



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 10:27 AM UTC

PDB ID : 3T24 / pdb_00003t24
Title : Crystal structure of Pseudomonas aeruginosa OpdQ
Authors : van den Berg, B.; Eren, E.
Deposited on : 2011-07-22
Resolution : 2.40 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 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

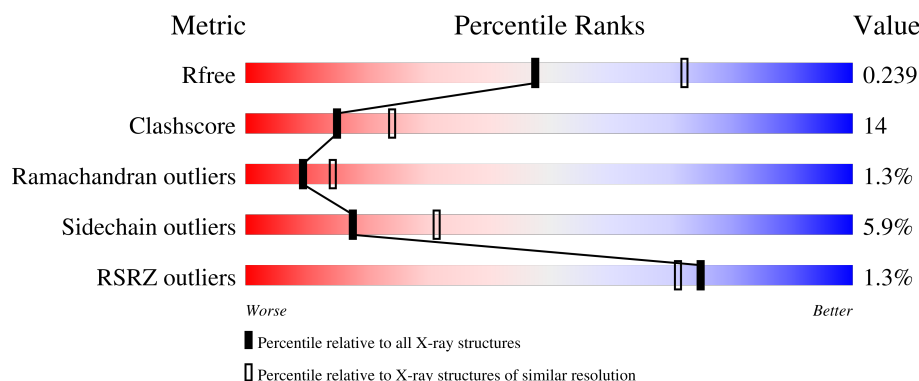
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.40 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	4912 (2.40-2.40)
Clashscore	190562	5391 (2.40-2.40)
Ramachandran outliers	187476	5320 (2.40-2.40)
Sidechain outliers	187428	5321 (2.40-2.40)
RSRZ outliers	180081	4916 (2.40-2.40)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	401	
1	B	401	
1	C	401	

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	SO4	B	395	-	-	X	-
2	SO4	C	395	-	-	X	-
3	C8E	A	403	-	-	X	-

2 Entry composition [i](#)

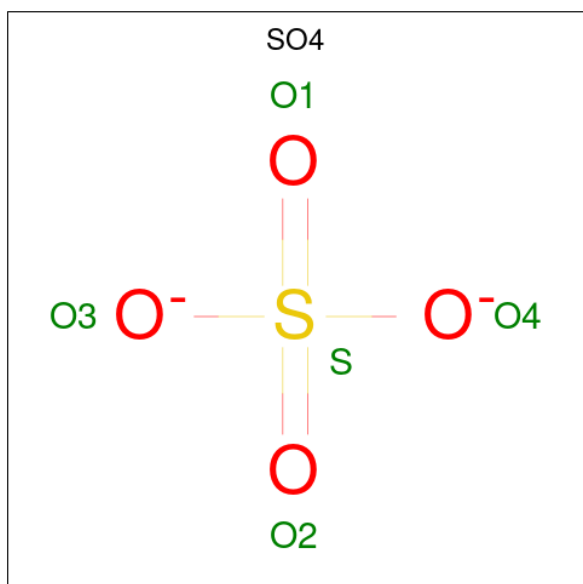
There are 4 unique types of molecules in this entry. The entry contains 9050 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 porin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	377	Total	C	N	O	S	0	0	0
			2955	1869	501	577	8			
1	B	368	Total	C	N	O	S	0	0	0
			2846	1799	482	557	8			
1	C	367	Total	C	N	O	S	0	0	0
			2777	1745	474	550	8			

- Molecule 2 is SULFATE ION (CCD ID: SO4) (formula: O₄S).



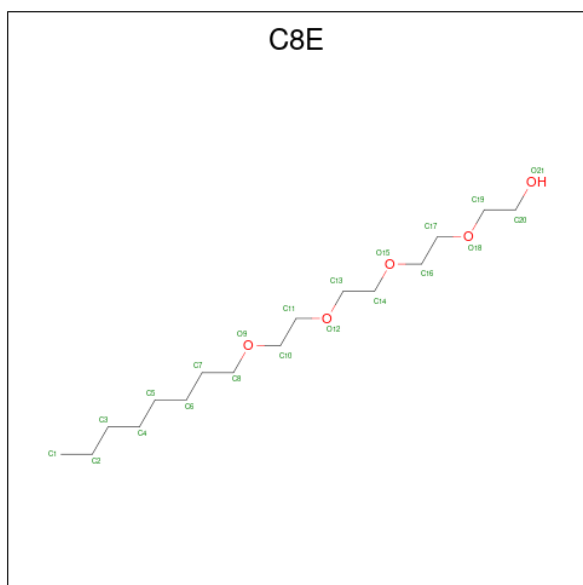
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	O	S	0	0
			5	4	1		
2	A	1	Total	O	S	0	0
			5	4	1		
2	A	1	Total	O	S	0	0
			5	4	1		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	O	S	0	0
			5	4	1		
2	A	1	Total	O	S	0	0
			5	4	1		
2	A	1	Total	O	S	0	0
			5	4	1		
2	B	1	Total	O	S	0	0
			5	4	1		
2	B	1	Total	O	S	0	0
			5	4	1		
2	B	1	Total	O	S	0	0
			5	4	1		
2	C	1	Total	O	S	0	0
			5	4	1		
2	C	1	Total	O	S	0	0
			5	4	1		
2	C	1	Total	O	S	0	0
			5	4	1		

- Molecule 3 is (HYDROXYETHYLOXY)TRI(ETHYLOXY)OCTANE (CCD ID: C8E) (formula: C₁₆H₃₄O₅).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			18	14	4		
3	A	1	Total	C	O	0	0
			10	6	4		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			16	11	5		
3	A	1	Total	C	O	0	0
			12	10	2		
3	A	1	Total	C	O	0	0
			15	10	5		
3	B	1	Total	C	O	0	0
			19	14	5		
3	B	1	Total	C	O	0	0
			20	15	5		
3	B	1	Total	C	O	0	0
			10	6	4		
3	B	1	Total	C	O	0	0
			11	10	1		
3	B	1	Total	C	O	0	0
			18	14	4		
3	C	1	Total	C	O	0	0
			14	10	4		
3	C	1	Total	C	O	0	0
			11	9	2		

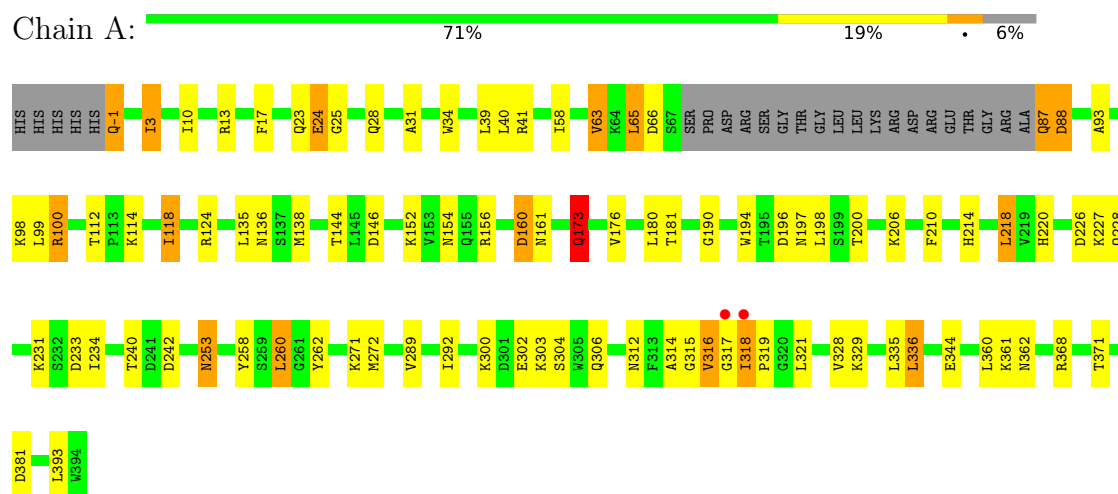
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	118	Total	O	0	0
			118	118		
4	B	82	Total	O	0	0
			82	82		
4	C	38	Total	O	0	0
			38	38		

