Full wwPDB X-ray Structure Validation Report ⓘ

Aug 24, 2025 – 11:06 pm BST

PDB ID	:	9ESV / pdb_00009esv
Title	:	CDK2-cyclin A in complex with FragLite 19
Authors	:	Hope, I.; Martin, M.P.; Waring, M.J.; Noble, M.E.M.; Endicott, J.A.; Tatum, N.J.
Deposited on	:	2024-03-26
Resolution	:	2.40 Å(reported)

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

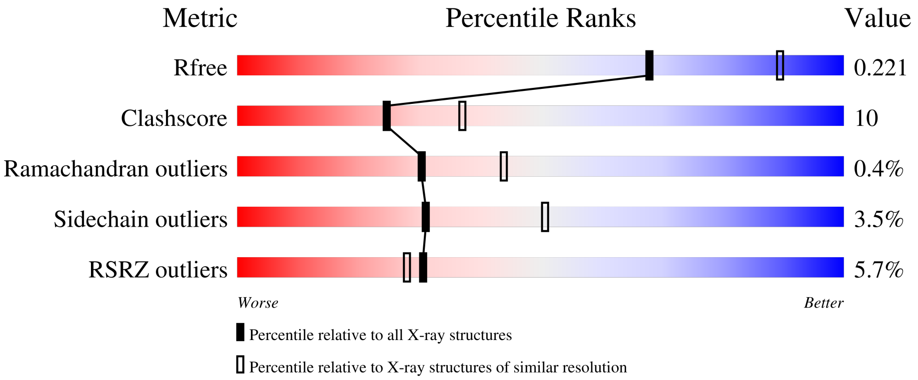
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

1 Overall quality at a glance ⓘ

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

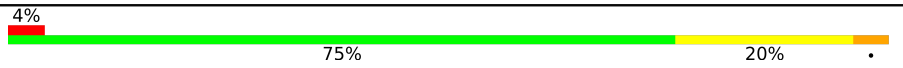
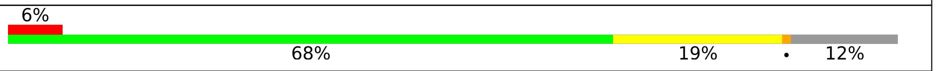
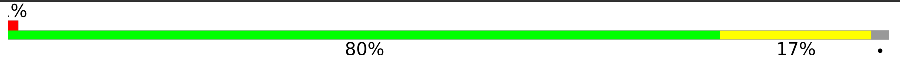
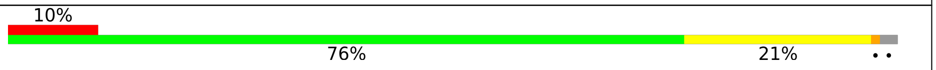
The reported resolution of this entry is 2.40 Å.

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}	164625	4642 (2.40-2.40)
Clashscore	180529	5218 (2.40-2.40)
Ramachandran outliers	177936	5158 (2.40-2.40)
Sidechain outliers	177891	5159 (2.40-2.40)
RSRZ outliers	164620	4642 (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 <=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	302	
1	C	302	
2	B	268	
2	D	268	

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
3	3Z7	A	603	-	-	X	-
3	3Z7	B	501	-	-	X	-
3	3Z7	C	501[A]	-	-	X	X
3	3Z7	C	501[B]	-	-	-	X

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 9161 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 Cyclin-dependent kinase 2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	302	Total 2442	C 1583	N 418	O 432	P 1	S 8	0	2	0
1	C	265	Total 2138	C 1386	N 365	O 379	P 1	S 7	0	1	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	GLY	-	expression tag	UNP P24941
A	-2	PRO	-	expression tag	UNP P24941
A	-1	GLY	-	expression tag	UNP P24941
A	0	SER	-	expression tag	UNP P24941
C	-3	GLY	-	expression tag	UNP P24941
C	-2	PRO	-	expression tag	UNP P24941
C	-1	GLY	-	expression tag	UNP P24941
C	0	SER	-	expression tag	UNP P24941

- Molecule 2 is a protein called Cyclin-A2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	262	Total 2127	C 1375	N 346	O 396	S 10	0	2	0
2	D	262	Total 2110	C 1366	N 344	O 390	S 10	0	0	0

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	171	GLY	-	expression tag	UNP P30274
B	433	HIS	-	expression tag	UNP P30274
B	434	HIS	-	expression tag	UNP P30274
B	435	HIS	-	expression tag	UNP P30274

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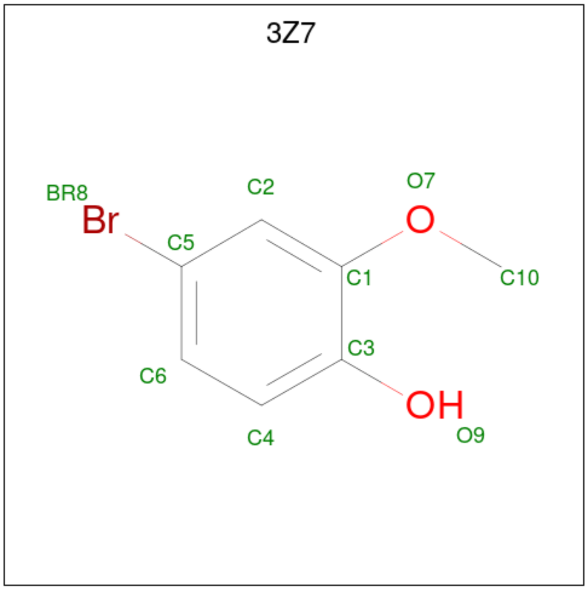
Chain	Residue	Modelled	Actual	Comment	Reference
B	436	HIS	-	expression tag	UNP P30274
B	437	HIS	-	expression tag	UNP P30274
B	438	HIS	-	expression tag	UNP P30274
D	171	GLY	-	expression tag	UNP P30274
D	433	HIS	-	expression tag	UNP P30274
D	434	HIS	-	expression tag	UNP P30274
D	435	HIS	-	expression tag	UNP P30274
D	436	HIS	-	expression tag	UNP P30274
D	437	HIS	-	expression tag	UNP P30274
D	438	HIS	-	expression tag	UNP P30274

- Molecule 3 is 4-bromo-2-methoxyphenol (CCD ID: 3Z7) (formula: $C_7H_7BrO_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total Br C O 30 3 21 6	0	1
3	A	1	Total Br C O 10 1 7 2	0	0
3	A	1	Total Br C O 10 1 7 2	0	0
3	A	1	Total Br C O 10 1 7 2	0	0
3	B	1	Total Br C O 10 1 7 2	0	0
3	B	1	Total Br C O 10 1 7 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	C	1	Total Br C O 20 2 14 4	0	1
3	C	1	Total Br C O 10 1 7 2	0	0
3	D	1	Total Br C O 10 1 7 2	0	0

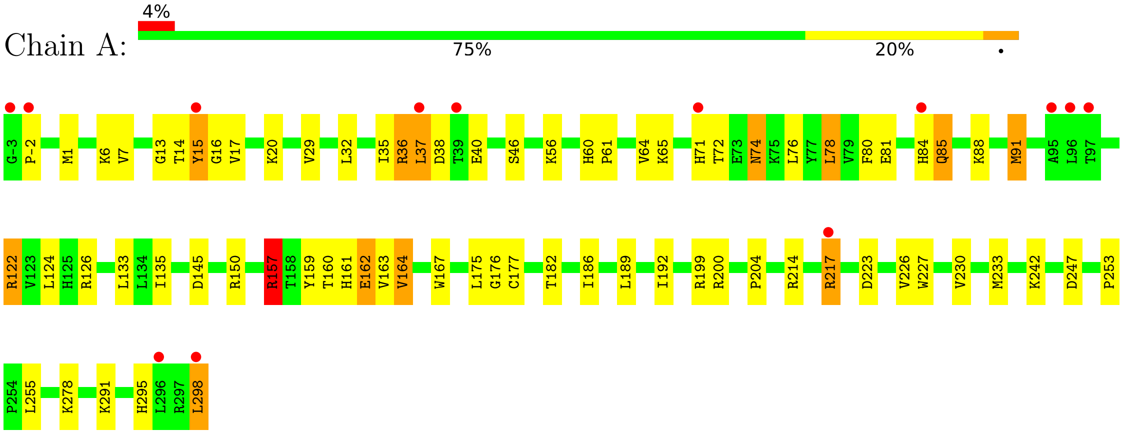
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	86	Total O 86 86	0	0
4	B	86	Total O 86 86	0	0
4	C	32	Total O 32 32	0	0
4	D	20	Total O 20 20	0	0

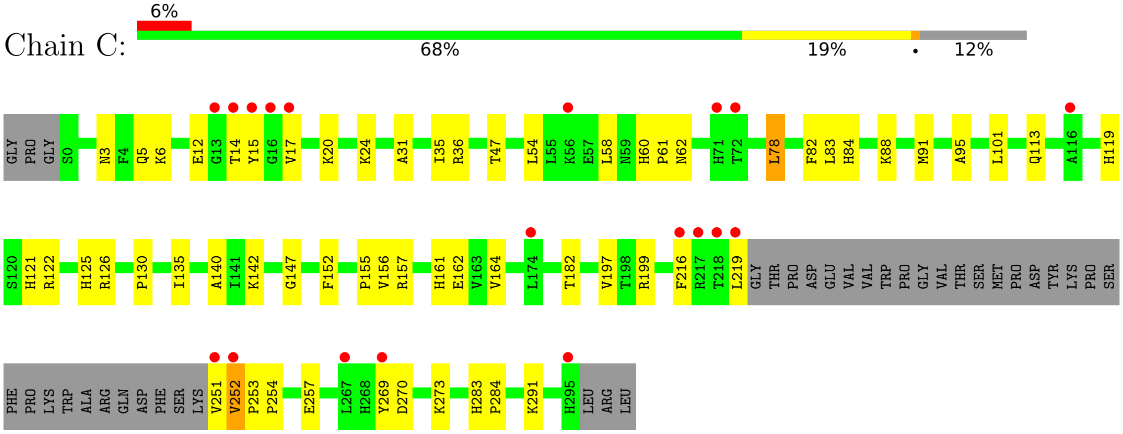
3 Residue-property plots ⓘ

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.

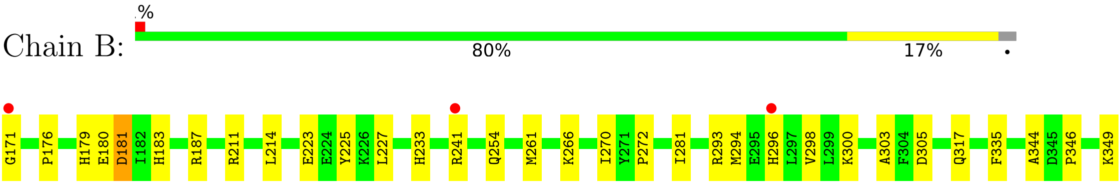
- Molecule 1: Cyclin-dependent kinase 2

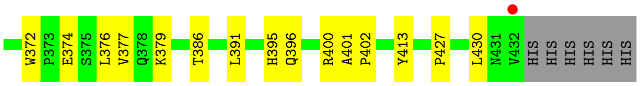


- Molecule 1: Cyclin-dependent kinase 2

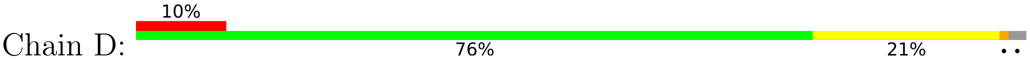


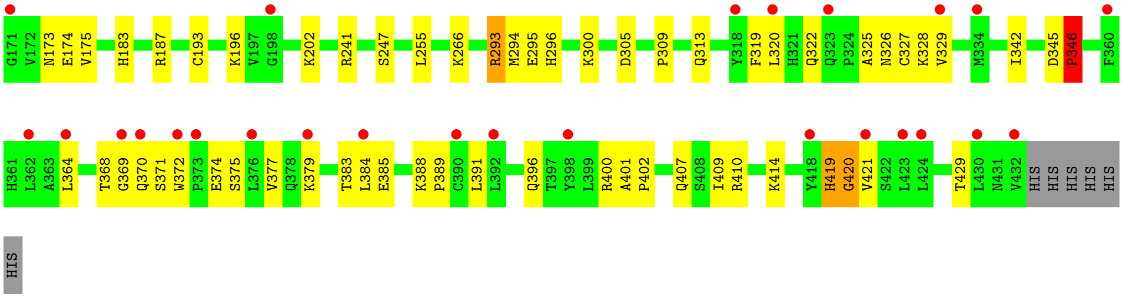
- Molecule 2: Cyclin-A2





- Molecule 2: Cyclin-A2





4 Data and refinement statistics ⓘ

Property	**Value**	**Source**
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	74.02Å 133.92Å 147.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	99.47 – 2.40 99.27 – 2.40	Depositor EDS
% Data completeness (in resolution range)	97.0 (99.47-2.40) 96.7 (99.27-2.40)	Depositor EDS
R_{merge}	0.37	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.80 (at 2.40Å)	Xtriage
Refinement program	REFMAC 5.8.0425	Depositor
R, R_{free}	0.227 , 0.229 0.223 , 0.221	Depositor DCC
R_{free} test set	3060 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å^2)	64.4	Xtriage
Anisotropy	0.065	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 47.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	9161	wwPDB-VP
Average B, all atoms (Å^2)	66.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.58% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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: 3Z7, TPO

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	0.66	0/2495	1.20	6/3385 (0.2%)
1	C	0.61	0/2175	1.19	7/2944 (0.2%)
2	B	0.63	0/2177	1.17	4/2960 (0.1%)
2	D	0.67	0/2160	1.23	3/2937 (0.1%)
All	All	0.64	0/9007	1.20	20/12226 (0.2%)

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	A	0	6
2	B	0	2
2	D	0	2
All	All	0	10

There are no bond length outliers.

