

Bond angles

Torsions

Rings

Ligand EVS A 1000

Bond lengths

Bond angles

Torsions

Rings

Ligand EVS B 1000

Bond lengths

Bond angles

Torsions

Rings
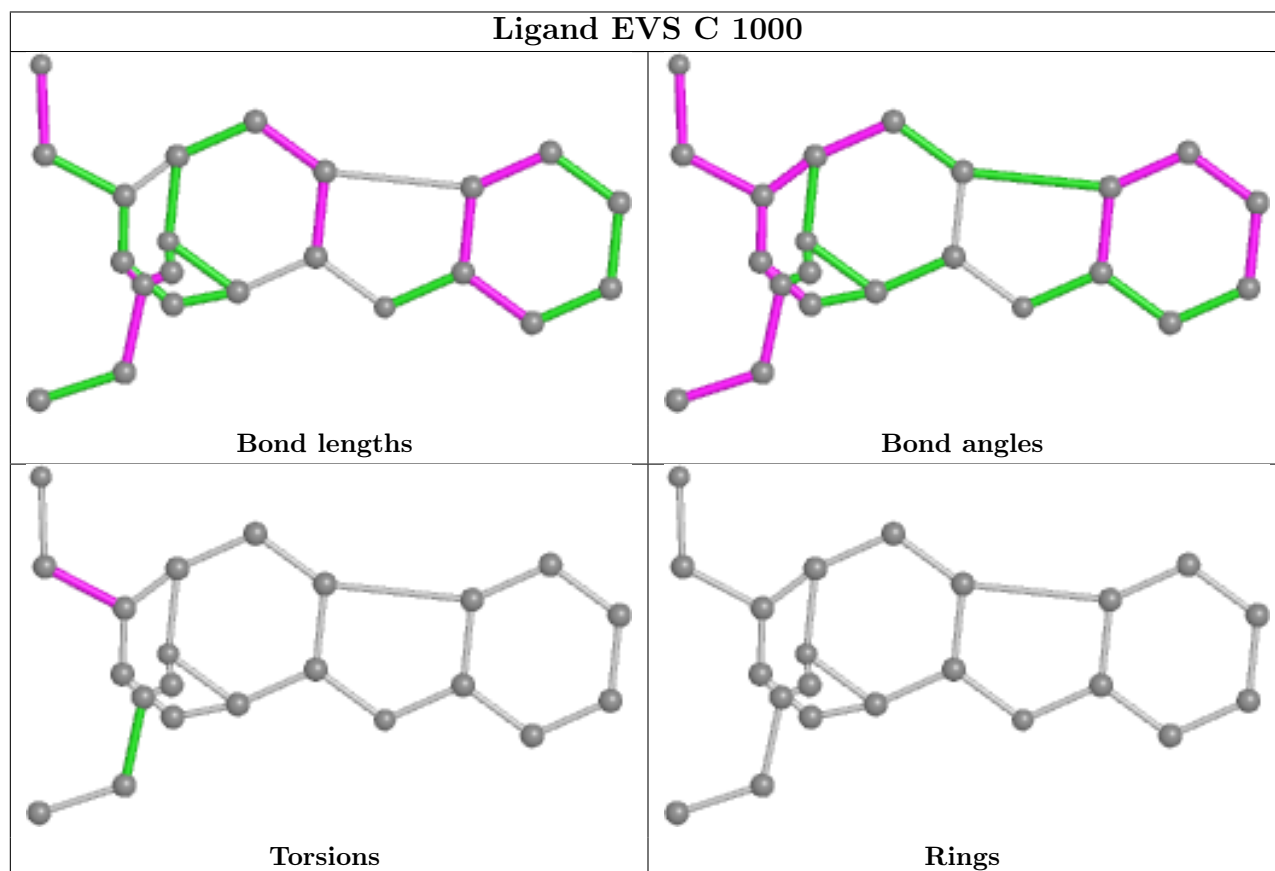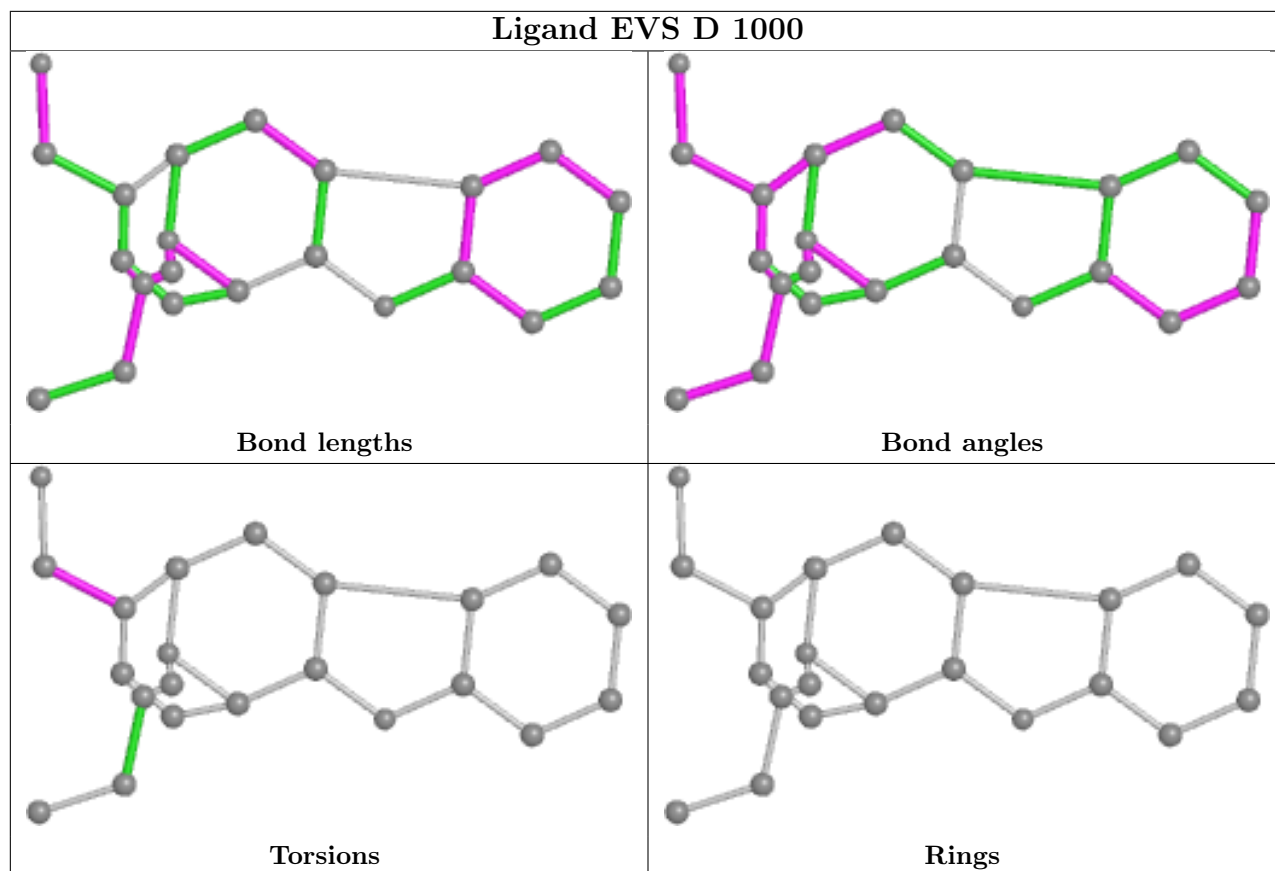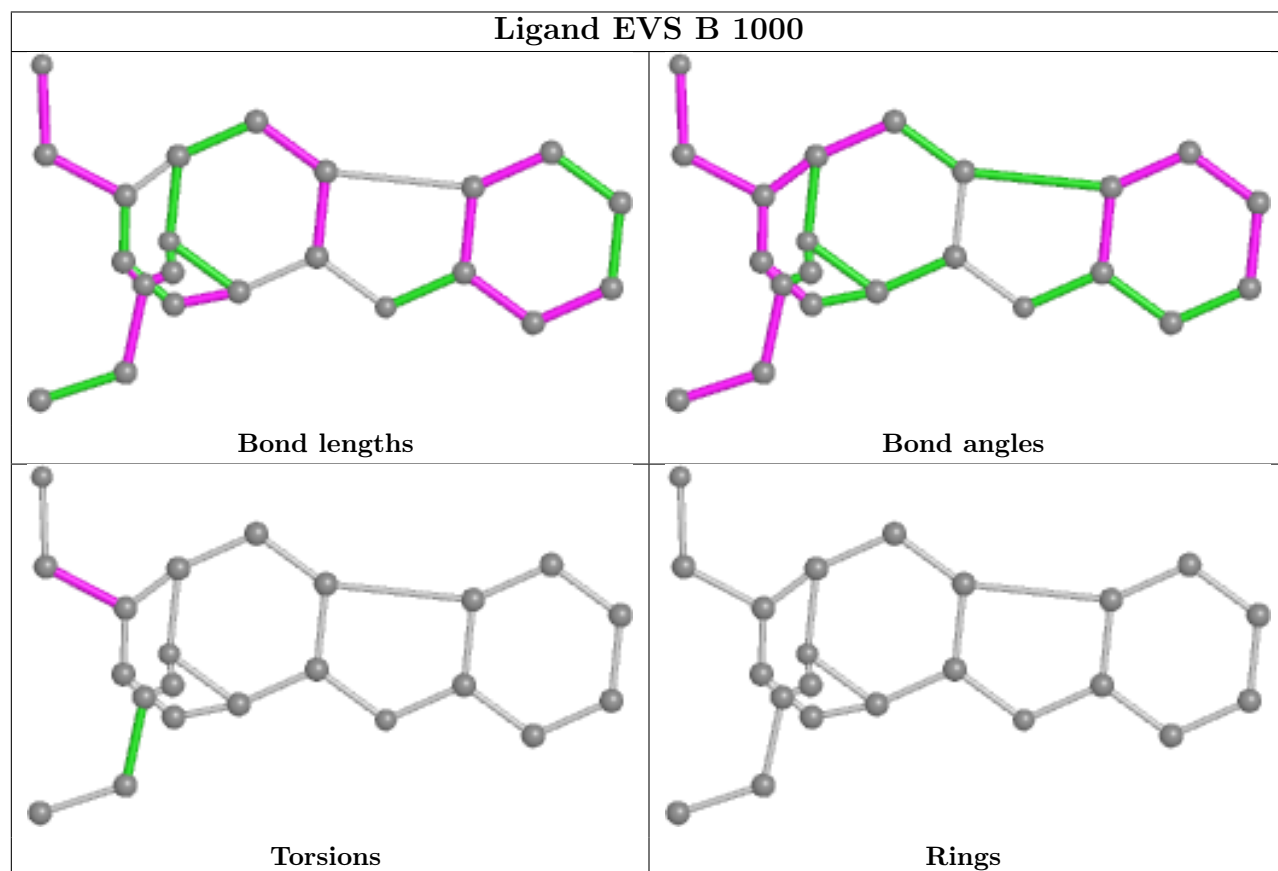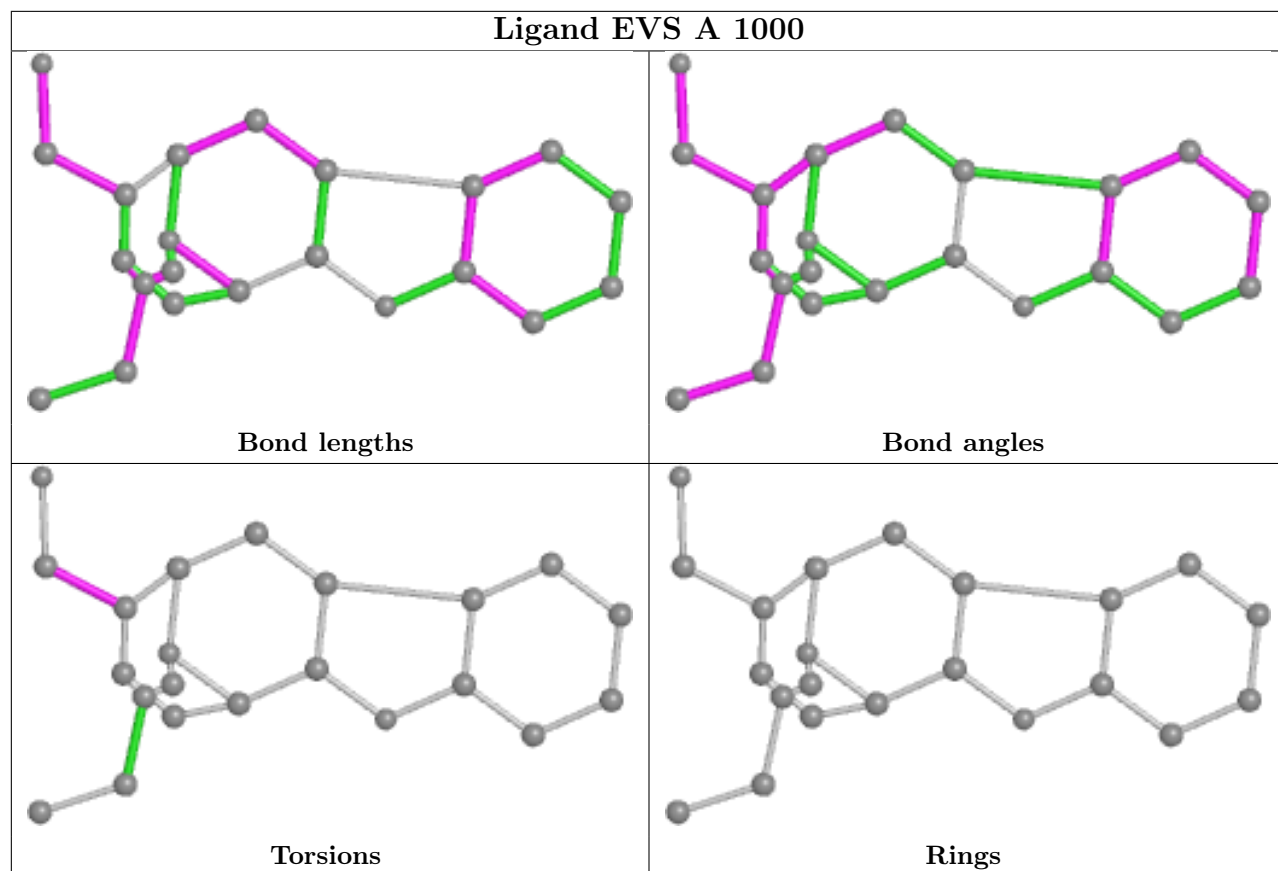
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	254/258 (98%)	0.48	4 (1%)	72	70	16, 25, 36, 52	0
1	B	254/258 (98%)	0.56	7 (2%)	53	51	14, 26, 40, 48	0
1	C	254/258 (98%)	0.47	4 (1%)	72	70	18, 27, 36, 43	0
1	D	254/258 (98%)	0.28	3 (1%)	79	77	14, 21, 34, 50	0
1	E	254/258 (98%)	1.54	66 (25%)	0	0	17, 34, 43, 48	0
All	All	1270/1290 (98%)	0.67	84 (6%)	18	17	14, 26, 40, 52	0