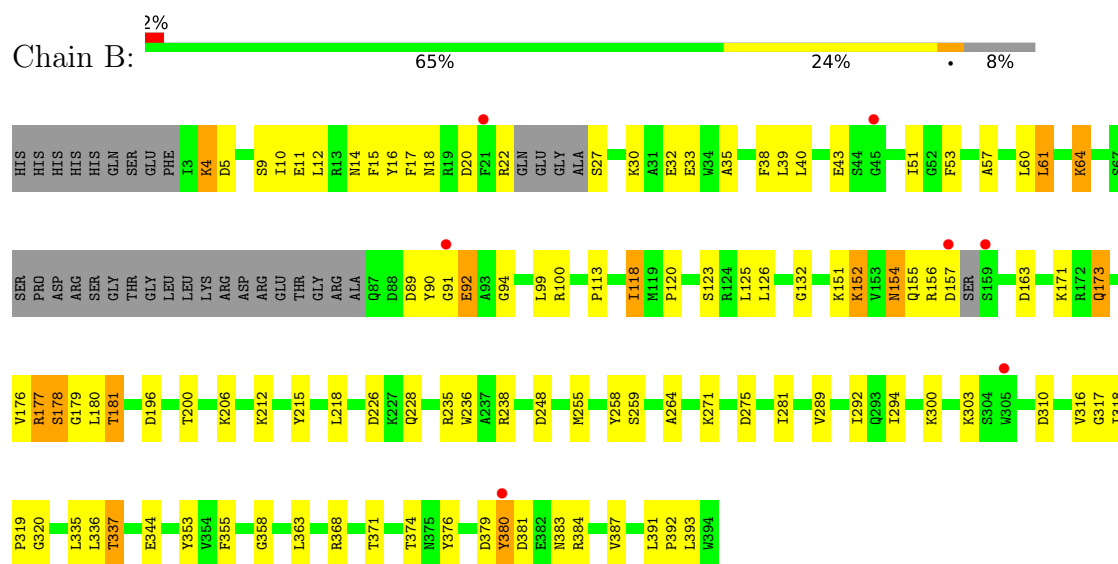
3 Residue-property plots

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: porin

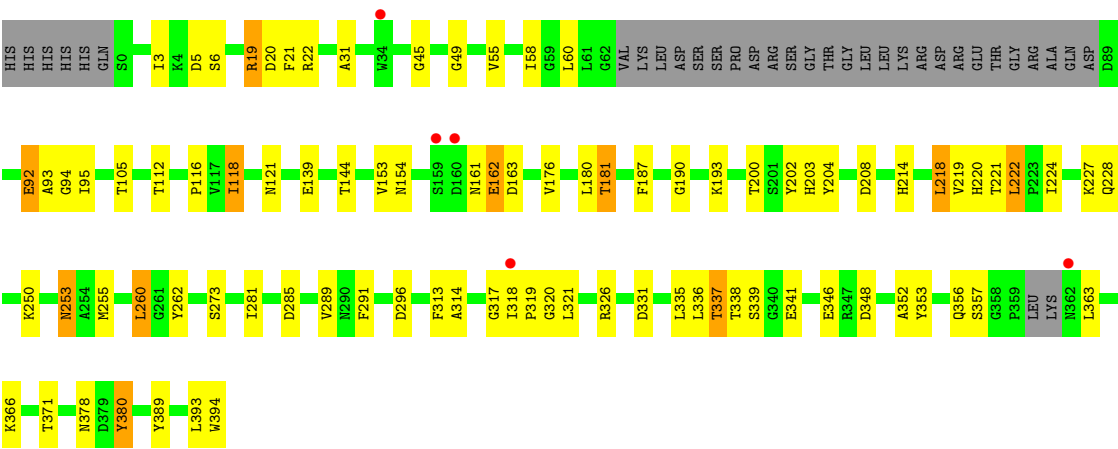


• Molecule 1: porin



• Molecule 1: porin





4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	64.72Å 78.46Å 97.52Å 77.76° 81.50° 70.04°	Depositor
Resolution (Å)	14.98 – 2.40 14.98 – 2.40	Depositor EDS
% Data completeness (in resolution range)	98.3 (14.98-2.40) 93.2 (14.98-2.40)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.05 (at 2.39Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.7.1_743)	Depositor
R, R_{free}	0.203 , 0.242 0.203 , 0.239	Depositor DCC
R_{free} test set	2000 reflections (2.93%)	wwPDB-VP
Wilson B-factor (Å ²)	42.1	Xtriage
Anisotropy	0.204	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 70.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	9050	wwPDB-VP
Average B, all atoms (Å ²)	56.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.03% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: C8E, SO4

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	0.56	0/3019	0.84	2/4080 (0.0%)
1	B	0.51	0/2906	0.81	5/3927 (0.1%)
1	C	0.40	0/2836	0.76	1/3837 (0.0%)
All	All	0.49	0/8761	0.81	8/11844 (0.1%)

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	123	SER	N-CA-C	-7.48	101.21	110.41
1	B	380	TYR	N-CA-C	6.51	118.45	108.42
1	C	49	GLY	N-CA-C	6.28	118.42	112.08
1	B	294	ILE	CB-CA-C	-5.84	105.85	111.05
1	B	358	GLY	CA-C-N	5.73	125.83	119.87
1	B	358	GLY	C-N-CA	5.73	125.83	119.87
1	A	173	GLN	N-CA-CB	-5.39	104.28	112.47
1	A	393	LEU	N-CA-C	-5.37	106.73	113.28

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	2955	0	2813	89	0
1	B	2846	0	2665	78	0
1	C	2777	0	2534	64	0
2	A	30	0	0	2	0
2	B	15	0	0	2	0
2	C	15	0	0	2	0
3	A	71	0	103	10	0
3	B	78	0	112	6	0
3	C	25	0	30	4	0
4	A	118	0	0	6	0
4	B	82	0	0	3	0
4	C	38	0	0	2	0
All	All	9050	0	8257	233	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 14.