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	346	PRO	N-CA-CB	-11.64	89.80	102.60
1	A	253	PRO	N-CA-C	7.83	120.25	110.70
1	C	253	PRO	N-CA-C	7.57	119.93	110.70
2	B	181	ASP	CA-CB-CG	6.79	119.39	112.60
1	A	37	LEU	N-CA-C	-6.76	104.76	112.87
1	A	247	ASP	CB-CA-C	6.61	119.75	109.84
2	B	180	GLU	CB-CG-CD	-6.37	101.77	112.60
1	C	36	ARG	N-CA-CB	5.99	118.78	109.85
2	B	270	ILE	N-CA-C	-5.84	105.04	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	272	PRO	N-CA-CB	5.65	106.36	103.19
1	C	83	LEU	CA-C-N	5.45	127.58	120.28
1	C	83	LEU	C-N-CA	5.45	127.58	120.28
1	A	-2	PRO	N-CA-CB	-5.40	99.23	102.79
1	A	85	GLN	N-CA-CB	-5.33	103.13	111.56
1	A	7	VAL	O-C-N	5.16	125.77	121.85
2	D	247	SER	CB-CA-C	5.10	117.91	110.26
2	D	414	LYS	CB-CA-C	-5.06	102.01	110.56
1	C	113	GLN	CA-C-N	5.03	125.67	119.99
1	C	113	GLN	C-N-CA	5.03	125.67	119.99
1	C	47	THR	N-CA-CB	5.00	117.47	110.12

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	122	ARG	Sidechain
1	A	157	ARG	Sidechain
1	A	199	ARG	Sidechain
1	A	200	ARG	Sidechain
1	A	217	ARG	Sidechain
1	A	36	ARG	Sidechain
2	B	187	ARG	Sidechain
2	B	241	ARG	Sidechain
2	D	293	ARG	Sidechain
2	D	400	ARG	Sidechain

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	2442	0	2479	64	0
1	C	2138	0	2194	50	0
2	B	2127	0	2136	30	0
2	D	2110	0	2128	33	0
3	A	60	0	38	10	0
3	B	20	0	12	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	30	0	18	5	0
3	D	10	0	6	0	0
4	A	86	0	0	0	0
4	B	86	0	0	6	0
4	C	32	0	0	1	0
4	D	20	0	0	0	0
All	All	9161	0	9011	175	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 10.

All (175) 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:6:LYS:HE3	3:A:603:3Z7:BR8	1.61	1.56
1:A:6:LYS:CE	3:A:603:3Z7:BR8	2.32	1.31
1:C:31:ALA:CB	3:C:501[A]:3Z7:BR8	2.37	1.27
1:C:216:PHE:O	1:C:219:LEU:HG	1.38	1.18
1:C:219:LEU:HD23	1:C:269:TYR:OH	1.49	1.12
1:A:84[B]:HIS:ND1	1:A:298:LEU:HB2	1.75	1.01
1:A:6:LYS:HG3	3:A:603:3Z7:BR8	2.15	1.01
1:C:31:ALA:HB2	3:C:501[A]:3Z7:BR8	2.16	0.99
1:C:15:TYR:HE1	1:C:35:ILE:HD11	1.29	0.97
1:C:15:TYR:HE1	1:C:35:ILE:CD1	1.78	0.95
1:C:31:ALA:HB1	3:C:501[A]:3Z7:BR8	2.20	0.94
1:A:6:LYS:CG	3:A:603:3Z7:BR8	2.75	0.90
2:B:300:LYS:HE2	4:B:671:HOH:O	1.79	0.82
1:A:6:LYS:HE2	3:A:603:3Z7:BR8	2.35	0.81
1:C:31:ALA:HB3	3:C:501[A]:3Z7:BR8	2.36	0.79
1:C:15:TYR:CE1	1:C:35:ILE:HD11	2.16	0.77
2:B:254:GLN:HB2	3:B:502:3Z7:BR8	2.40	0.76
2:B:171:GLY:O	2:B:176:PRO:HD3	1.87	0.75
1:C:216:PHE:O	1:C:219:LEU:CG	2.29	0.75
1:A:56:LYS:HD3	2:B:305[B]:ASP:OD1	1.88	0.74
1:C:15:TYR:CE1	1:C:35:ILE:CD1	2.68	0.73
2:B:179:HIS:CD2	4:B:667:HOH:O	2.42	0.72
1:A:126:ARG:HB3	1:A:163:VAL:HG11	1.73	0.70
1:C:88:LYS:HA	1:C:91:MET:HE2	1.71	0.70
1:A:81:GLU:O	3:A:601[B]:3Z7:H12	1.92	0.70
1:C:14:THR:HG23	1:C:15:TYR:HD2	1.57	0.68
1:C:14:THR:HG23	1:C:15:TYR:CD2	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:604:3Z7:O9	3:A:604:3Z7:H17	1.91	0.68
3:B:501:3Z7:C10	3:B:501:3Z7:O9	2.43	0.66
1:A:88:LYS:HA	1:A:91:MET:HE2	1.78	0.65
1:A:6:LYS:CD	3:A:603:3Z7:BR8	2.98	0.65
1:C:162:GLU:HG2	1:C:162:GLU:O	1.98	0.63
1:A:177:CYS:SG	1:A:233:MET:HE3	2.38	0.63
1:A:84[B]:HIS:ND1	1:A:298:LEU:CB	2.57	0.62
2:D:326:ASN:HB3	2:D:329:VAL:HB	1.82	0.62
1:A:177:CYS:SG	1:A:233:MET:HG2	2.39	0.61
1:C:197:VAL:HG13	1:C:254:PRO:HG2	1.85	0.59
1:A:72:THR:HG22	1:A:74:ASN:ND2	2.18	0.59
1:C:219:LEU:HD23	1:C:269:TYR:CZ	2.38	0.59
2:D:296:HIS:O	2:D:300:LYS:HG3	2.03	0.59
1:A:126:ARG:HB3	1:A:163:VAL:CG1	2.32	0.58
1:C:84:HIS:HB2	4:C:621:HOH:O	2.02	0.58
1:A:85:GLN:HE21	1:A:135:ILE:HD11	1.69	0.58
2:D:364:LEU:HG	2:D:370:GLN:HB2	1.85	0.58
2:B:396:GLN:HE21	2:B:400:ARG:CZ	2.17	0.57
1:A:71:HIS:CD2	1:A:76:LEU:HD13	2.40	0.57
1:A:72:THR:CG2	1:A:74:ASN:HD21	2.18	0.57
1:A:20:LYS:HE3	1:A:29:VAL:HG11	1.87	0.56
1:A:71:HIS:HD2	1:A:76:LEU:HD13	1.70	0.56
2:D:401:ALA:HB3	2:D:402:PRO:HD3	1.89	0.55
2:D:374:GLU:HA	2:D:377:VAL:HG23	1.88	0.55
1:A:72:THR:CG2	1:A:74:ASN:ND2	2.70	0.55
1:C:54:LEU:O	1:C:58:LEU:HG	2.06	0.55
1:A:78:LEU:N	1:A:78:LEU:HD23	2.22	0.54
2:B:254:GLN:CB	3:B:502:3Z7:BR8	3.10	0.54
1:C:95:ALA:HA	1:C:199:ARG:HD2	1.89	0.54
1:C:60:HIS:CG	1:C:61:PRO:HD2	2.43	0.54
1:C:121:HIS:O	1:C:122:ARG:HG3	2.07	0.54
1:A:163:VAL:HG12	1:A:164:VAL:N	2.23	0.54
1:A:1:MET:HE1	1:A:32:LEU:HD13	1.89	0.54
2:B:395:HIS:HB2	2:B:430:LEU:HD11	1.90	0.53
1:A:36:ARG:C	1:A:38:ASP:N	2.61	0.53
1:C:197:VAL:HG11	1:C:252:VAL:HG12	1.90	0.53
1:A:230:VAL:HA	1:A:233:MET:SD	2.48	0.53
1:C:156:VAL:HG22	2:D:173:ASN:HB3	1.91	0.53
1:A:214:ARG:HG3	1:A:217:ARG:HH11	1.73	0.52
1:C:122:ARG:HA	1:C:152:PHE:CZ	2.44	0.52
1:A:291:LYS:O	1:A:291:LYS:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:270:ASP:OD2	1:C:273:LYS:HG2	2.10	0.52
1:A:223:ASP:H	1:A:226:VAL:HG12	1.75	0.52
1:A:72:THR:HG21	1:A:74:ASN:HD21	1.73	0.52
2:D:266:LYS:NZ	2:D:295:GLU:OE2	2.42	0.51
1:A:161[A]:HIS:O	1:A:162:GLU:C	2.53	0.51
2:B:179:HIS:HD2	4:B:667:HOH:O	1.88	0.51
1:A:227:TRP:CH2	1:A:233:MET:HE1	2.46	0.51
2:D:241:ARG:HH22	2:D:305:ASP:HB3	1.76	0.50
2:B:183:HIS:HD2	4:B:641:HOH:O	1.95	0.50
1:A:80:PHE:CG	3:A:601[C]:3Z7:H15	2.47	0.50
1:C:14:THR:HG21	1:C:147:GLY:HA3	1.94	0.50
1:A:161[A]:HIS:CG	1:A:162:GLU:N	2.80	0.50
2:D:374:GLU:HA	2:D:377:VAL:CG2	2.42	0.50
1:C:15:TYR:HE1	1:C:35:ILE:CG1	2.25	0.49
1:A:133:LEU:HD11	1:A:192:ILE:HD13	1.93	0.49
1:A:161[B]:HIS:C	1:A:161[B]:HIS:CD2	2.90	0.49
2:B:346:PRO:O	2:B:349:LYS:HG2	2.12	0.49
1:A:36:ARG:C	1:A:38:ASP:H	2.20	0.48
1:A:161[A]:HIS:CE1	1:A:176:GLY:HA2	2.48	0.48
1:C:219:LEU:CD2	1:C:269:TYR:OH	2.40	0.48
2:B:335:PHE:HB2	2:B:413:TYR:CD2	2.49	0.48
2:D:309:PRO:HA	2:D:313:GLN:NE2	2.29	0.48
1:A:36:ARG:HA	1:A:36:ARG:HD2	1.70	0.48
1:C:122:ARG:HA	1:C:152:PHE:CE1	2.49	0.48
1:A:13:GLY:HA3	1:A:15:TYR:CE2	2.48	0.48
1:A:60:HIS:CG	1:A:61:PRO:HD2	2.49	0.48
1:C:15:TYR:CE1	1:C:35:ILE:HG12	2.49	0.48
2:D:345:ASP:HA	2:D:346:PRO:HA	1.67	0.47
2:B:233:HIS:HD2	4:B:625:HOH:O	1.96	0.47
1:A:278:LYS:NZ	2:B:181:ASP:OD2	2.43	0.47
1:C:6:LYS:HB3	3:C:502:3Z7:H13	1.95	0.47
1:C:125:HIS:O	1:C:126:ARG:HB2	2.14	0.47
2:B:395:HIS:HE1	2:B:427:PRO:O	1.97	0.47
1:C:62:ASN:HA	1:C:142:LYS:HG2	1.97	0.47
1:C:219:LEU:HA	1:C:269:TYR:HE2	1.80	0.46
2:B:183:HIS:HB2	2:B:317:GLN:HE22	1.80	0.46
1:C:216:PHE:HA	1:C:219:LEU:HD21	1.98	0.46
1:A:161[B]:HIS:O	1:A:162:GLU:C	2.58	0.46
1:C:88:LYS:HB2	1:C:130:PRO:HB2	1.98	0.46
1:C:15:TYR:CD1	1:C:35:ILE:HG12	2.51	0.46
2:D:371:SER:O	2:D:372:TRP:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:293:ARG:NH1	1:C:3:ASN:OD1	2.49	0.45
1:C:135:ILE:HA	1:C:140:ALA:O	2.16	0.45
2:D:388:LYS:HB3	2:D:389:PRO:HD3	1.98	0.45
1:A:157:ARG:HG3	1:A:159:TYR:CE1	2.51	0.45
2:D:322:GLN:HB3	2:D:325:ALA:HA	1.99	0.45
3:A:604:3Z7:H16	2:B:303:ALA:HB1	1.98	0.45
1:A:65:LYS:H	1:A:81:GLU:HG2	1.82	0.44
1:A:295:HIS:H	1:A:295:HIS:CD2	2.35	0.44
1:C:283:HIS:CG	1:C:284:PRO:HD2	2.52	0.44
2:D:419:HIS:O	2:D:420:GLY:C	2.59	0.44
3:B:501:3Z7:O9	3:B:501:3Z7:H17	2.15	0.44
2:B:294:MET:O	2:B:298:VAL:HG23	2.18	0.44
1:A:161[A]:HIS:HD2	1:A:162:GLU:OE1	2.01	0.43
1:C:78:LEU:HD23	1:C:78:LEU:N	2.33	0.43
1:C:155:PRO:HD3	2:D:320:LEU:HD21	1.99	0.43
1:C:161:HIS:CG	1:C:162:GLU:N	2.86	0.43
2:B:401:ALA:N	2:B:402:PRO:CD	2.82	0.43
1:C:20:LYS:HD2	1:C:82:PHE:CE1	2.53	0.43
1:A:124:LEU:HD21	1:A:182:THR:HA	1.99	0.43
2:D:419:HIS:O	2:D:421:VAL:N	2.51	0.43
1:A:175:LEU:HD13	1:A:233:MET:HE2	2.01	0.43
2:B:372:TRP:CZ2	2:B:376:LEU:HB3	2.54	0.43
1:C:88:LYS:HE2	1:C:130:PRO:HG2	2.00	0.43
2:D:202:LYS:HA	2:D:202:LYS:HD2	1.76	0.43
2:D:388:LYS:O	2:D:389:PRO:C	2.59	0.43
1:A:189:LEU:HD23	1:A:189:LEU:HA	1.86	0.43
1:A:13:GLY:N	1:A:16:GLY:O	2.48	0.42
2:D:383:THR:C	2:D:385:GLU:N	2.75	0.42
2:B:214:LEU:HB2	3:B:501:3Z7:BR8	2.74	0.42
1:C:121:HIS:C	1:C:122:ARG:HG3	2.44	0.42
2:D:327:CYS:HB2	2:D:419:HIS:CE1	2.54	0.42
1:A:223:ASP:OD1	1:A:226:VAL:HG12	2.18	0.42
2:B:171:GLY:O	2:B:176:PRO:CD	2.62	0.42
2:B:386:THR:HB	4:B:603:HOH:O	2.19	0.42
3:B:501:3Z7:O9	3:B:501:3Z7:H16	2.18	0.42
2:B:374:GLU:O	2:B:377:VAL:HB	2.20	0.42
2:D:384:LEU:HD23	2:D:384:LEU:HA	1.91	0.42
1:A:177:CYS:SG	1:A:233:MET:SD	3.18	0.42
2:D:372:TRP:CD1	2:D:377:VAL:HG22	2.54	0.42
1:A:175:LEU:CD1	1:A:233:MET:HE2	2.50	0.41
2:B:317:GLN:HE21	2:B:379:LYS:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:328:LYS:O	2:D:329:VAL:C	2.62	0.41
2:D:174:GLU:O	2:D:175:VAL:C	2.62	0.41
1:A:167:TRP:CD1	1:A:204:PRO:HA	2.56	0.41
2:B:227:LEU:CD1	2:B:261:MET:HE3	2.50	0.41
1:C:5:GLN:HB2	1:C:24:LYS:HE2	2.02	0.41
1:C:15:TYR:CE1	1:C:35:ILE:CG1	3.03	0.41
2:D:319:PHE:O	2:D:322:GLN:HB2	2.20	0.41
2:B:225:TYR:HE1	2:B:281:ILE:HG21	1.85	0.41
2:D:183:HIS:ND1	2:D:379:LYS:HE3	2.36	0.41
2:D:368:THR:OG1	2:D:369:GLY:N	2.54	0.41
2:B:211:ARG:HD3	2:B:344:ALA:HB2	2.01	0.41
1:A:46:SER:HB2	2:B:266:LYS:O	2.21	0.41
1:A:255:LEU:HD12	1:A:255:LEU:HA	1.92	0.41
2:D:255:LEU:HD23	2:D:294:MET:HE2	2.03	0.41
2:D:374:GLU:O	2:D:375:SER:C	2.63	0.41
2:D:407:GLN:OE1	2:D:410:ARG:HD3	2.20	0.41
2:D:193:CYS:O	2:D:241:ARG:HD2	2.21	0.41
1:A:186:ILE:HD13	1:A:186:ILE:HA	1.92	0.40
1:C:119:HIS:CE1	1:C:182:THR:HB	2.56	0.40
1:A:37:LEU:O	1:A:38:ASP:C	2.64	0.40
1:A:64:VAL:O	1:A:64:VAL:HG13	2.20	0.40
2:D:187:ARG:HH11	2:D:187:ARG:HD3	1.76	0.40
1:A:14:THR:O	1:A:15:TYR:C	2.65	0.40