All (84) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	134	ALA	12.6
1	E	223	PHE	7.6
1	E	132	CYS	7.3
1	E	125	PHE	7.0
1	E	198	PHE	6.8
1	E	133	PRO	6.5
1	E	120	SER	6.3
1	B	148	PRO	6.2
1	E	190	GLN	6.0
1	E	149	GLU	5.5
1	E	150	ASN	5.4
1	E	128	TYR	5.2
1	E	189	PHE	5.1
1	E	129	ASN	5.1
1	E	123	TYR	5.0
1	E	153	MET	5.0
1	E	193	ALA	4.9
1	E	136	MET	4.8
1	E	227	PHE	4.7
1	E	204	GLY	4.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	124	PRO	4.4
1	E	226	TRP	4.4
1	E	126	GLU	4.3
1	E	135	ASP	4.2
1	E	127	LYS	4.1
1	E	130	GLU	4.1
1	A	36	ALA	3.9
1	E	157	LEU	3.7
1	E	257	CYS	3.6
1	C	259	LEU	3.6
1	E	196	LYS	3.4
1	E	142	PHE	3.4
1	E	148	PRO	3.4
1	E	78	ASP	3.3
1	E	156	ILE	3.3
1	E	119	HIS	3.3
1	E	200	THR	3.3
1	E	118	ASN	3.2
1	E	116	ASP	3.1
1	C	148	PRO	3.1
1	E	192	LEU	3.0
1	E	197	LYS	3.0
1	E	188	PHE	3.0
1	E	234	ASP	2.9
1	E	59	HIS	2.9
1	B	147	ASN	2.9
1	E	205	SER	2.9
1	E	121	LEU	2.9
1	E	221	VAL	2.8
1	E	236	VAL	2.8
1	E	117	PRO	2.8
1	E	131	LYS	2.8
1	E	145	TYR	2.7
1	B	223	PHE	2.7
1	E	144	THR	2.6
1	E	33	LEU	2.6
1	E	115	PRO	2.6
1	C	78	ASP	2.6
1	E	194	LYS	2.5
1	E	108	VAL	2.5
1	E	222	GLU	2.5