All (233) 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:22:ARG:NH1	2:C:395:SO4:O1	1.94	1.00
1:A:100:ARG:HG2	1:A:100:ARG:HH11	1.34	0.92
1:A:-1:GLN:O	1:A:3:ILE:HG22	1.76	0.84
1:A:24:GLU:HG2	1:A:25:GLY:H	1.44	0.83
1:B:255:MET:HE2	1:B:289:VAL:HB	1.61	0.83
1:B:228:GLN:OE1	1:B:258:TYR:OH	1.96	0.82
1:B:374:THR:OG1	4:B:436:HOH:O	1.99	0.79
1:B:163:ASP:HB3	1:B:181:THR:HG23	1.64	0.79
1:A:173:GLN:HB2	1:A:336:LEU:HD21	1.65	0.78
1:A:368:ARG:NH1	4:A:482:HOH:O	2.16	0.77
1:C:220:HIS:CE1	1:C:222:LEU:HD22	2.20	0.76
1:A:100:ARG:NH1	4:A:443:HOH:O	2.20	0.74
1:C:363:LEU:HD12	1:C:389:TYR:HB2	1.67	0.73
1:A:24:GLU:CG	1:A:25:GLY:H	2.01	0.73
2:A:399:SO4:O3	4:A:520:HOH:O	2.08	0.72
1:A:98:LYS:C	1:A:99:LEU:HD12	2.15	0.71
1:A:220:HIS:HE1	3:A:403:C8E:H191	1.55	0.71
1:A:100:ARG:HH11	1:A:100:ARG:CG	2.02	0.70
1:A:316:VAL:HG23	1:A:317:GLY:N	2.05	0.70
1:A:306:GLN:HB2	1:A:328:VAL:HG22	1.73	0.70
1:A:87:GLN:O	1:A:88:ASP:HB2	1.91	0.70
1:A:41:ARG:HG2	1:A:58:ILE:CD1	2.22	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:92:GLU:HG3	1:C:93:ALA:H	1.58	0.69
1:A:253:ASN:HB2	1:A:289:VAL:HG22	1.74	0.69
2:A:398:SO4:O1	4:A:454:HOH:O	2.08	0.68
1:A:112:THR:HG23	1:A:112:THR:O	1.92	0.68
1:B:376:TYR:N	4:B:436:HOH:O	2.26	0.68
1:B:200:THR:HB	3:B:398:C8E:H61	1.76	0.68
1:A:173:GLN:HG2	1:A:300:LYS:HD2	1.77	0.67
1:A:63:VAL:HA	1:A:88:ASP:O	1.96	0.66
1:A:160:ASP:OD1	1:A:160:ASP:N	2.27	0.66
1:B:200:THR:OG1	3:B:398:C8E:H81	1.97	0.65
1:C:363:LEU:CD1	1:C:389:TYR:HB2	2.27	0.64
1:A:100:ARG:HG2	1:A:100:ARG:NH1	2.07	0.64
1:A:10:ILE:HD13	1:A:40:LEU:HG	1.78	0.64
1:B:371:THR:HG23	1:B:381:ASP:OD2	1.99	0.63
1:B:53:PHE:CE1	1:B:99:LEU:HD13	2.35	0.62
3:A:404:C8E:H42	3:A:404:C8E:H81	1.82	0.62
1:B:218:LEU:C	1:B:218:LEU:HD23	2.26	0.61
1:B:20:ASP:O	1:B:380:TYR:HB2	2.00	0.61
1:C:92:GLU:HG3	1:C:93:ALA:N	2.13	0.61
1:C:116:PRO:HG2	1:C:203:HIS:CD2	2.35	0.61
1:A:13:ARG:NH1	1:A:124:ARG:O	2.32	0.61
1:C:317:GLY:C	1:C:319:PRO:HD3	2.26	0.61
1:A:23:GLN:O	1:A:24:GLU:HB3	2.00	0.60
1:B:335:LEU:O	1:B:337:THR:N	2.33	0.60
1:B:90:TYR:CE1	1:B:126:LEU:HD12	2.36	0.60
1:A:318:ILE:HG22	1:A:321:LEU:HB3	1.82	0.60
1:B:17:PHE:HD1	1:B:384:ARG:HG2	1.66	0.60
1:B:173:GLN:O	1:B:173:GLN:HG3	1.99	0.60
1:C:22:ARG:NH1	2:C:395:SO4:S	2.75	0.60
1:B:215:TYR:HE2	1:B:235:ARG:HB3	1.68	0.59
1:A:173:GLN:O	1:A:173:GLN:HG3	2.03	0.59
1:C:319:PRO:HB2	1:C:356:GLN:OE1	2.03	0.59
1:A:316:VAL:HG23	1:A:317:GLY:H	1.67	0.58
1:B:35:ALA:HB1	1:B:125:LEU:HD22	1.85	0.58
1:B:156:ARG:O	4:B:485:HOH:O	2.17	0.58
1:C:227:LYS:O	1:C:260:LEU:HA	2.03	0.58
1:A:318:ILE:HG22	1:A:321:LEU:CB	2.34	0.58
1:B:51:ILE:CG2	1:B:99:LEU:HD11	2.34	0.58
1:B:379:ASP:O	1:B:380:TYR:HB3	2.03	0.58
1:A:198:LEU:HD23	3:A:403:C8E:H132	1.85	0.57
1:C:260:LEU:HD13	1:C:260:LEU:O	2.04	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:224:ILE:HD11	1:C:228:GLN:HG2	1.85	0.57
1:B:10:ILE:HG12	1:B:393:LEU:HD21	1.85	0.57
1:C:163:ASP:HB3	1:C:181:THR:HG23	1.85	0.57
1:A:197:ASN:HB2	3:A:403:C8E:H202	1.87	0.57
1:C:336:LEU:O	1:C:337:THR:CB	2.53	0.57
1:A:23:GLN:OE1	1:A:28:GLN:HG2	2.05	0.57
1:A:24:GLU:CG	1:A:25:GLY:N	2.67	0.57
1:B:173:GLN:HG2	1:B:300:LYS:HD2	1.86	0.57
1:A:41:ARG:HG2	1:A:58:ILE:HD11	1.87	0.56
1:C:154:ASN:HB2	1:C:161:ASN:OD1	2.06	0.55
1:B:178:SER:OG	2:B:395:SO4:O3	2.24	0.55
1:C:19:ARG:HB2	1:C:31:ALA:HB3	1.89	0.55
1:A:271:LYS:HD3	1:A:303:LYS:CG	2.36	0.55
1:A:24:GLU:HG2	1:A:25:GLY:N	2.17	0.55
1:C:112:THR:O	1:C:112:THR:HG23	2.07	0.54
1:C:202:TYR:OH	1:C:214:HIS:ND1	2.40	0.54
1:C:393:LEU:O	1:C:394:TRP:HB3	2.07	0.54
1:A:258:TYR:HE2	1:A:260:LEU:HD23	1.72	0.54
1:A:41:ARG:HG2	1:A:58:ILE:HD12	1.88	0.54
1:B:344:GLU:HB3	1:B:374:THR:HG22	1.89	0.54
1:C:331:ASP:HB2	1:C:341:GLU:OE1	2.08	0.54
1:A:99:LEU:HD12	1:A:99:LEU:N	2.24	0.53
1:A:335:LEU:O	1:A:336:LEU:HB2	2.08	0.53
1:A:24:GLU:OE2	1:A:25:GLY:N	2.42	0.53
1:A:262:TYR:CE2	1:A:315:GLY:HA2	2.44	0.52
1:A:31:ALA:HB2	1:B:179:GLY:HA3	1.90	0.52
1:B:163:ASP:CB	1:B:181:THR:HG23	2.38	0.52
1:B:57:ALA:HA	1:B:94:GLY:O	2.09	0.52
1:B:271:LYS:HE2	1:B:303:LYS:HE2	1.90	0.52
1:B:18:ASN:OD1	1:B:383:ASN:HB2	2.09	0.52
1:B:132:GLY:HA2	3:B:401:C8E:H102	1.92	0.52
1:C:253:ASN:HB2	1:C:289:VAL:HG22	1.92	0.52
1:A:124:ARG:HG2	1:A:156:ARG:NH1	2.24	0.52
1:C:262:TYR:CE1	1:C:314:ALA:HB3	2.45	0.52
1:B:27:SER:OG	1:B:30:LYS:HE3	2.10	0.52
1:B:61:LEU:HD11	3:B:400:C8E:H171	1.91	0.52
1:A:124:ARG:HG3	1:A:156:ARG:HD2	1.92	0.51
1:A:314:ALA:C	1:A:316:VAL:N	2.68	0.51
1:A:39:LEU:N	1:A:39:LEU:HD12	2.26	0.51
1:A:124:ARG:CG	1:A:156:ARG:HD2	2.41	0.51
1:A:173:GLN:CB	1:A:336:LEU:HD21	2.39	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:214:HIS:HD2	4:A:516:HOH:O	1.93	0.51
1:C:21:PHE:CD1	1:C:378:ASN:HB3	2.46	0.51
1:B:91:GLY:O	1:B:92:GLU:HB2	2.10	0.51
1:B:173:GLN:O	1:B:173:GLN:CG	2.59	0.51
1:C:326:ARG:HG2	1:C:348:ASP:HB2	1.93	0.51
1:A:228:GLN:OE1	1:A:258:TYR:OH	2.26	0.51
1:B:200:THR:CB	3:B:398:C8E:H61	2.41	0.50
1:B:316:VAL:HG23	1:B:318:ILE:HD12	1.93	0.50
1:C:60:LEU:N	1:C:92:GLU:O	2.36	0.50
1:C:218:LEU:HD12	1:C:218:LEU:C	2.37	0.50
1:A:318:ILE:H	1:A:319:PRO:HD3	1.75	0.50
1:C:250:LYS:HB2	1:C:273:SER:HB2	1.93	0.50
1:B:10:ILE:HB	1:B:391:LEU:HD21	1.94	0.50
1:B:317:GLY:C	1:B:319:PRO:HD3	2.37	0.49
1:C:21:PHE:CE1	1:C:378:ASN:HB3	2.47	0.49
1:C:228:GLN:HG3	1:C:260:LEU:HB3	1.93	0.49
1:A:314:ALA:C	1:A:316:VAL:H	2.19	0.49
1:B:39:LEU:HG	1:B:60:LEU:HD22	1.94	0.49
1:C:200:THR:CB	3:C:399:C8E:H132	2.43	0.49
1:A:258:TYR:CE2	1:A:260:LEU:HD23	2.47	0.49
1:C:139:GLU:HB3	3:C:398:C8E:H132	1.94	0.48
1:B:16:TYR:OH	1:B:32:GLU:OE2	2.31	0.48
1:C:319:PRO:HB2	1:C:356:GLN:CD	2.39	0.48
1:C:338:THR:HG22	1:C:339:SER:N	2.28	0.48
1:B:10:ILE:HD11	1:B:40:LEU:HD13	1.96	0.48
1:B:320:GLY:O	1:B:353:TYR:HA	2.14	0.48
1:C:20:ASP:O	1:C:380:TYR:HA	2.13	0.47
1:C:200:THR:HB	3:C:399:C8E:H132	1.96	0.47
1:A:233:ASP:C	1:A:234:ILE:HD12	2.40	0.47
1:A:194:TRP:CZ2	3:A:403:C8E:H81	2.49	0.47
1:A:262:TYR:CD2	1:A:315:GLY:HA2	2.49	0.47
1:B:4:LYS:HA	1:B:5:ASP:C	2.40	0.47
1:A:112:THR:O	1:A:112:THR:CG2	2.63	0.47
1:A:173:GLN:O	1:A:173:GLN:CG	2.63	0.47
1:A:220:HIS:CE1	3:A:403:C8E:H191	2.44	0.47
1:B:61:LEU:CD1	3:B:400:C8E:H171	2.45	0.47
1:B:33:GLU:OE2	1:B:64:LYS:HD3	2.14	0.46
1:C:200:THR:OG1	3:C:399:C8E:H132	2.16	0.46
1:A:135:LEU:O	1:A:146:ASP:HA	2.15	0.46
1:C:262:TYR:HE1	1:C:314:ALA:HB3	1.80	0.46
1:B:22:ARG:HD2	1:B:381:ASP:OD1	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:264:ALA:HB3	1:B:310:ASP:HB2	1.97	0.46
1:B:14:ASN:HB2	1:B:387:VAL:HB	1.97	0.46
1:C:356:GLN:O	1:C:357:SER:HB3	2.16	0.46
1:B:38:PHE:C	1:B:39:LEU:HD12	2.41	0.45
1:B:39:LEU:HD12	1:B:39:LEU:N	2.31	0.45
1:B:60:LEU:HB3	1:B:126:LEU:HD22	1.97	0.45
1:C:181:THR:O	4:C:430:HOH:O	2.21	0.45
1:B:9:SER:O	1:B:10:ILE:HD13	2.17	0.45
1:C:346:GLU:HA	1:C:371:THR:O	2.16	0.45
1:A:234:ILE:HD12	1:A:234:ILE:N	2.31	0.45
1:C:21:PHE:CD1	1:C:21:PHE:C	2.93	0.45
1:B:53:PHE:CD1	1:B:99:LEU:HD13	2.52	0.45
1:A:87:GLN:O	1:A:88:ASP:CB	2.59	0.45
1:C:176:VAL:CG1	1:C:180:LEU:HB3	2.47	0.45
1:A:371:THR:HG23	1:A:381:ASP:OD2	2.17	0.45
1:B:236:TRP:CH2	1:B:238:ARG:HB2	2.51	0.45
1:B:368:ARG:HB2	1:B:384:ARG:HB2	1.99	0.45
1:C:313:PHE:HD2	1:C:321:LEU:O	1.99	0.45
1:A:31:ALA:HB2	1:B:179:GLY:CA	2.48	0.44
1:A:206:LYS:HE3	1:A:242:ASP:OD2	2.17	0.44
1:B:15:PHE:CZ	1:B:17:PHE:HB2	2.52	0.44
1:A:58:ILE:O	1:A:93:ALA:HA	2.18	0.44
1:C:218:LEU:HD12	1:C:219:VAL:N	2.33	0.44
1:A:304:SER:HA	1:A:329:LYS:O	2.18	0.44
1:A:312:ASN:C	1:A:312:ASN:OD1	2.60	0.44
1:A:136:ASN:C	1:A:136:ASN:OD1	2.60	0.44
1:A:154:ASN:HB2	1:A:161:ASN:OD1	2.18	0.44
1:C:58:ILE:O	1:C:94:GLY:N	2.47	0.44
1:A:200:THR:HG22	1:A:218:LEU:HD22	1.99	0.44
1:B:113:PRO:O	1:B:120:PRO:CD	2.65	0.44
1:B:177:ARG:NH1	2:B:395:SO4:O1	2.51	0.44
1:B:206:LYS:CD	1:B:212:LYS:HG2	2.47	0.44
1:C:187:PHE:HA	1:C:204:TYR:O	2.17	0.44
1:A:23:GLN:HB3	1:A:28:GLN:OE1	2.18	0.43
1:A:34:TRP:CE2	1:A:65:LEU:HD23	2.53	0.43
1:B:228:GLN:HA	1:B:259:SER:O	2.18	0.43
1:C:255:MET:HE2	1:C:289:VAL:HB	2.00	0.43
1:C:352:ALA:HB2	1:C:366:LYS:HE3	2.00	0.43
1:A:124:ARG:HB3	4:A:511:HOH:O	2.17	0.43
1:C:144:THR:O	1:C:190:GLY:HA2	2.18	0.43
1:A:198:LEU:CD2	3:A:403:C8E:H132	2.47	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:262:TYR:CD2	1:A:315:GLY:CA	3.02	0.43
1:C:321:LEU:HB2	1:C:353:TYR:CD1	2.54	0.43
1:C:320:GLY:O	1:C:353:TYR:HA	2.19	0.43
1:A:226:ASP:HA	1:A:227:LYS:HA	1.43	0.43
1:B:155:GLN:OE1	1:B:155:GLN:HA	2.18	0.43
1:C:3:ILE:O	1:C:6:SER:HB2	2.19	0.43
1:C:220:HIS:HD2	4:C:412:HOH:O	2.01	0.43
1:C:193:LYS:HB3	1:C:193:LYS:HE2	1.67	0.43
1:A:197:ASN:CB	3:A:403:C8E:H202	2.48	0.42
1:C:121:ASN:ND2	1:C:285:ASP:OD1	2.52	0.42
1:C:378:ASN:HB2	1:C:380:TYR:CZ	2.54	0.42
1:A:65:LEU:O	1:A:66:ASP:HB3	2.19	0.42
1:A:136:ASN:HD21	1:A:138:MET:HE3	1.84	0.42
1:A:17:PHE:CD1	1:A:17:PHE:C	2.97	0.42
1:A:318:ILE:N	1:A:319:PRO:HD3	2.33	0.42
1:B:43:GLU:N	1:B:43:GLU:CD	2.77	0.42
1:C:118:ILE:HD13	1:C:281:ILE:HD12	2.01	0.42
1:B:355:PHE:CD2	1:B:363:LEU:HD23	2.55	0.42
1:B:391:LEU:HA	1:B:392:PRO:HD3	1.90	0.42
1:B:163:ASP:CB	1:B:181:THR:CG2	2.98	0.42
3:A:403:C8E:H142	3:A:403:C8E:H171	1.53	0.42
1:A:361:LYS:O	1:A:362:ASN:HB2	2.20	0.42
1:B:11:GLU:HB3	1:B:39:LEU:HB2	2.01	0.41
1:B:17:PHE:CD1	1:B:384:ARG:HG2	2.52	0.41
1:B:176:VAL:HG12	1:B:177:ARG:N	2.34	0.41
1:A:144:THR:O	1:A:190:GLY:HA2	2.21	0.41
1:B:10:ILE:HB	1:B:391:LEU:CD2	2.50	0.41
1:C:346:GLU:HG3	1:C:371:THR:O	2.20	0.41
1:A:318:ILE:HG22	1:A:318:ILE:O	2.20	0.41
1:B:173:GLN:HG2	1:B:275:ASP:O	2.20	0.41
1:B:173:GLN:CG	1:B:275:ASP:O	2.69	0.41
1:A:152:LYS:HB3	1:A:161:ASN:HB3	2.02	0.41
1:B:118:ILE:HD13	1:B:281:ILE:HD12	2.02	0.41
1:C:5:ASP:HB2	1:C:45:GLY:HA3	2.02	0.41
1:C:153:VAL:O	1:C:162:GLU:HG3	2.21	0.41
1:A:220:HIS:HE1	3:A:403:C8E:C19	2.27	0.41
1:B:154:ASN:OD1	1:B:154:ASN:O	2.39	0.41
1:A:180:LEU:HD23	1:A:210:PHE:CZ	2.56	0.41
1:A:271:LYS:HD2	1:A:272:MET:O	2.20	0.41
1:B:171:LYS:HA	1:B:171:LYS:HD3	1.88	0.40
1:C:92:GLU:CG	1:C:93:ALA:N	2.82	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:291:PHE:HA	1:C:296:ASP:HA	2.02	0.40
1:C:318:ILE:N	1:C:319:PRO:HD3	2.36	0.40
1:B:151:LYS:C	1:B:152:LYS:HG2	2.46	0.40
1:A:302:GLU:OE2	1:A:344:GLU:OE2	2.40	0.40
1:B:61:LEU:HD12	1:B:61:LEU:HA	1.90	0.40
1:B:151:LYS:O	1:B:152:LYS:HG2	2.20	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	373/401 (93%)	351 (94%)	17 (5%)	5 (1%)	9	14
1	B	360/401 (90%)	335 (93%)	18 (5%)	7 (2%)	6	8
1	C	361/401 (90%)	343 (95%)	16 (4%)	2 (1%)	21	32
All	All	1094/1203 (91%)	1029 (94%)	51 (5%)	14 (1%)	9	14