There are no symmetry-related clashes.

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	301/302 (100%)	291 (97%)	8 (3%)	2 (1%)	19	29
1	C	261/302 (86%)	251 (96%)	9 (3%)	1 (0%)	30	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	262/268 (98%)	259 (99%)	3 (1%)	0	100	100
2	D	260/268 (97%)	249 (96%)	10 (4%)	1 (0%)	30	44
All	All	1084/1140 (95%)	1050 (97%)	30 (3%)	4 (0%)	30	44

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	164	VAL
1	A	145	ASP
1	C	164	VAL
2	D	420	GLY

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	266/264 (101%)	253 (95%)	13 (5%)	21	36
1	C	233/264 (88%)	224 (96%)	9 (4%)	27	46
2	B	236/240 (98%)	232 (98%)	4 (2%)	56	75
2	D	234/240 (98%)	225 (96%)	9 (4%)	28	47
All	All	969/1008 (96%)	934 (96%)	35 (4%)	31	49

All (35) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	15	TYR
1	A	17	VAL
1	A	35	ILE
1	A	40	GLU
1	A	74	ASN
1	A	78	LEU
1	A	91	MET
1	A	122	ARG

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Mol	Chain	Res	Type
1	A	150	ARG
1	A	157	ARG
1	A	162	GLU
1	A	242	LYS
1	A	298	LEU
2	B	223[A]	GLU
2	B	223[B]	GLU
2	B	296	HIS
2	B	391	LEU
1	C	12	GLU
1	C	17	VAL
1	C	78	LEU
1	C	101	LEU
1	C	157	ARG
1	C	251	VAL
1	C	252	VAL
1	C	257	GLU
1	C	291	LYS
2	D	196	LYS
2	D	293	ARG
2	D	342	ILE
2	D	346	PRO
2	D	391	LEU
2	D	396	GLN
2	D	409	ILE
2	D	419	HIS
2	D	429	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	74	ASN
1	A	85	GLN
1	A	295	HIS
2	B	254	GLN
2	B	296	HIS
2	B	317	GLN
2	B	378	GLN
2	B	395	HIS
2	B	396	GLN
2	B	425	ASN
2	B	431	ASN

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Mol	Chain	Res	Type
1	C	59	ASN
1	C	62	ASN
1	C	84	HIS
1	C	265	GLN
1	C	287	GLN
2	D	173	ASN
2	D	228	GLN
2	D	254	GLN
2	D	317	GLN
2	D	378	GLN
2	D	395	HIS
2	D	419	HIS
2	D	425	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues 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	$\#\|Z\| > 2$
1	TPO	A	160	1	8,10,11	0.75	0	10,14,16	1.11	1 (10%)
1	TPO	C	160	1	8,10,11	0.84	0	10,14,16	0.97	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
1	TPO	A	160	1	-	1/9/11/13	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	TPO	C	160	1	-	0/9/11/13	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	160	TPO	O-C-CA	-2.03	119.47	124.78

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	160	TPO	O-C-CA-CB

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

12 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	$\#\|Z\| > 2$
3	3Z7	B	501	-	10,10,10	0.32	0	13,13,13	1.13	2 (15%)
3	3Z7	A	604	-	10,10,10	0.56	0	13,13,13	0.88	0
3	3Z7	C	502	-	10,10,10	0.29	0	13,13,13	0.27	0
3	3Z7	C	501[B]	-	10,10,10	0.51	0	13,13,13	1.13	1 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
3	3Z7	A	601[A]	-	10,10,10	0.38	0	13,13,13	0.59	0
3	3Z7	D	501	-	10,10,10	0.47	0	13,13,13	0.75	0
3	3Z7	C	501[A]	-	10,10,10	0.31	0	13,13,13	0.26	0
3	3Z7	A	602	-	10,10,10	0.46	0	13,13,13	0.63	0
3	3Z7	A	601[B]	-	10,10,10	0.58	0	13,13,13	1.06	0
3	3Z7	A	603	-	10,10,10	0.32	0	13,13,13	0.31	0
3	3Z7	A	601[C]	-	10,10,10	0.44	0	13,13,13	1.30	2 (15%)
3	3Z7	B	502	-	10,10,10	0.36	0	13,13,13	1.15	1 (7%)

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	3Z7	B	501	-	-	2/2/2/2	0/1/1/1
3	3Z7	A	604	-	-	2/2/2/2	0/1/1/1
3	3Z7	C	502	-	-	0/2/2/2	0/1/1/1
3	3Z7	C	501[B]	-	-	0/2/2/2	0/1/1/1
3	3Z7	A	601[A]	-	-	0/2/2/2	0/1/1/1
3	3Z7	D	501	-	-	2/2/2/2	0/1/1/1
3	3Z7	C	501[A]	-	-	2/2/2/2	0/1/1/1
3	3Z7	A	602	-	-	0/2/2/2	0/1/1/1
3	3Z7	A	601[B]	-	-	0/2/2/2	0/1/1/1
3	3Z7	A	603	-	-	2/2/2/2	0/1/1/1
3	3Z7	A	601[C]	-	-	0/2/2/2	0/1/1/1
3	3Z7	B	502	-	-	0/2/2/2	0/1/1/1

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	601[C]	3Z7	O9-C3-C4	2.79	126.91	119.33
3	A	601[C]	3Z7	O9-C3-C1	-2.73	113.72	120.09
3	B	501	3Z7	C10-O7-C1	2.59	121.44	117.53
3	C	501[B]	3Z7	C10-O7-C1	-2.56	113.66	117.53
3	B	501	3Z7	O7-C1-C3	2.26	117.85	114.57
3	B	502	3Z7	BR8-C5-C6	-2.23	116.06	119.30

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	501	3Z7	C3-C1-O7-C10
3	B	501	3Z7	C2-C1-O7-C10
3	A	604	3Z7	C2-C1-O7-C10
3	D	501	3Z7	C3-C1-O7-C10
3	A	604	3Z7	C3-C1-O7-C10
3	A	603	3Z7	C3-C1-O7-C10
3	A	603	3Z7	C2-C1-O7-C10
3	C	501[A]	3Z7	C2-C1-O7-C10
3	C	501[A]	3Z7	C3-C1-O7-C10
3	D	501	3Z7	C2-C1-O7-C10

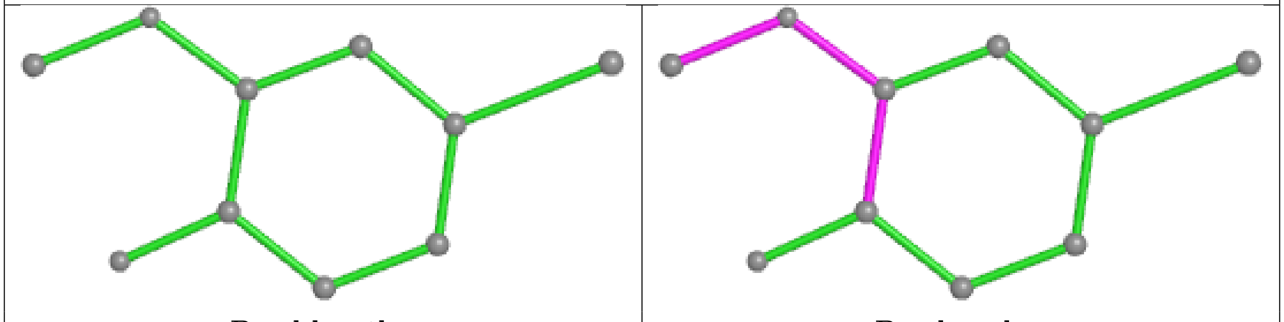
There are no ring outliers.