1	B	151	PRO	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	102	GLU	2.4
1	E	161	PHE	2.4
1	E	164	LEU	2.4
1	E	56	ASP	2.4
1	B	221	VAL	2.4
1	E	201	GLU	2.4
1	D	78	ASP	2.4
1	D	54	ARG	2.3
1	E	104	ILE	2.3
1	D	149	GLU	2.3
1	E	195	ALA	2.3
1	E	100	TYR	2.2
1	A	75	ILE	2.2
1	B	145	TYR	2.2
1	E	141	GLN	2.2
1	C	77	PRO	2.2
1	E	61	PHE	2.1
1	E	225	LYS	2.1
1	A	11	LYS	2.1
1	A	13	PHE	2.0
1	E	199	SER	2.0
1	B	69	MET	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	EVS	A	1000	22/22	0.88	0.18	34,38,39,40	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	EVS	D	1000	22/22	0.88	0.15	28,32,33,36	0
2	EVS	C	1000	22/22	0.92	0.17	37,40,41,42	0
2	EVS	B	1000	22/22	0.94	0.17	27,33,36,37	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 EVS A 1000:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative) and green (positive)
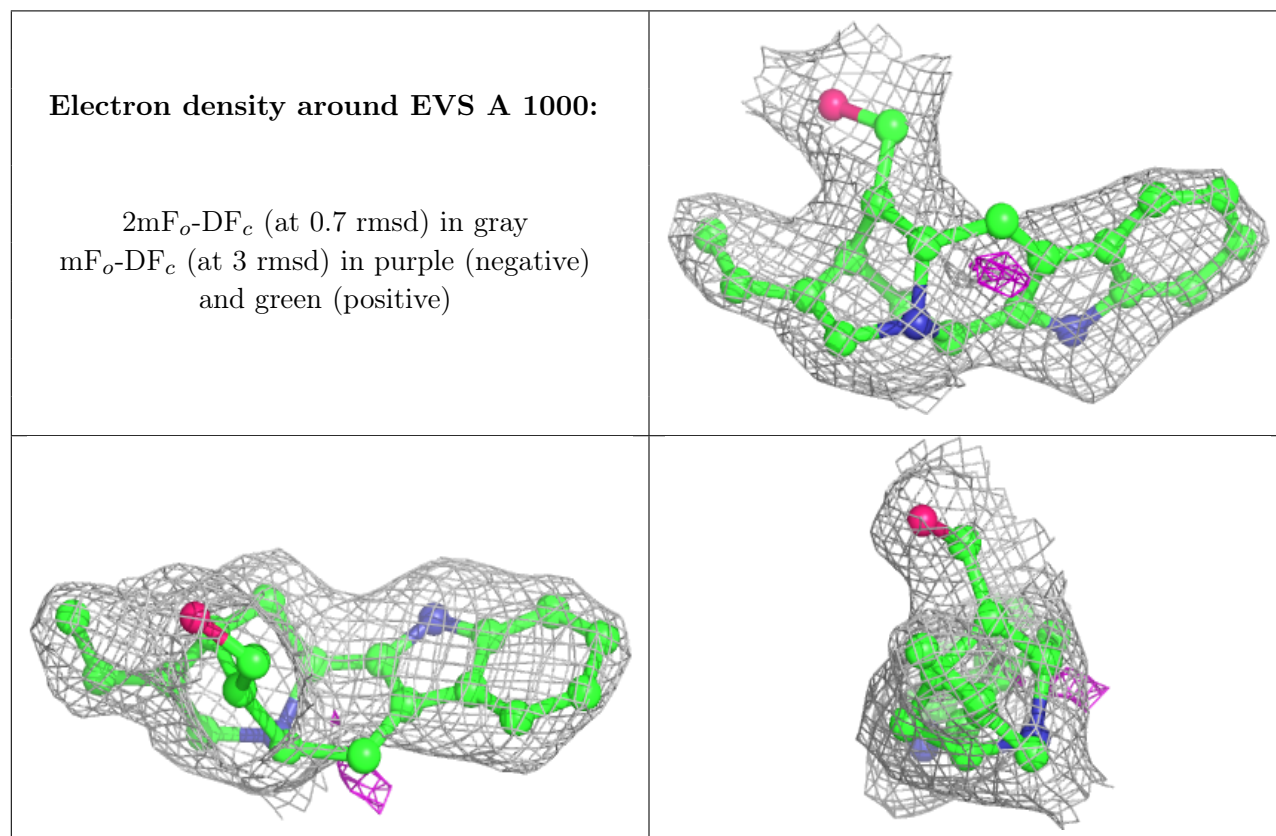
Electron density around EVS D 1000:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
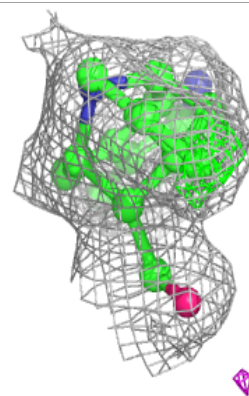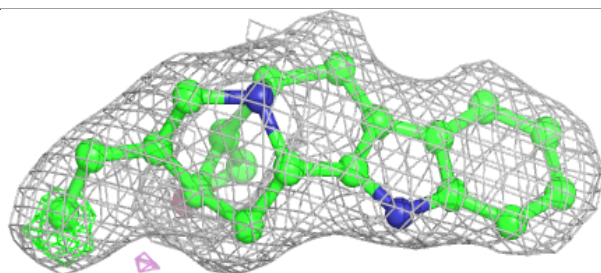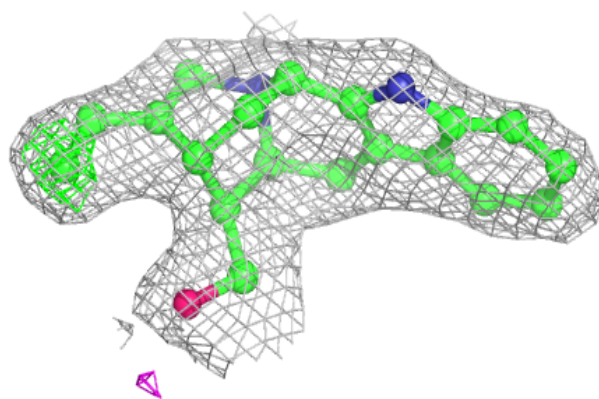
Electron density around EVS C 1000:

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

Electron density around EVS B 1000:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
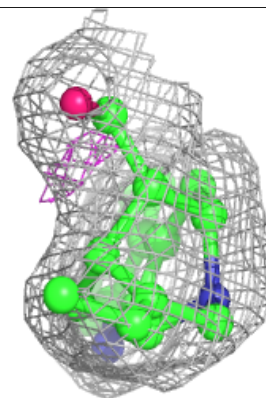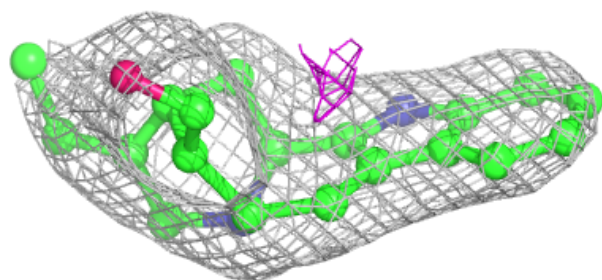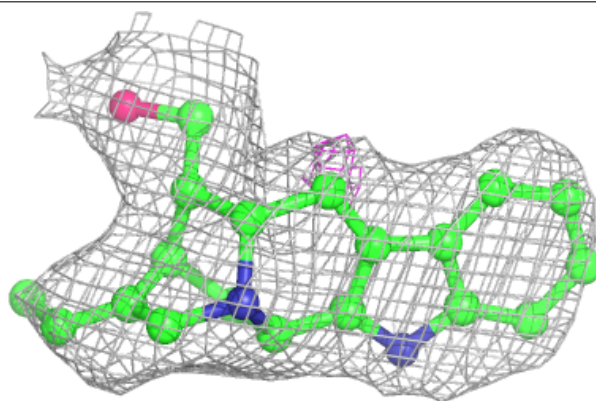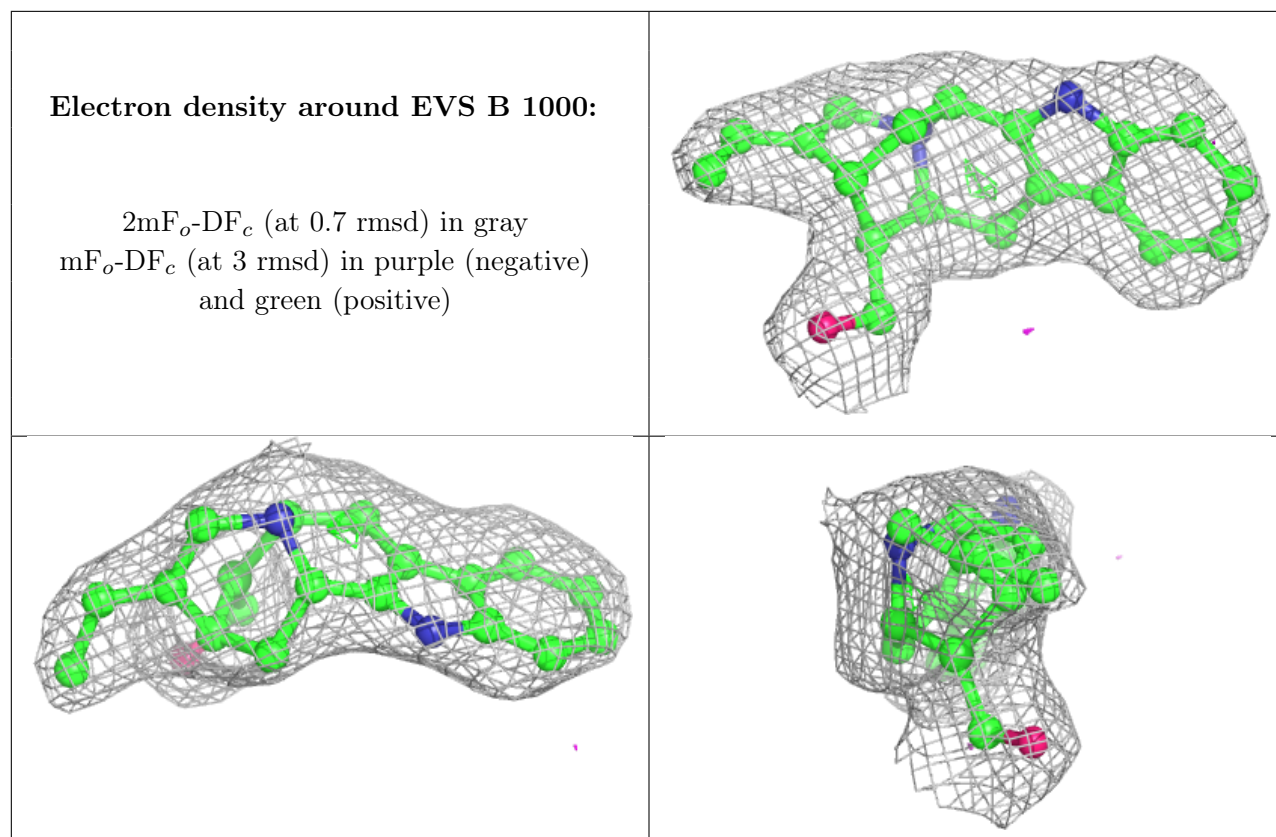
6.5 Other polymers (i)

There are no such residues in this entry.