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	318	ILE
1	B	226	ASP
1	A	88	ASP
1	B	4	LYS
1	B	92	GLU
1	B	336	LEU
1	B	337	THR
1	C	337	THR
1	A	316	VAL
1	A	118	ILE
1	B	118	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	118	ILE
1	A	292	ILE
1	B	292	ILE

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	305/335 (91%)	284 (93%)	21 (7%)	14	24
1	B	287/335 (86%)	272 (95%)	15 (5%)	21	36
1	C	271/335 (81%)	256 (94%)	15 (6%)	19	34
All	All	863/1005 (86%)	812 (94%)	51 (6%)	18	31

All (51) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	-1	GLN
1	A	3	ILE
1	A	24	GLU
1	A	63	VAL
1	A	65	LEU
1	A	87	GLN
1	A	100	ARG
1	A	114	LYS
1	A	118	ILE
1	A	160	ASP
1	A	173	GLN
1	A	176	VAL
1	A	181	THR
1	A	196	ASP
1	A	218	LEU
1	A	231	LYS
1	A	240	THR
1	A	253	ASN
1	A	260	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	336	LEU
1	A	360	LEU
1	B	12	LEU
1	B	61	LEU
1	B	64	LYS
1	B	89	ASP
1	B	100	ARG
1	B	152	LYS
1	B	154	ASN
1	B	157	ASP
1	B	173	GLN
1	B	177	ARG
1	B	178	SER
1	B	180	LEU
1	B	181	THR
1	B	196	ASP
1	B	248	ASP
1	C	19	ARG
1	C	55	VAL
1	C	92	GLU
1	C	95	ILE
1	C	105	THR
1	C	162	GLU
1	C	181	THR
1	C	208	ASP
1	C	218	LEU
1	C	221	THR
1	C	222	LEU
1	C	253	ASN
1	C	260	LEU
1	C	335	LEU
1	C	380	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	220	HIS
1	A	306	GLN
1	A	369	ASN
1	A	378	ASN
1	B	121	ASN
1	B	203	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	306	GLN
1	C	136	ASN
1	C	213	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