8 monomers are involved in 21 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	501	3Z7	4	0
3	A	604	3Z7	2	0
3	C	502	3Z7	1	0
3	C	501[A]	3Z7	4	0
3	A	601[B]	3Z7	1	0
3	A	603	3Z7	6	0
3	A	601[C]	3Z7	1	0
3	B	502	3Z7	2	0

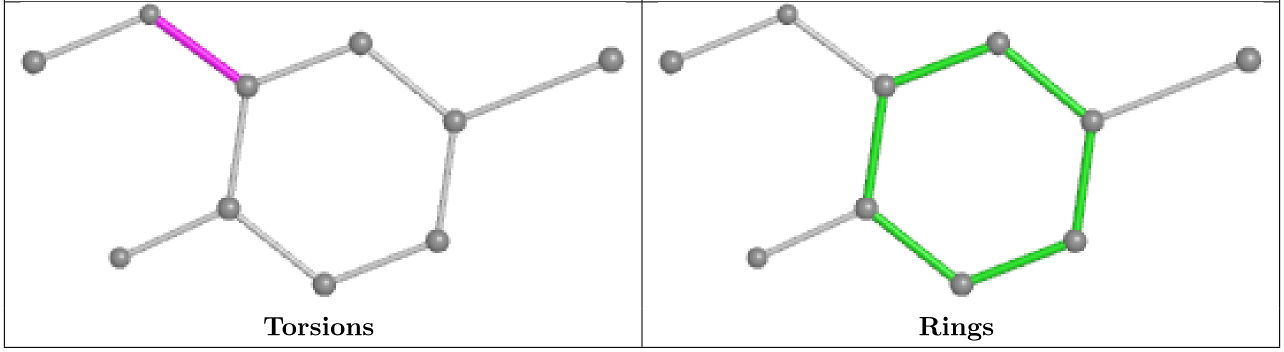
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 3Z7 B 501



Bond lengths

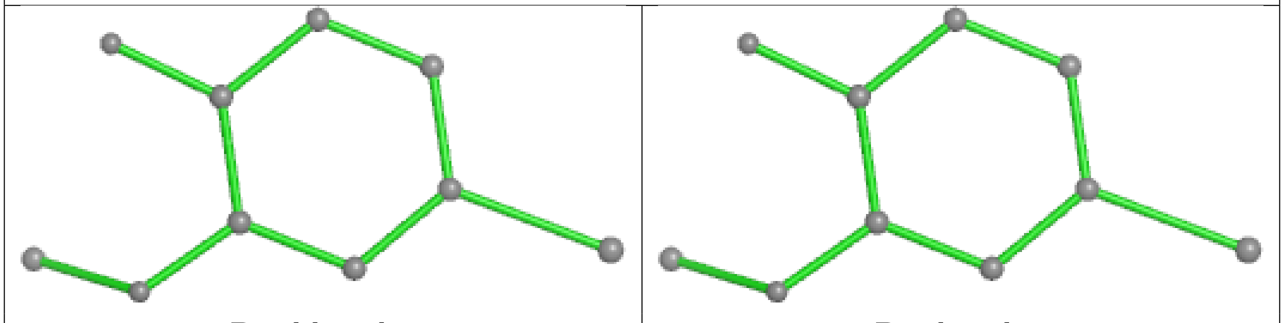
Bond angles



Torsions

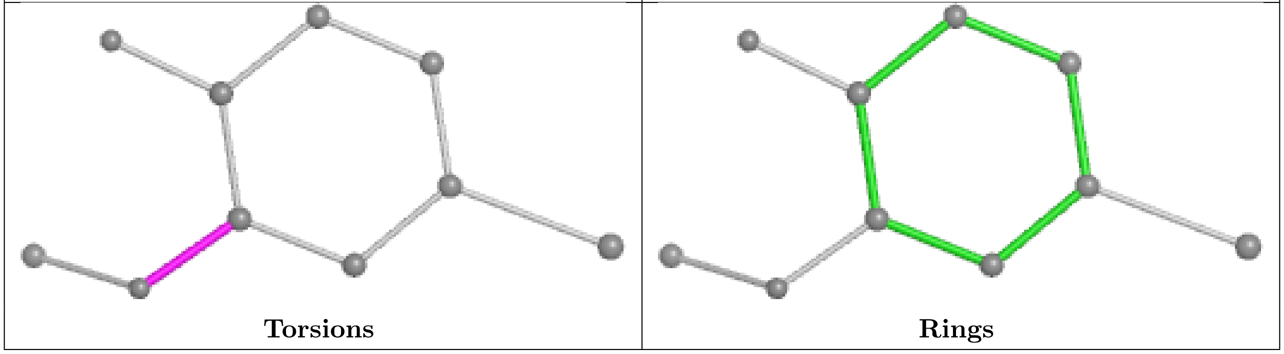
Rings

Ligand 3Z7 A 604



Bond lengths

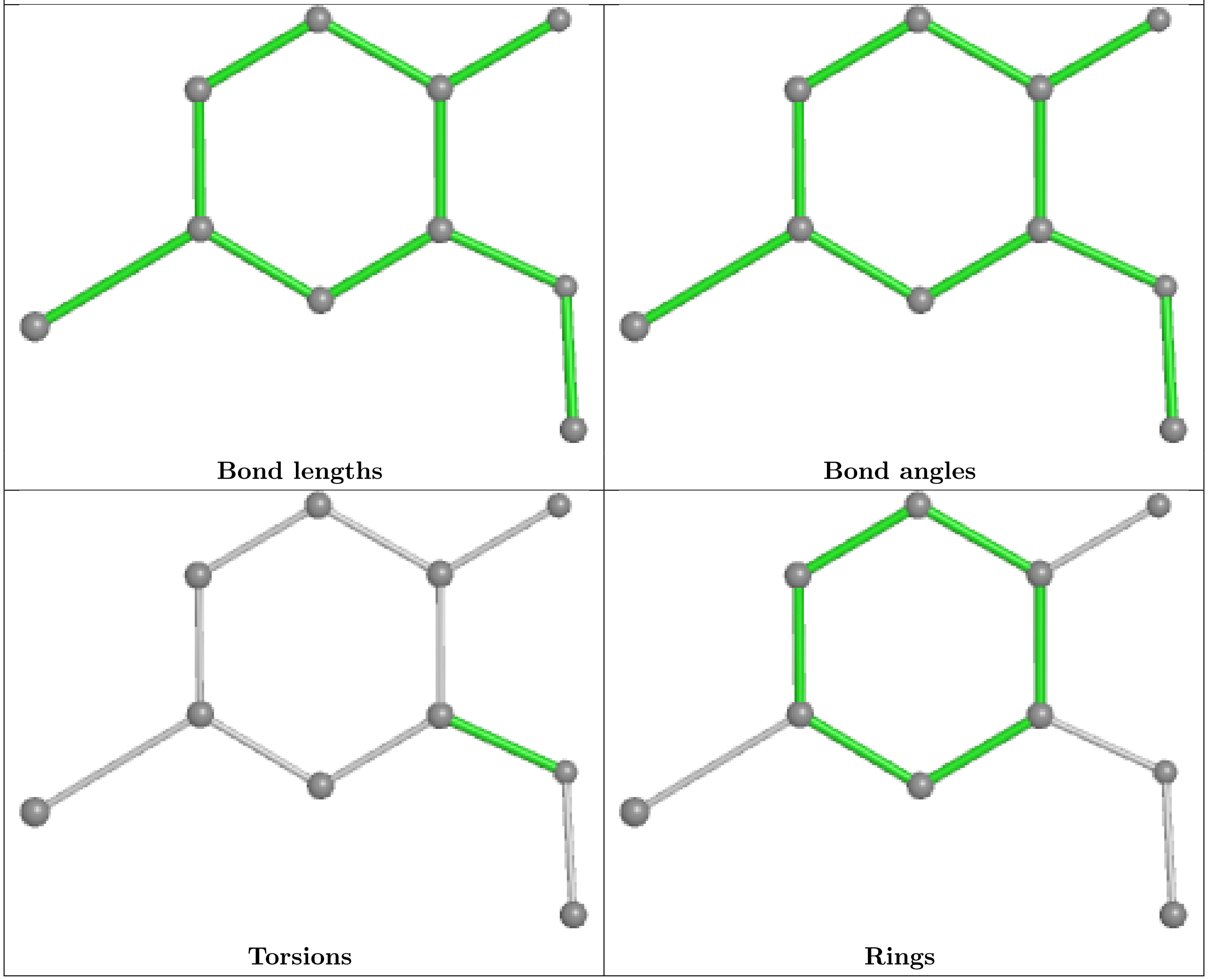
Bond angles



Torsions

Rings

Ligand 3Z7 C 502



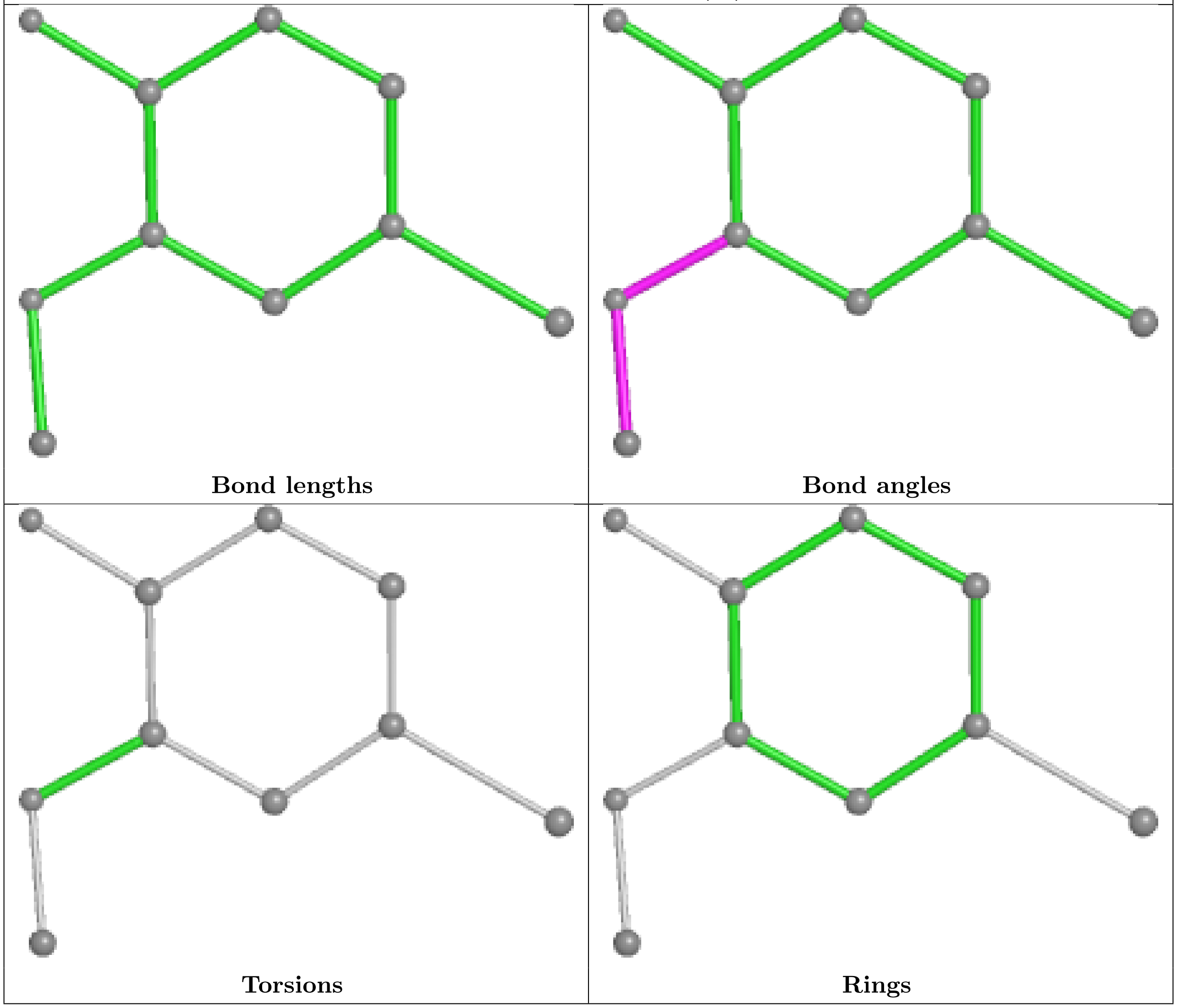
Bond lengths

Bond angles

Torsions

Rings

Ligand 3Z7 C 501 (B)