24 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	SO4	B	395	-	4,4,4	0.20	0	6,6,6	0.38	0
2	SO4	A	396	-	4,4,4	0.23	0	6,6,6	0.41	0
3	C8E	A	404	-	11,11,20	0.37	0	10,10,19	0.50	0
3	C8E	B	398	-	18,18,20	0.40	0	17,17,19	0.35	0
3	C8E	B	399	-	19,19,20	0.42	0	18,18,19	0.37	0
2	SO4	C	397	-	4,4,4	0.24	0	6,6,6	0.09	0
3	C8E	C	399	-	10,10,20	0.42	0	9,9,19	0.28	0
2	SO4	B	396	-	4,4,4	0.28	0	6,6,6	0.12	0
3	C8E	C	398	-	13,13,20	0.44	0	12,12,19	0.42	0
3	C8E	A	401	-	17,17,20	0.50	0	16,16,19	0.39	0
3	C8E	B	400	-	9,9,20	0.47	0	8,8,19	0.33	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	SO4	A	398	-	4,4,4	0.27	0	6,6,6	0.08	0
2	SO4	A	397	-	4,4,4	0.24	0	6,6,6	0.36	0
2	SO4	C	395	-	4,4,4	0.26	0	6,6,6	0.25	0
3	C8E	A	402	-	9,9,20	0.45	0	8,8,19	0.26	0
3	C8E	A	403	-	15,15,20	0.44	0	14,14,19	0.55	0
2	SO4	A	395	-	4,4,4	0.21	0	6,6,6	0.44	0
3	C8E	B	401	-	10,10,20	0.36	0	9,9,19	0.49	0
2	SO4	C	396	-	4,4,4	0.25	0	6,6,6	0.09	0
2	SO4	B	397	-	4,4,4	0.31	0	6,6,6	0.32	0
3	C8E	A	405	-	14,14,20	0.46	0	13,13,19	0.53	0
3	C8E	B	402	-	17,17,20	0.46	0	16,16,19	0.45	0
2	SO4	A	399	-	4,4,4	0.28	0	6,6,6	0.15	0
2	SO4	A	400	-	4,4,4	0.24	0	6,6,6	0.18	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	C8E	A	404	-	-	6/9/9/18	-
3	C8E	B	398	-	-	10/16/16/18	-
3	C8E	B	399	-	-	7/17/17/18	-
3	C8E	B	401	-	-	3/8/8/18	-
3	C8E	C	398	-	-	7/11/11/18	-
3	C8E	C	399	-	-	3/8/8/18	-
3	C8E	A	401	-	-	9/15/15/18	-
3	C8E	B	400	-	-	5/7/7/18	-
3	C8E	A	405	-	-	8/12/12/18	-
3	C8E	B	402	-	-	9/15/15/18	-
3	C8E	A	402	-	-	6/7/7/18	-
3	C8E	A	403	-	-	9/13/13/18	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (82) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	398	C8E	O12-C13-C14-O15
3	B	402	C8E	O12-C13-C14-O15
3	A	405	C8E	O18-C19-C20-O21
3	A	401	C8E	O12-C13-C14-O15
3	A	403	C8E	C6-C7-C8-O9
3	B	402	C8E	C6-C7-C8-O9
3	C	399	C8E	O9-C10-C11-O12
3	B	401	C8E	C6-C7-C8-O9
3	A	402	C8E	O18-C19-C20-O21
3	A	403	C8E	O18-C19-C20-O21
3	A	401	C8E	C3-C4-C5-C6
3	B	401	C8E	C4-C5-C6-C7
3	B	400	C8E	O12-C13-C14-O15
3	B	399	C8E	C3-C4-C5-C6
3	A	405	C8E	O9-C10-C11-O12
3	C	398	C8E	O12-C13-C14-O15
3	A	401	C8E	C5-C6-C7-C8
3	A	402	C8E	O12-C13-C14-O15
3	A	404	C8E	C6-C7-C8-O9
3	A	401	C8E	C6-C7-C8-O9
3	B	400	C8E	O18-C19-C20-O21
3	A	404	C8E	C4-C5-C6-C7
3	B	402	C8E	C4-C5-C6-C7
3	B	399	C8E	O18-C19-C20-O21
3	A	403	C8E	C17-C16-O15-C14
3	B	398	C8E	C6-C7-C8-O9
3	B	398	C8E	C3-C4-C5-C6
3	B	398	C8E	C17-C16-O15-C14
3	A	405	C8E	C10-C11-O12-C13
3	B	402	C8E	C3-C4-C5-C6
3	A	405	C8E	C17-C16-O15-C14
3	A	401	C8E	C13-C14-O15-C16
3	B	398	C8E	C20-C19-O18-C17
3	A	405	C8E	C20-C19-O18-C17
3	A	402	C8E	C13-C14-O15-C16
3	B	399	C8E	C2-C3-C4-C5
3	B	398	C8E	C10-C11-O12-C13
3	B	399	C8E	C10-C11-O12-C13
3	A	405	C8E	C11-C10-O9-C8
3	A	401	C8E	C17-C16-O15-C14
3	C	398	C8E	C17-C16-O15-C14
3	B	402	C8E	O9-C10-C11-O12
3	A	404	C8E	C11-C10-O9-C8

Continued on next page...

Continued from previous page...

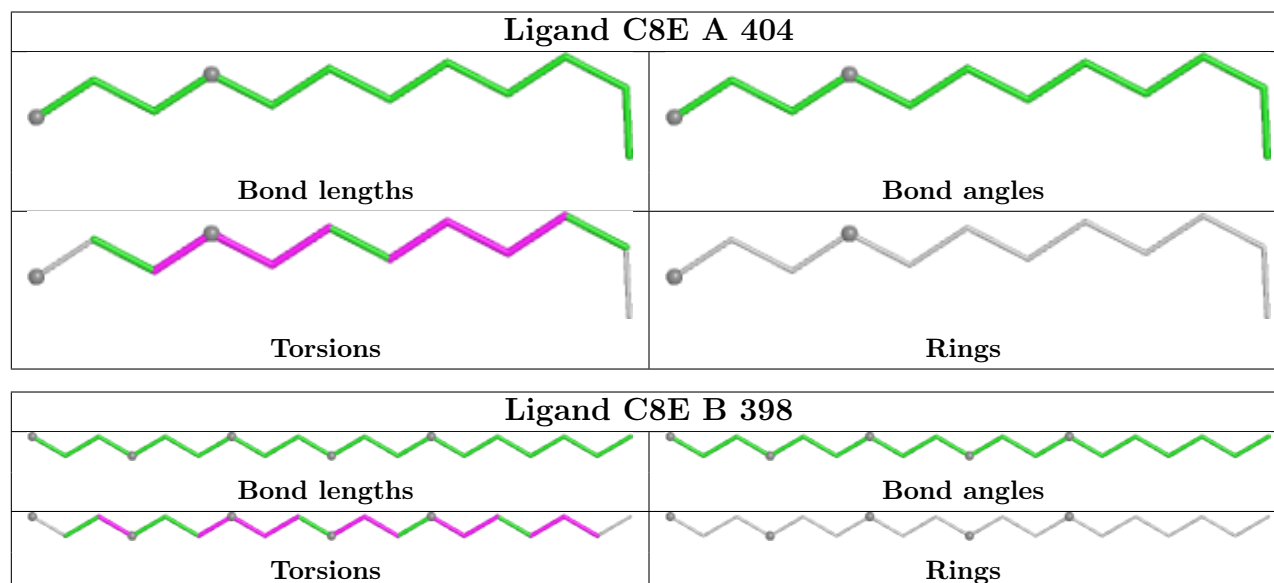
Mol	Chain	Res	Type	Atoms
3	B	402	C8E	C10-C11-O12-C13
3	A	403	C8E	C20-C19-O18-C17
3	A	404	C8E	C2-C3-C4-C5
3	A	403	C8E	O9-C10-C11-O12
3	B	398	C8E	O9-C10-C11-O12
3	C	398	C8E	C7-C8-O9-C10
3	A	401	C8E	C14-C13-O12-C11
3	A	402	C8E	C20-C19-O18-C17
3	A	403	C8E	C13-C14-O15-C16
3	C	398	C8E	C10-C11-O12-C13
3	A	404	C8E	C7-C8-O9-C10
3	B	400	C8E	C17-C16-O15-C14
3	A	403	C8E	C7-C8-O9-C10
3	B	398	C8E	C7-C8-O9-C10
3	B	401	C8E	C7-C8-O9-C10
3	A	402	C8E	C17-C16-O15-C14
3	A	405	C8E	O12-C13-C14-O15
3	C	399	C8E	C7-C8-O9-C10
3	B	399	C8E	O12-C13-C14-O15
3	B	402	C8E	C17-C16-O15-C14
3	B	399	C8E	C20-C19-O18-C17
3	A	403	C8E	O15-C16-C17-O18
3	A	405	C8E	C16-C17-O18-C19
3	B	402	C8E	O15-C16-C17-O18
3	A	401	C8E	C11-C10-O9-C8
3	A	404	C8E	C3-C4-C5-C6
3	C	398	C8E	O9-C10-C11-O12
3	B	399	C8E	C5-C6-C7-C8
3	B	402	C8E	C16-C17-O18-C19
3	B	400	C8E	O15-C16-C17-O18
3	A	403	C8E	C11-C10-O9-C8
3	C	398	C8E	C13-C14-O15-C16
3	A	402	C8E	O15-C16-C17-O18
3	A	401	C8E	C4-C5-C6-C7
3	B	398	C8E	C13-C14-O15-C16
3	C	398	C8E	O15-C16-C17-O18
3	B	400	C8E	C20-C19-O18-C17
3	B	398	C8E	C4-C5-C6-C7
3	C	399	C8E	C10-C11-O12-C13