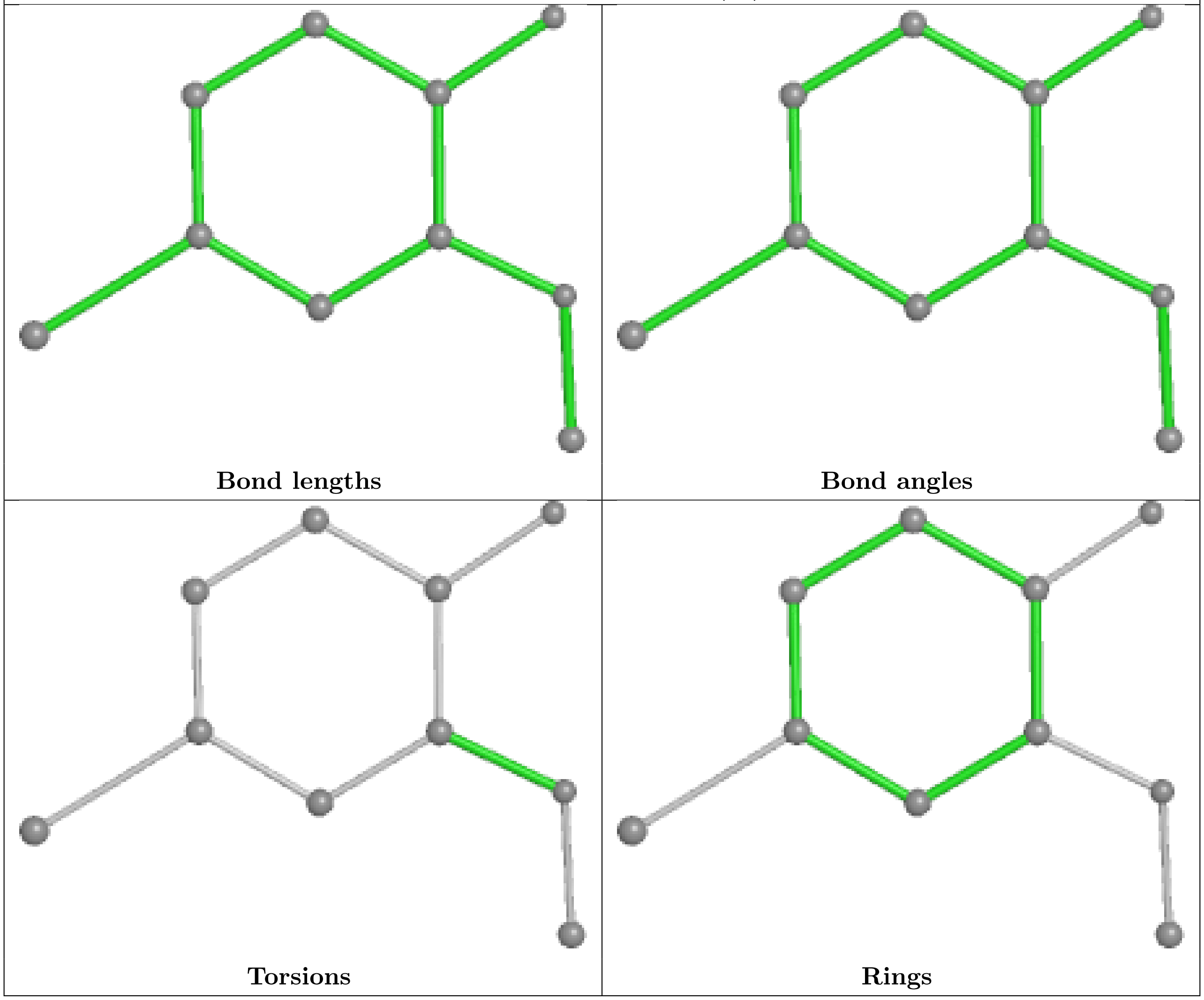
Bond lengths

Bond angles

Torsions

Rings

Ligand 3Z7 A 601 (A)



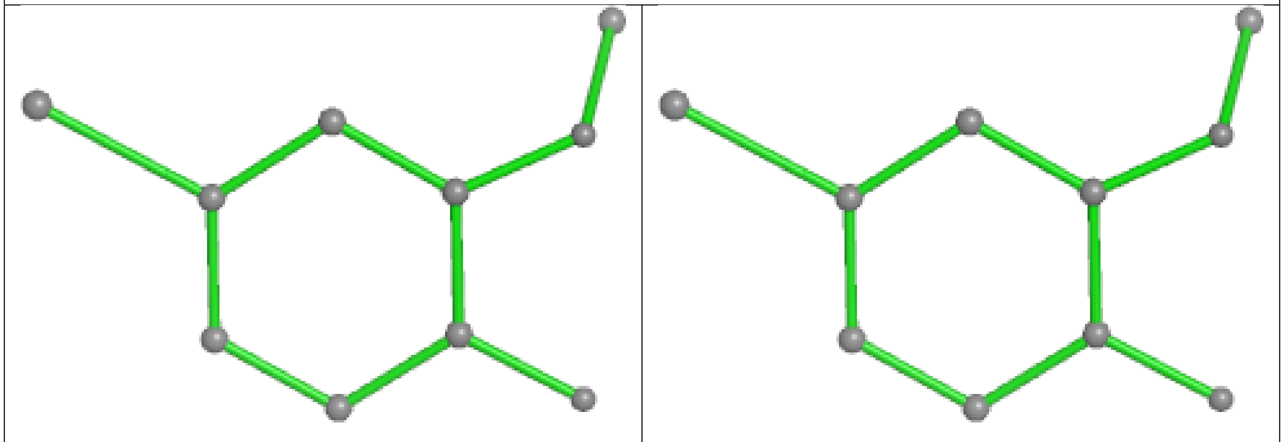
Bond lengths

Bond angles

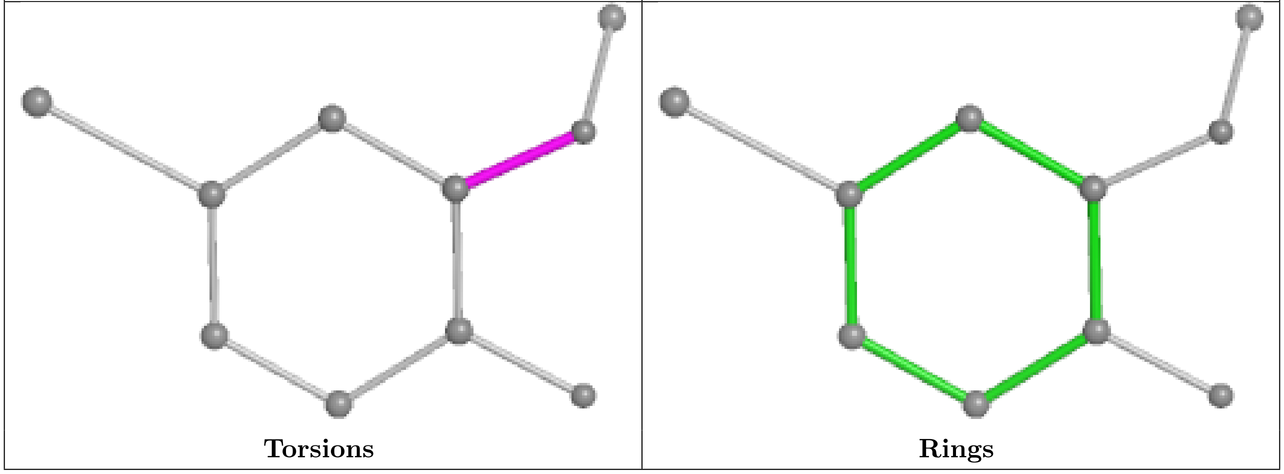
Torsions

Rings

Ligand 3Z7 D 501

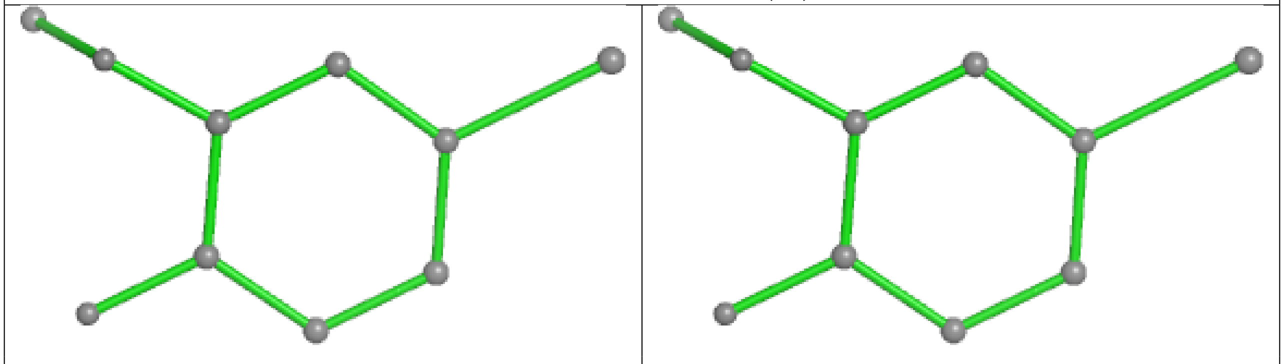


Bond lengths **Bond angles**

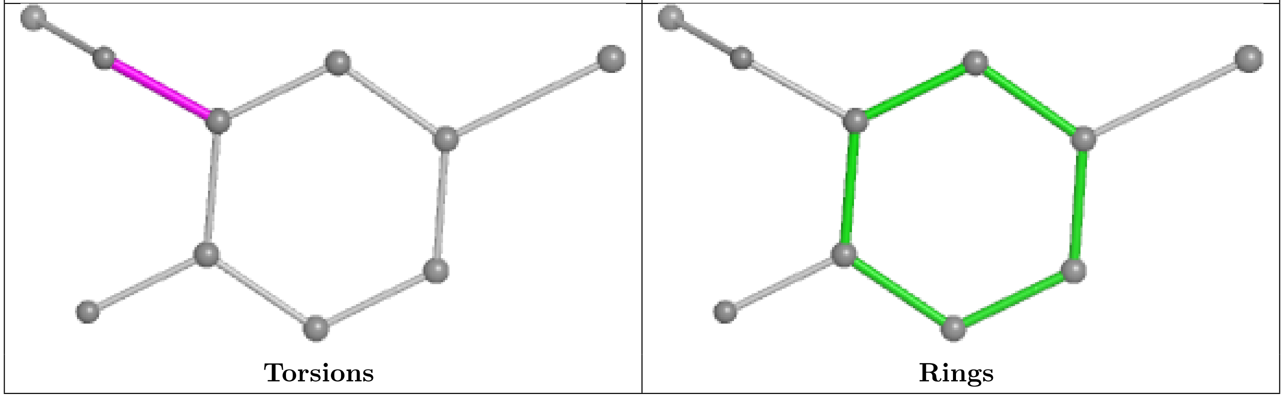


Torsions **Rings**

Ligand 3Z7 C 501 (A)

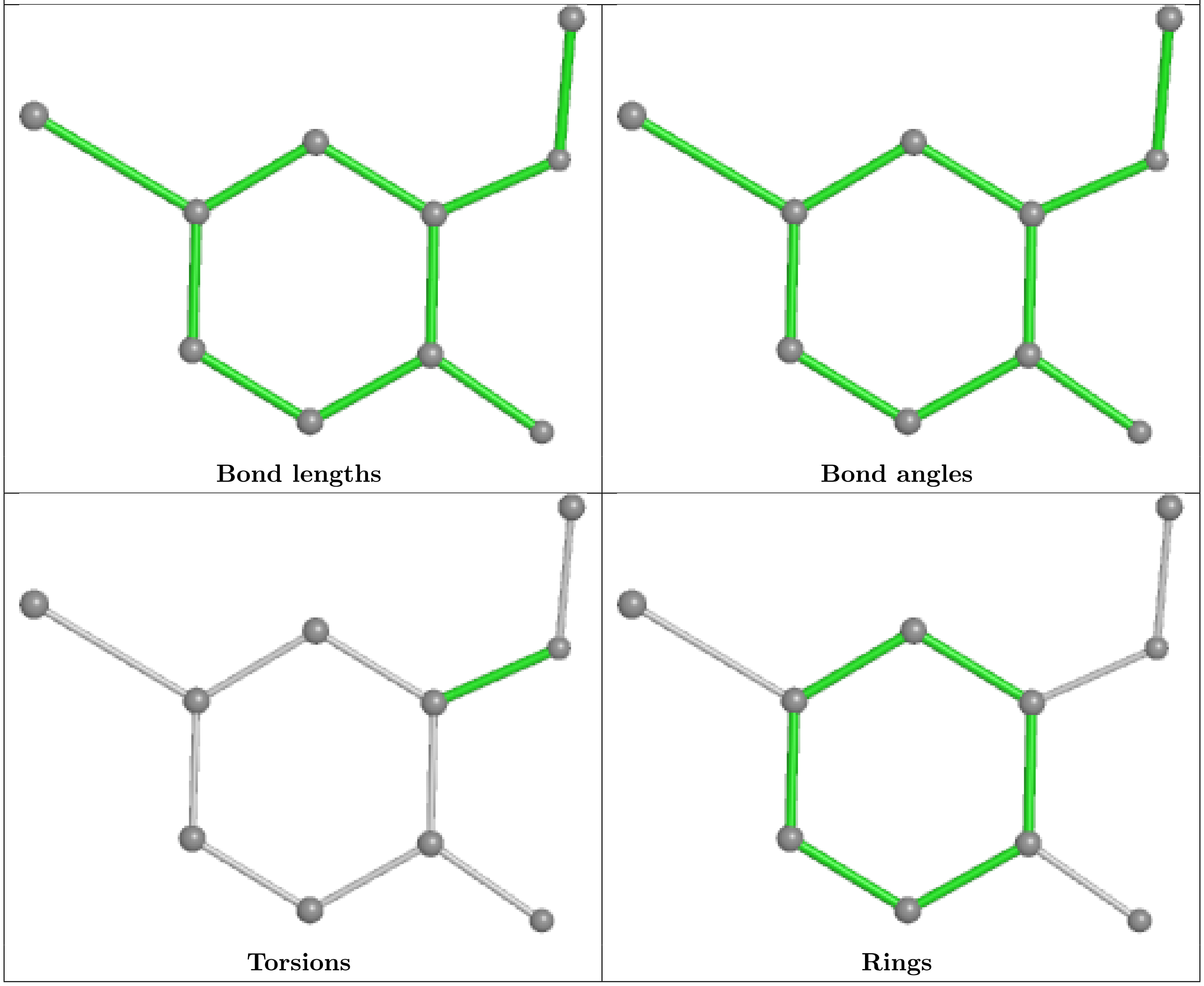


Bond lengths **Bond angles**



Torsions **Rings**

Ligand 3Z7 A 602



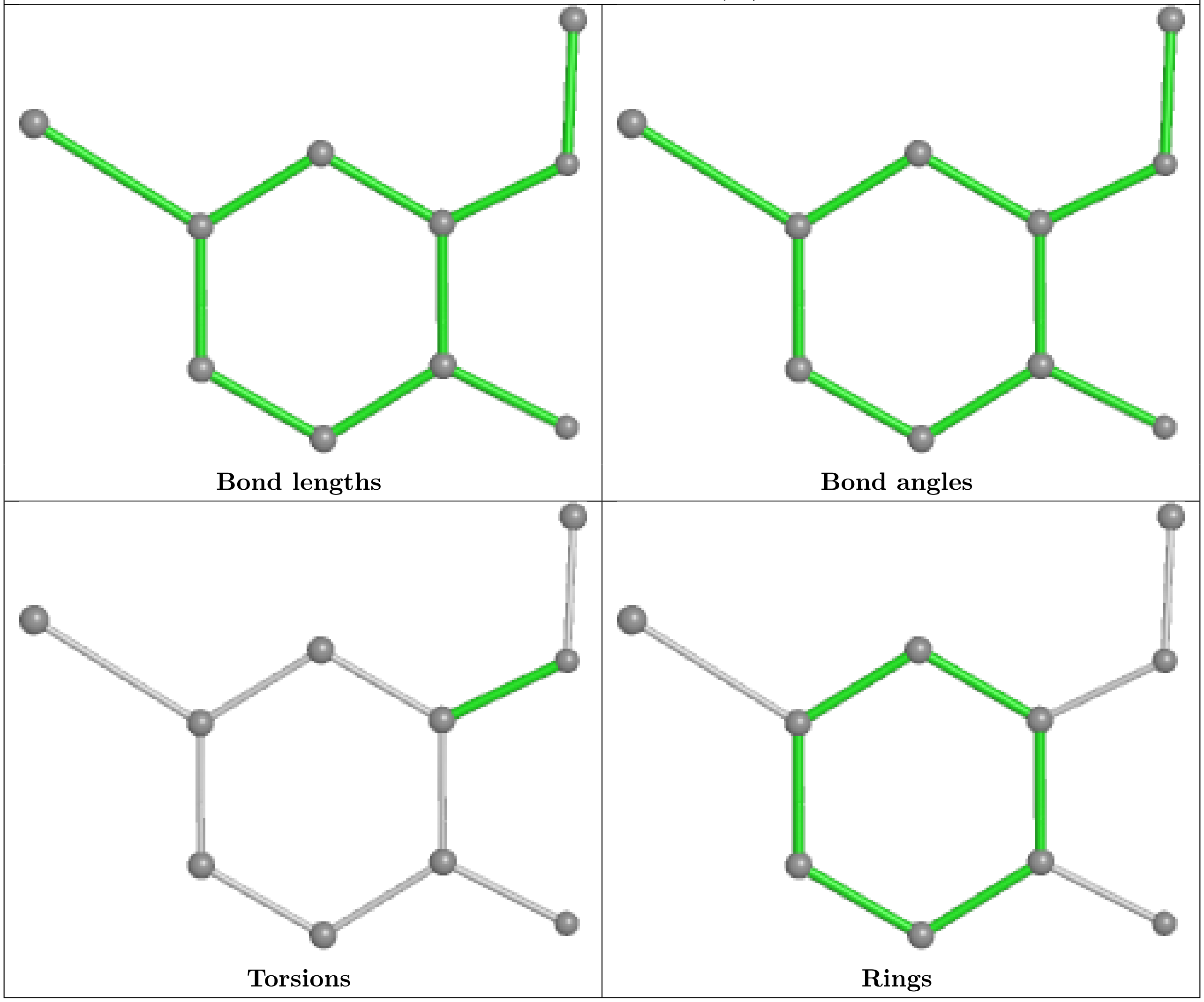
Bond lengths

Bond angles

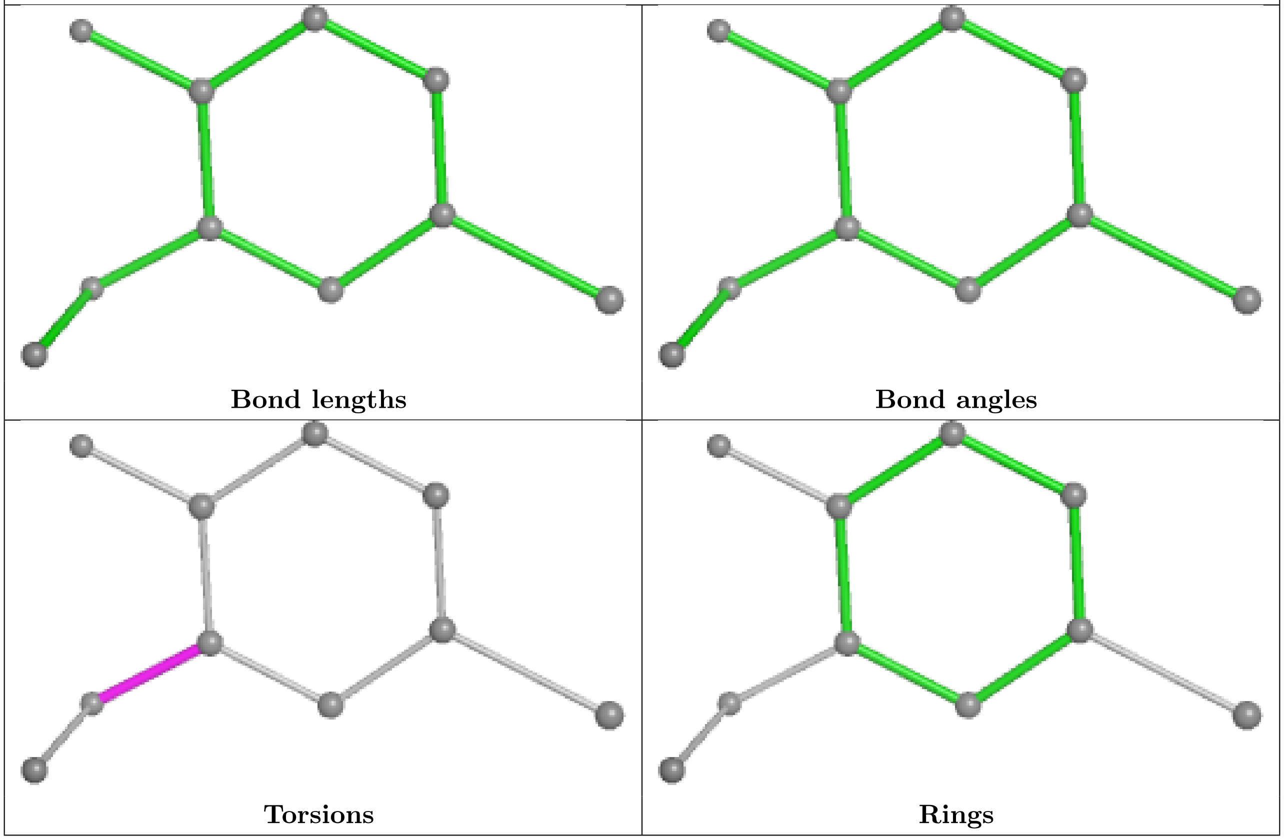
Torsions

Rings

Ligand 3Z7 A 601 (B)