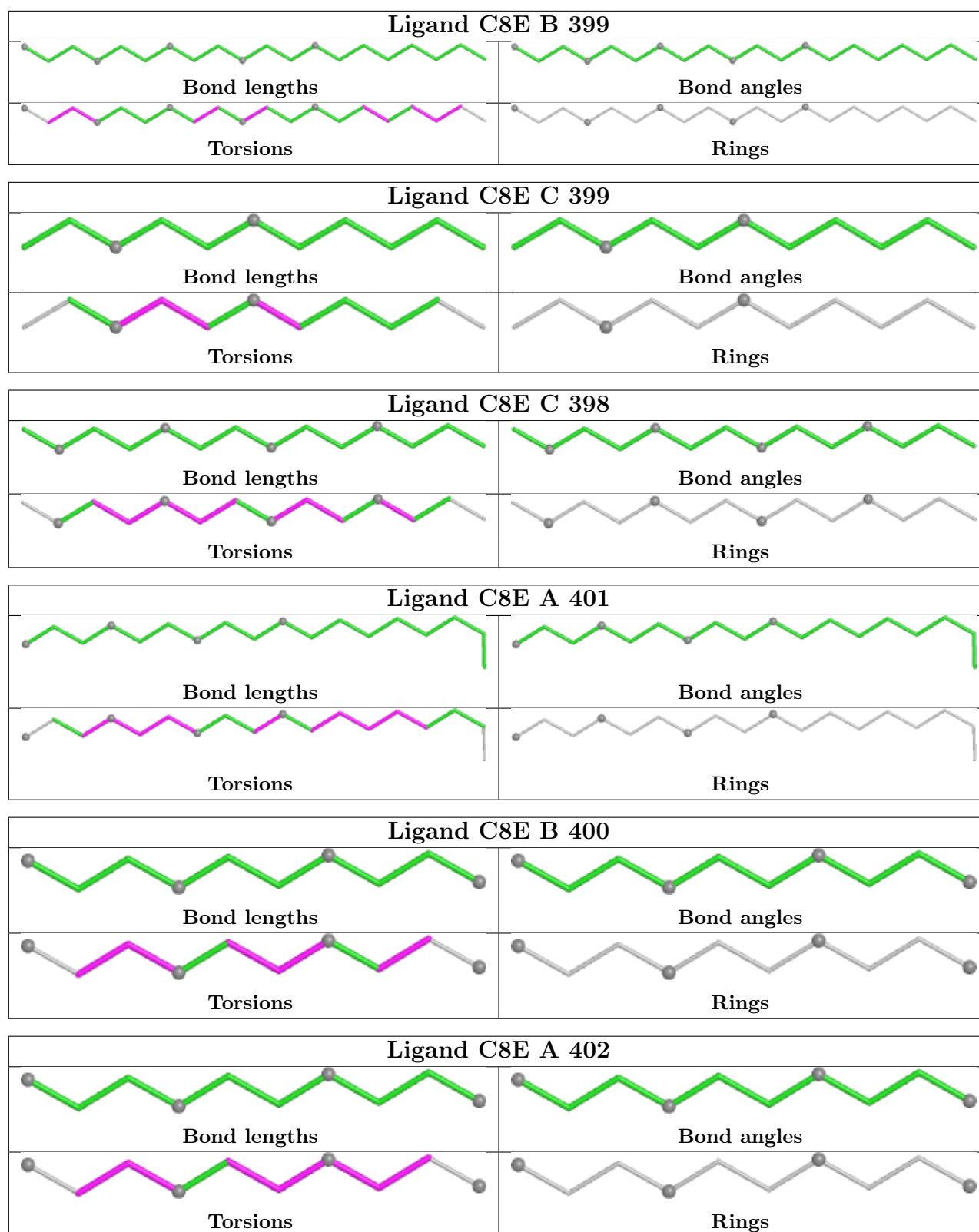
There are no ring outliers.

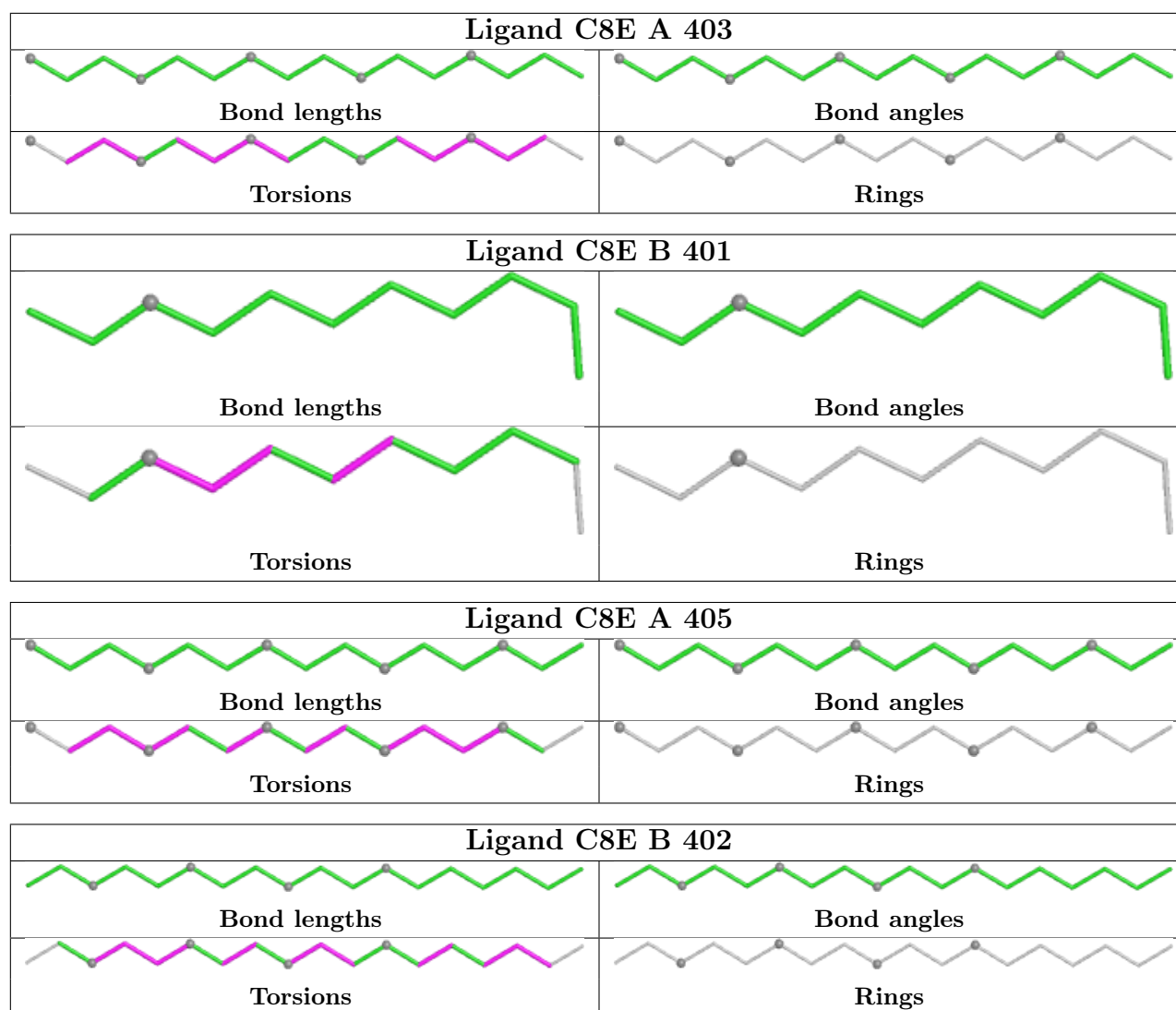
11 monomers are involved in 26 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	395	SO4	2	0
3	A	404	C8E	1	0
3	B	398	C8E	3	0
3	C	399	C8E	3	0
3	C	398	C8E	1	0
3	B	400	C8E	2	0
2	A	398	SO4	1	0
2	C	395	SO4	2	0
3	A	403	C8E	9	0
3	B	401	C8E	1	0
2	A	399	SO4	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 than 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.







5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	377/401 (94%)	-0.50	2 (0%) 87 85	23, 41, 82, 118	0
1	B	368/401 (91%)	-0.23	7 (1%) 66 62	22, 51, 94, 119	0
1	C	367/401 (91%)	0.11	5 (1%) 73 69	37, 69, 109, 132	0
All	All	1112/1203 (92%)	-0.21	14 (1%) 75 71	22, 52, 100, 132	0

All (14) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	21	PHE	3.5
1	C	160	ASP	3.2
1	A	317	GLY	2.9
1	B	91	GLY	2.8
1	B	380	TYR	2.7
1	B	159	SER	2.6
1	C	34	TRP	2.5
1	A	318	ILE	2.5
1	C	362	ASN	2.2
1	B	157	ASP	2.1
1	C	318	ILE	2.1
1	B	45	GLY	2.1
1	B	305	TRP	2.0
1	C	159	SER	2.0