Ligand 3Z7 A 603



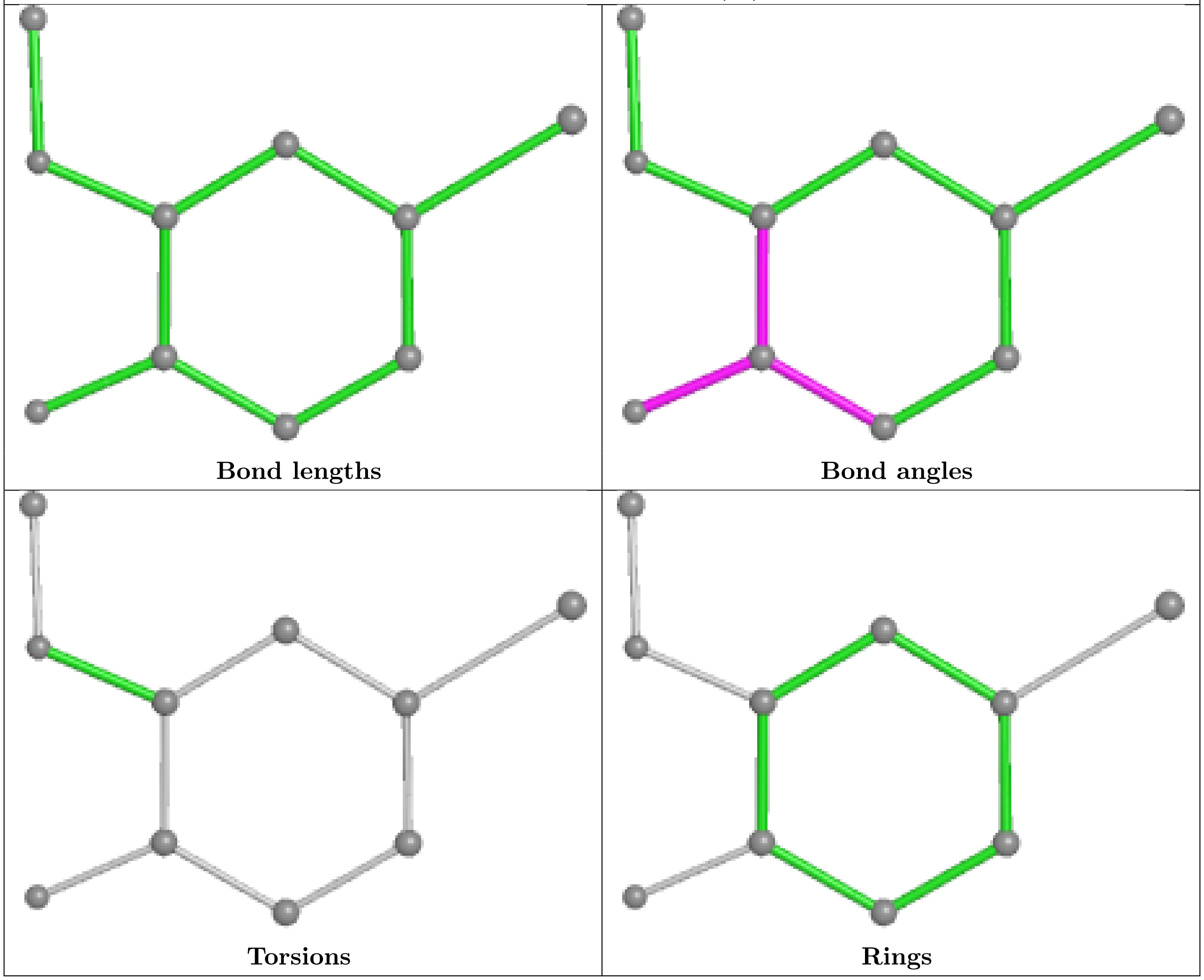
Bond lengths

Bond angles

Torsions

Rings

Ligand 3Z7 A 601 (C)

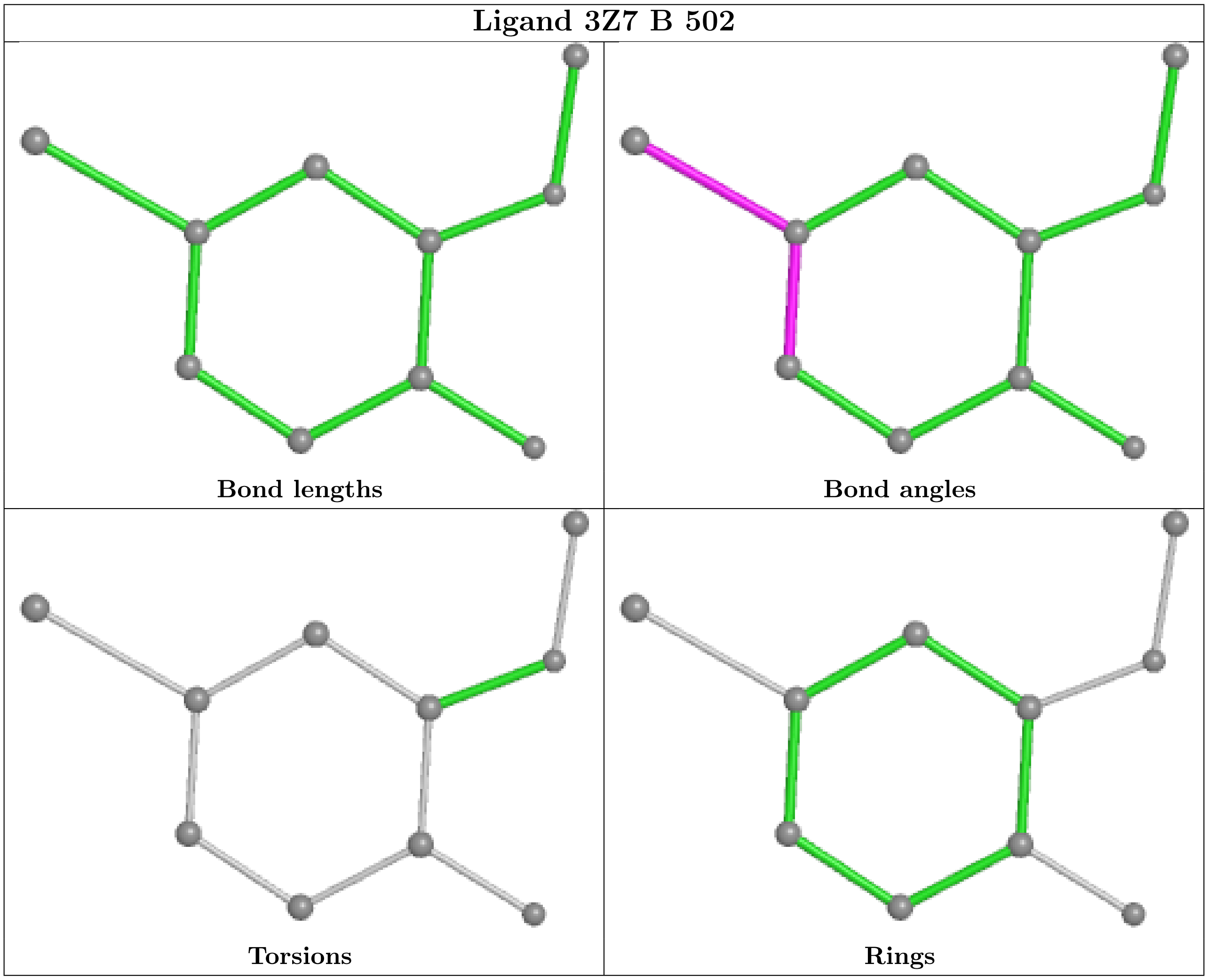


Bond lengths

Bond angles

Torsions

Rings


Ligand 3Z7 B 502

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	301/302 (99%)	-0.04	13 (4%)	40	38	25, 50, 122, 175	2 (0%)
1	C	264/302 (87%)	0.38	19 (7%)	23	21	32, 67, 107, 150	1 (0%)
2	B	262/268 (97%)	-0.26	4 (1%)	71	68	26, 53, 81, 127	2 (0%)
2	D	262/268 (97%)	0.58	26 (9%)	14	12	41, 74, 122, 157	0
All	All	1089/1140 (95%)	0.16	62 (5%)	30	28	25, 59, 115, 175	5 (0%)

All (62) RSRZ outliers are listed below:

Mol	**Chain**	**Res**	**Type**	**RSRZ**
1	C	218	THR	6.2
2	D	432	VAL	5.6
1	C	251	VAL	5.1
1	A	298	LEU	5.0
1	A	96	LEU	4.9
1	C	252	VAL	4.4
1	A	-2	PRO	4.1
1	C	219	LEU	4.0
2	D	364	LEU	4.0
1	A	15	TYR	3.9
1	C	216	PHE	3.7
2	D	373	PRO	3.5
2	D	372	TRP	3.2
2	D	320	LEU	3.1
1	C	14	THR	3.1
2	D	384	LEU	3.1
1	C	295	HIS	3.0
1	A	-3	GLY	3.0
1	C	174	LEU	3.0
2	D	424	LEU	3.0
2	D	329	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
2	D	360	PHE	2.9
2	B	432	VAL	2.8
1	A	39	THR	2.8
2	D	376	LEU	2.8
2	D	398	TYR	2.7
1	A	71	HIS	2.7
1	C	71	HIS	2.7
1	A	37	LEU	2.7
2	D	362	LEU	2.7
2	D	323	GLN	2.7
1	A	95	ALA	2.7
1	C	13	GLY	2.6
2	D	318	TYR	2.5
2	D	418	TYR	2.5
1	A	217	ARG	2.5
1	C	56[A]	LYS	2.5
2	D	421	VAL	2.5
2	D	390	CYS	2.5
1	A	296	LEU	2.5
1	C	217	ARG	2.5
1	C	16	GLY	2.4
2	D	430	LEU	2.4
2	D	423	LEU	2.4
1	C	269	TYR	2.4
1	C	15	TYR	2.3
2	D	198	GLY	2.3
2	D	379	LYS	2.2
2	D	392	LEU	2.2
2	D	334	MET	2.2
1	C	116	ALA	2.2
2	D	370	GLN	2.2
2	B	296	HIS	2.2
1	A	97	THR	2.2
1	C	17	VAL	2.1
2	D	171	GLY	2.1
1	C	72	THR	2.1
2	B	171	GLY	2.0
2	B	241	ARG	2.0
2	D	369	GLY	2.0
1	A	84[A]	HIS	2.0
1	C	267	LEU	2.0

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

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
1	TPO	C	160	11/12	0.97	0.07	52,62,79,82	0
1	TPO	A	160	11/12	0.98	0.05	41,47,52,52	0

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

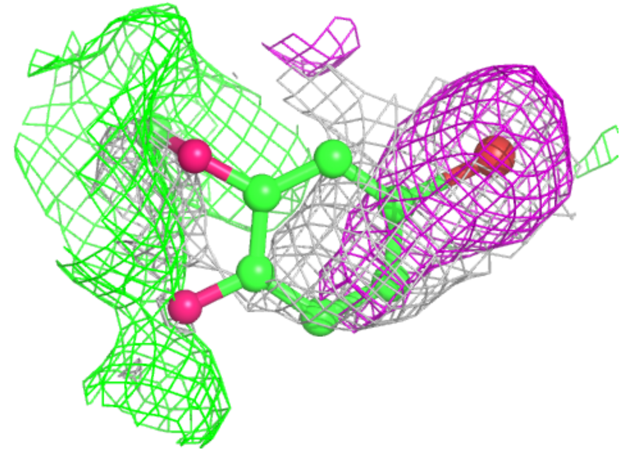
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

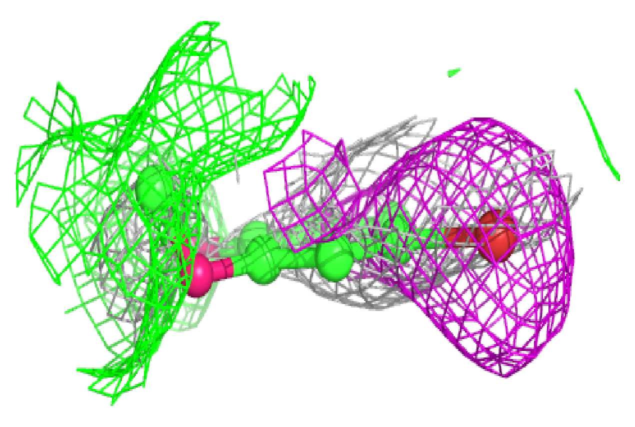
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	3Z7	C	501[A]	10/10	0.49	0.46	30,30,30,30	10
3	3Z7	C	501[B]	10/10	0.49	0.46	30,32,34,42	10
3	3Z7	A	603	10/10	0.62	0.23	138,168,179,180	0
3	3Z7	B	502	10/10	0.68	0.21	100,133,145,150	0
3	3Z7	B	501	10/10	0.69	0.22	98,113,132,173	0
3	3Z7	D	501	10/10	0.79	0.21	110,141,156,174	0
3	3Z7	C	502	10/10	0.82	0.17	115,132,134,142	0
3	3Z7	A	601[B]	10/10	0.83	0.22	48,54,63,66	10
3	3Z7	A	601[C]	10/10	0.83	0.22	34,44,53,55	10
3	3Z7	A	601[A]	10/10	0.83	0.22	30,30,30,30	10
3	3Z7	A	604	10/10	0.89	0.14	87,101,109,119	0
3	3Z7	A	602	10/10	0.95	0.12	68,71,84,85	0