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

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

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

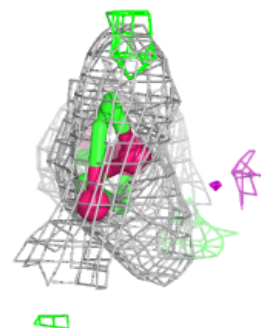
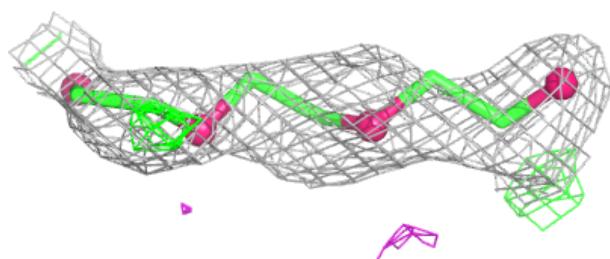
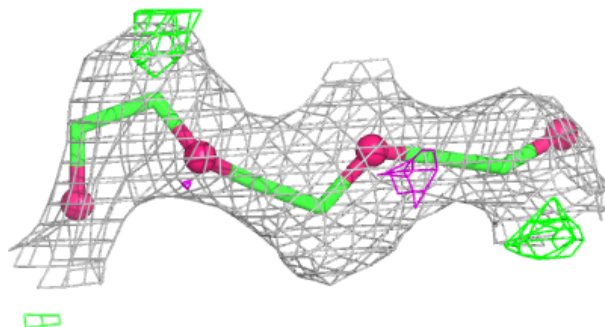
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	C8E	A	402	10/21	0.64	0.16	94,97,98,99	0
2	SO4	B	396	5/5	0.69	0.16	103,108,110,114	0
3	C8E	A	403	16/21	0.71	0.14	68,83,88,89	0
3	C8E	A	404	12/21	0.76	0.16	61,78,83,83	0
2	SO4	A	400	5/5	0.78	0.13	110,114,116,119	0
3	C8E	C	399	11/21	0.79	0.16	62,68,73,74	0
2	SO4	C	397	5/5	0.80	0.14	100,101,103,104	0
3	C8E	B	400	10/21	0.82	0.12	58,68,78,79	0
3	C8E	A	401	18/21	0.83	0.12	47,63,72,74	0
2	SO4	A	398	5/5	0.83	0.10	108,109,110,114	0
3	C8E	A	405	15/21	0.84	0.11	62,72,87,89	0
3	C8E	B	399	20/21	0.84	0.13	54,67,81,81	0
3	C8E	B	402	18/21	0.86	0.12	38,59,74,78	0
3	C8E	C	398	14/21	0.86	0.12	58,65,75,75	0
2	SO4	B	397	5/5	0.86	0.17	65,70,74,86	0
3	C8E	B	398	19/21	0.90	0.09	46,60,67,70	0
2	SO4	C	396	5/5	0.90	0.15	118,120,122,126	0
3	C8E	B	401	11/21	0.91	0.10	41,53,76,77	0
2	SO4	B	395	5/5	0.92	0.10	49,68,74,76	0
2	SO4	A	399	5/5	0.93	0.09	67,74,78,86	0
2	SO4	A	395	5/5	0.94	0.10	51,62,69,77	0
2	SO4	A	396	5/5	0.94	0.09	56,57,65,74	0
2	SO4	A	397	5/5	0.95	0.10	57,59,60,65	0
2	SO4	C	395	5/5	0.97	0.06	61,63,67,68	0

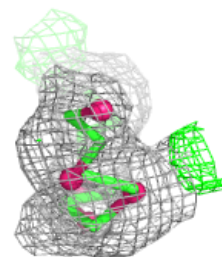
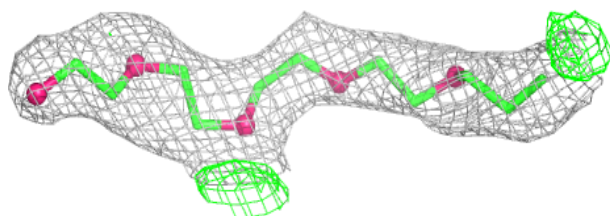
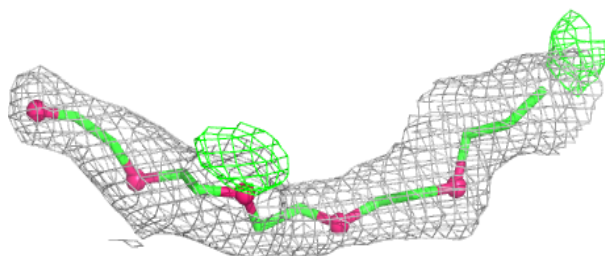
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around C8E A 402:

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

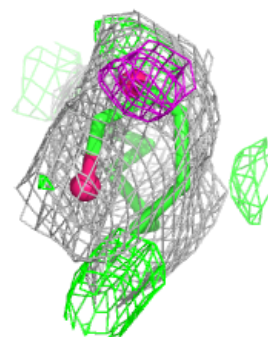
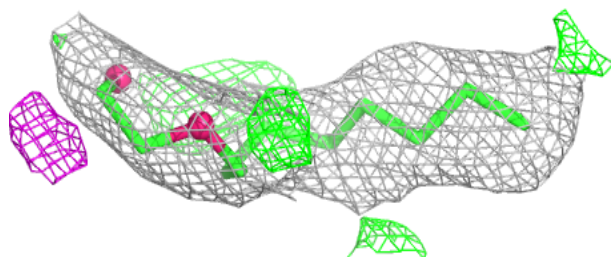
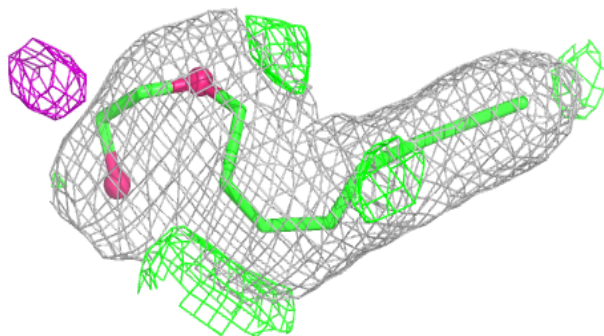
**Electron density around C8E A 403:**

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

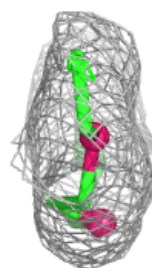
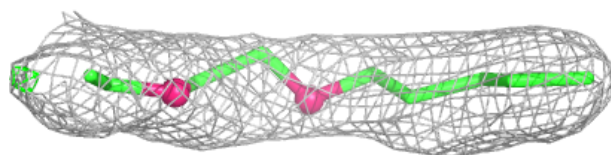
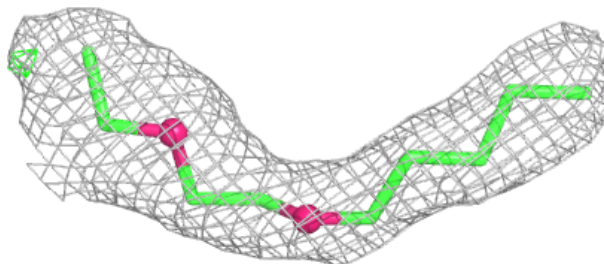


Electron density around C8E A 404:

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

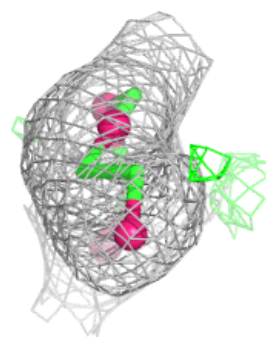
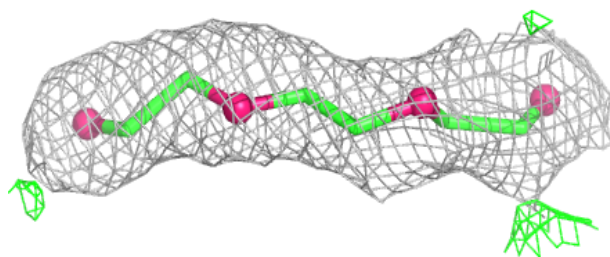
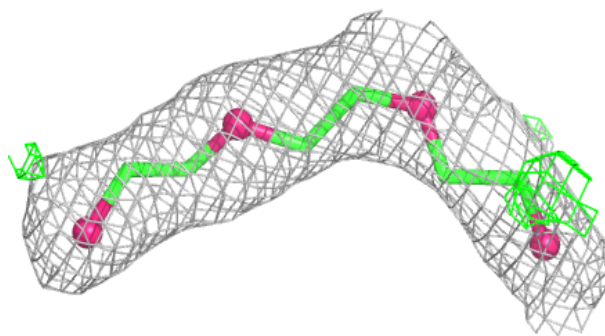
**Electron density around C8E C 399:**

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

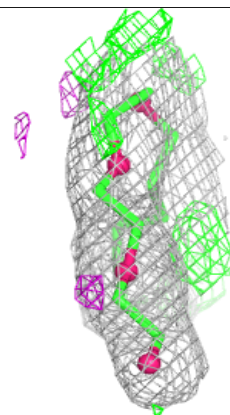
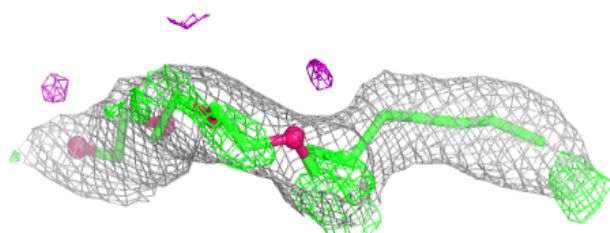
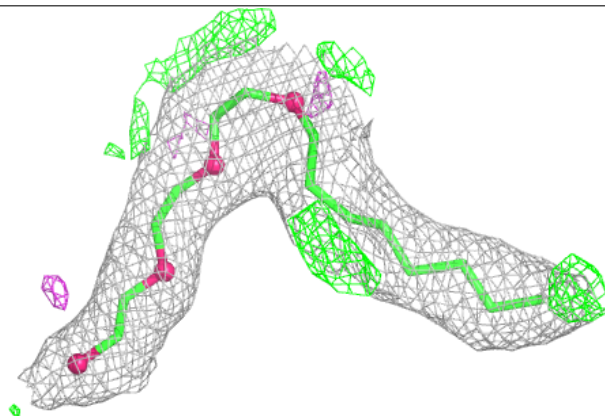


Electron density around C8E B 400:

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

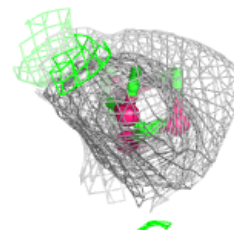
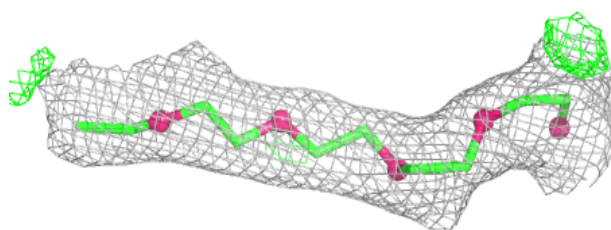
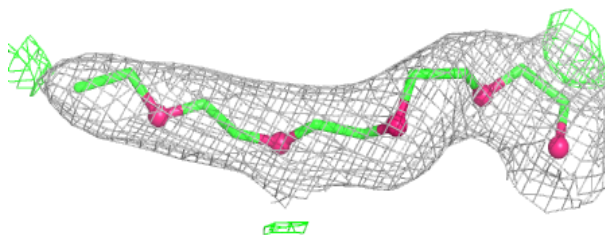
**Electron density around C8E A 401:**

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

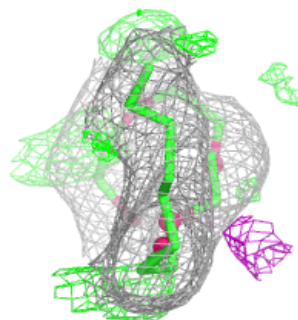
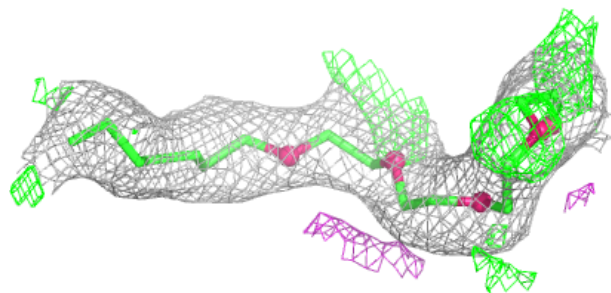
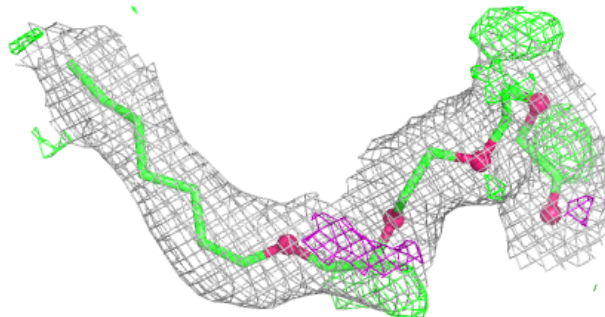


Electron density around C8E A 405:

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

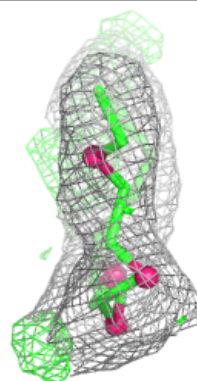
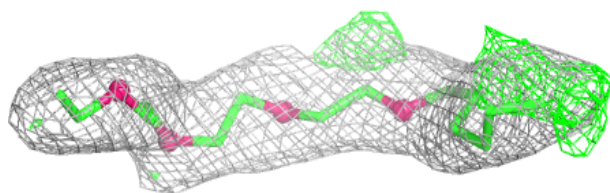
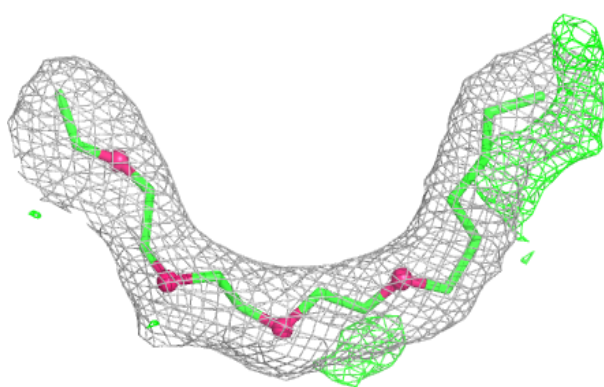
**Electron density around C8E B 399:**

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



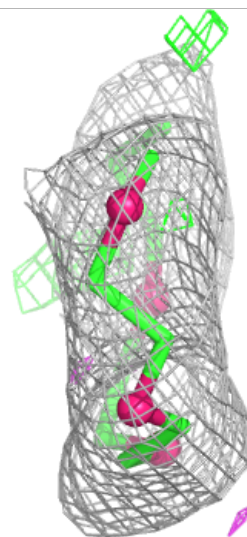
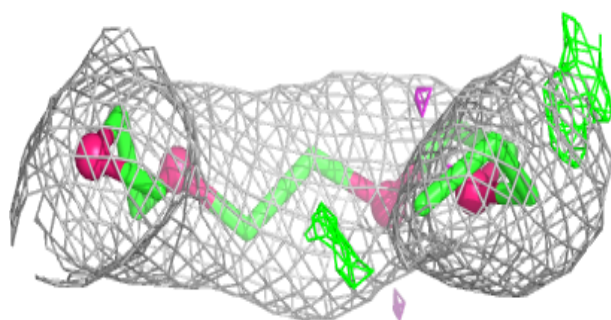
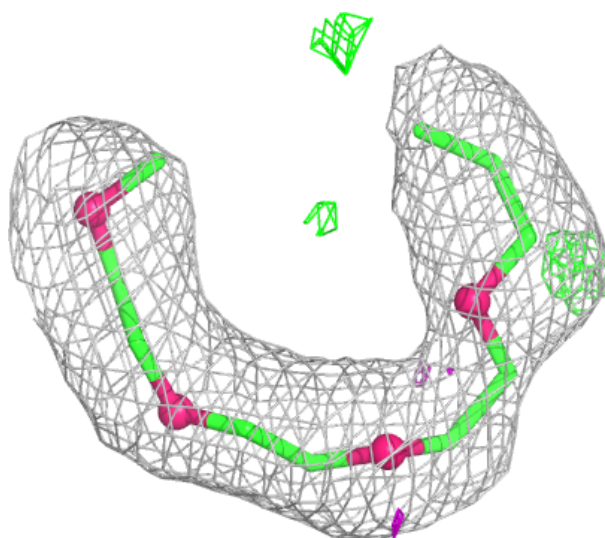
Electron density around C8E B 402:

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



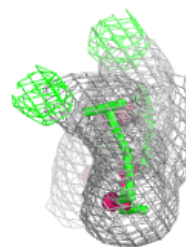
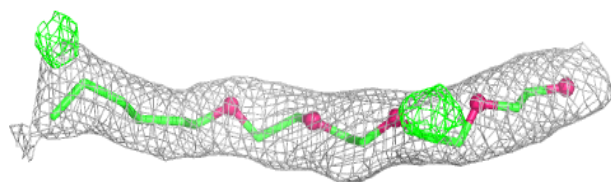
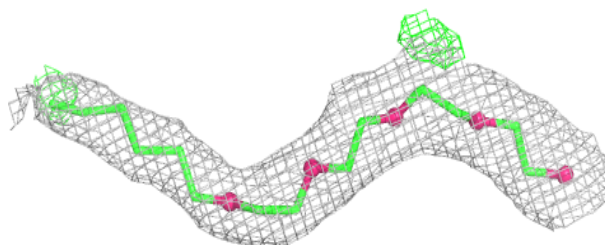
Electron density around C8E C 398:

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

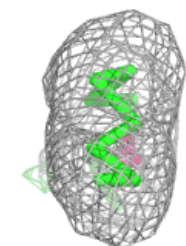
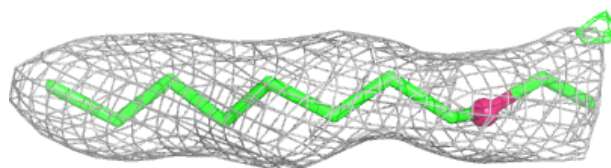
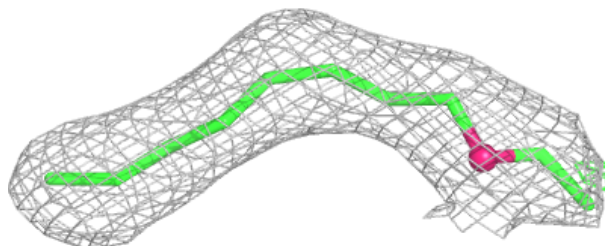


Electron density around C8E B 398:

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

**Electron density around C8E B 401:**

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



6.5 Other polymers [i](#)

There are no such residues in this entry.