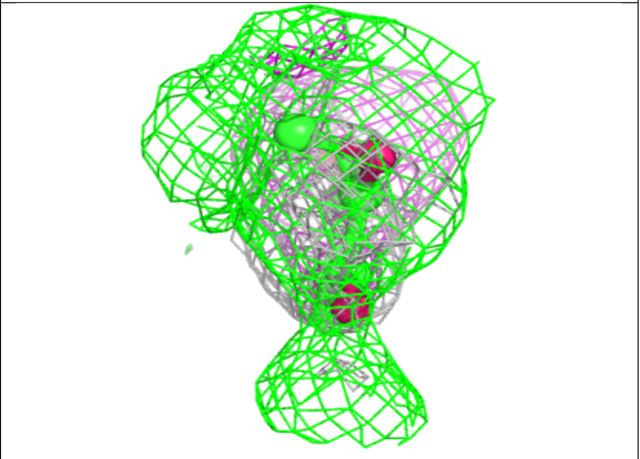
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around 3Z7 C 501 (A):

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

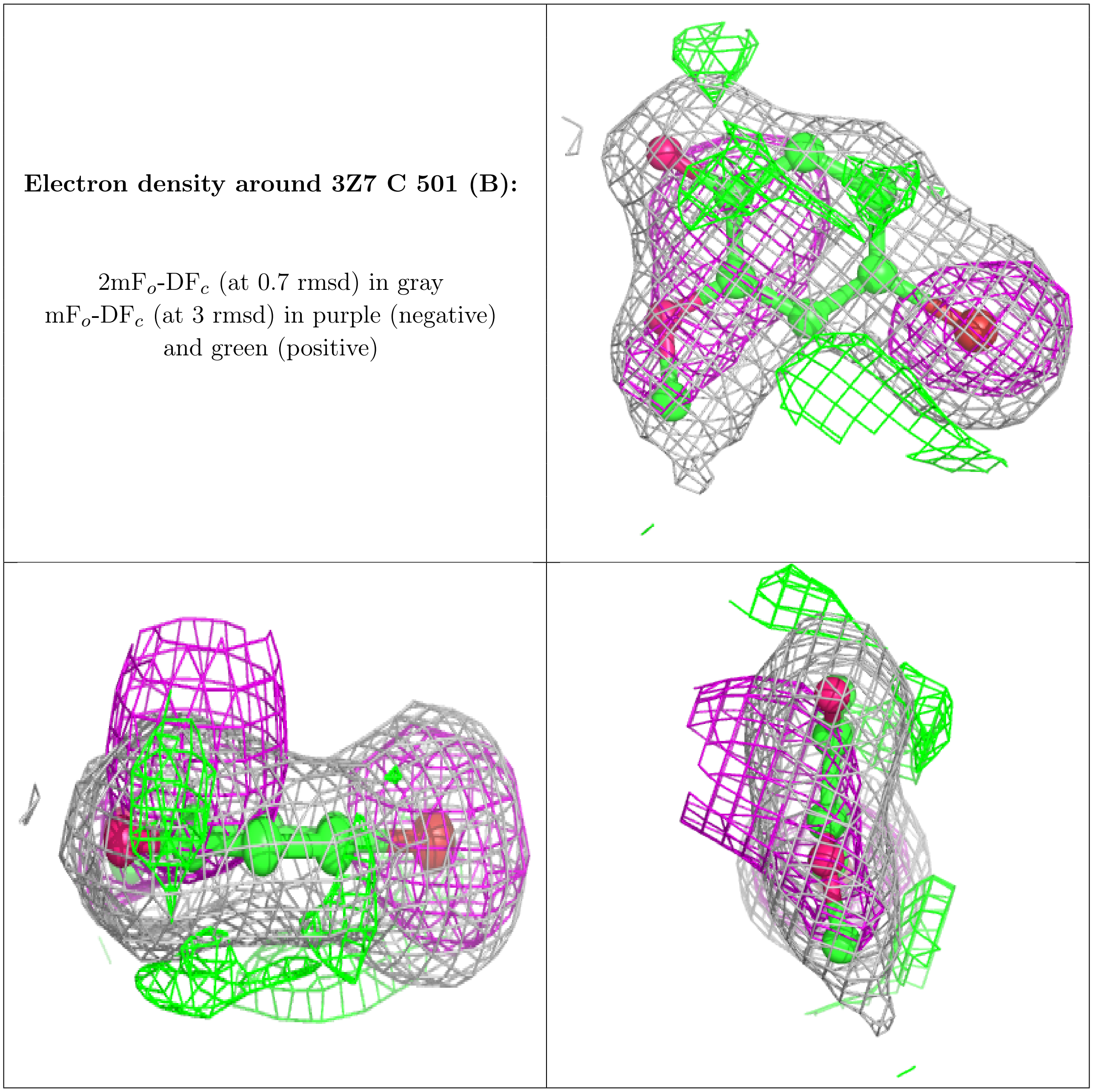






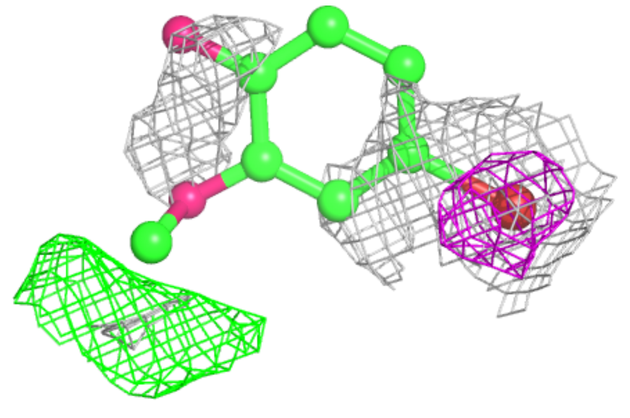
Electron density around 3Z7 C 501 (B):

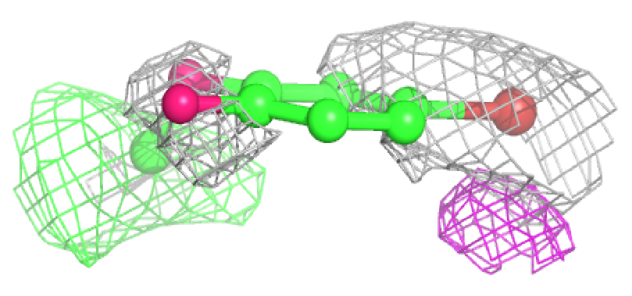
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

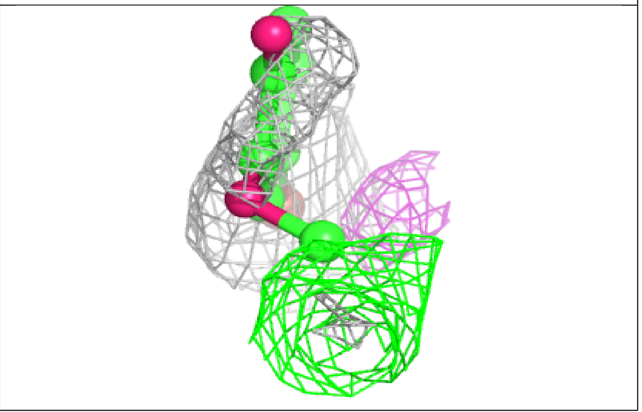


Electron density around 3Z7 A 603:

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







Electron density around 3Z7 B 502:

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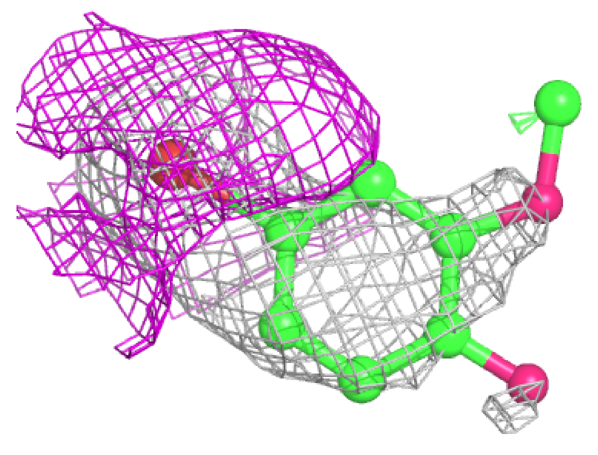
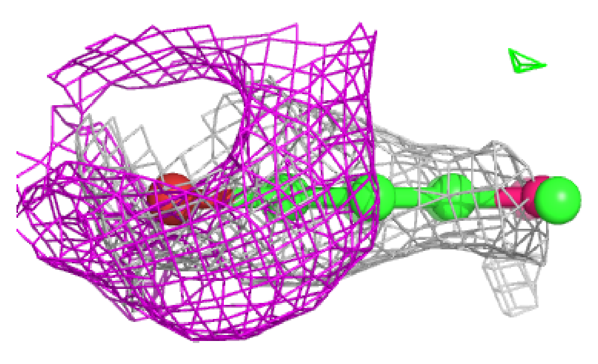
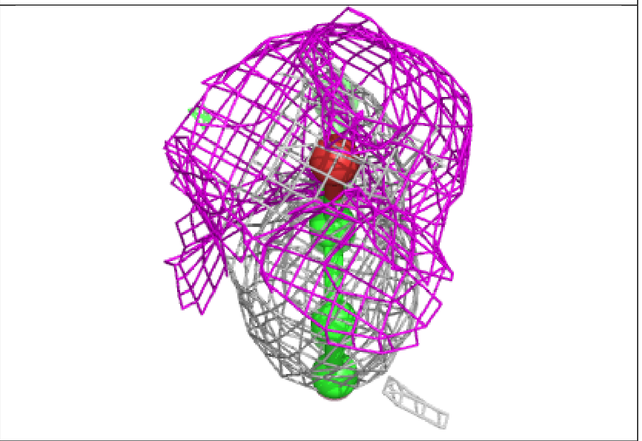
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)







Electron density around 3Z7 B 501:

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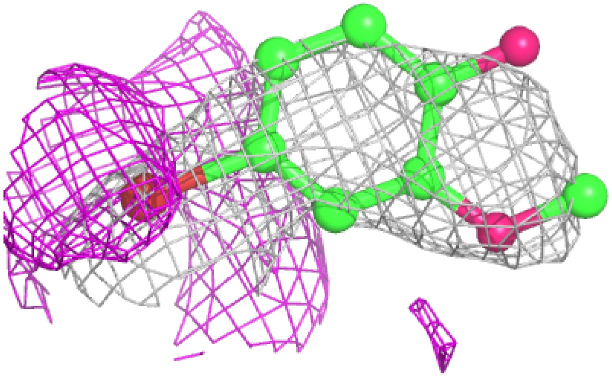
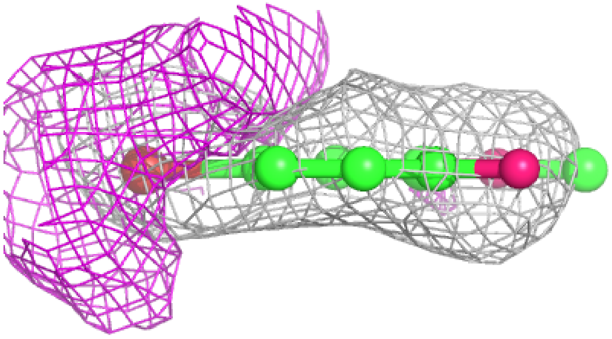
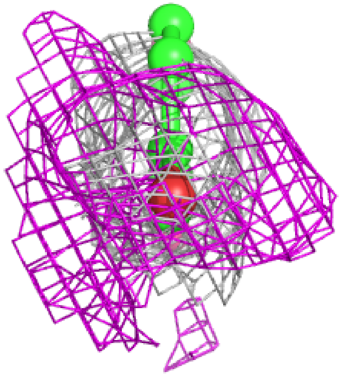
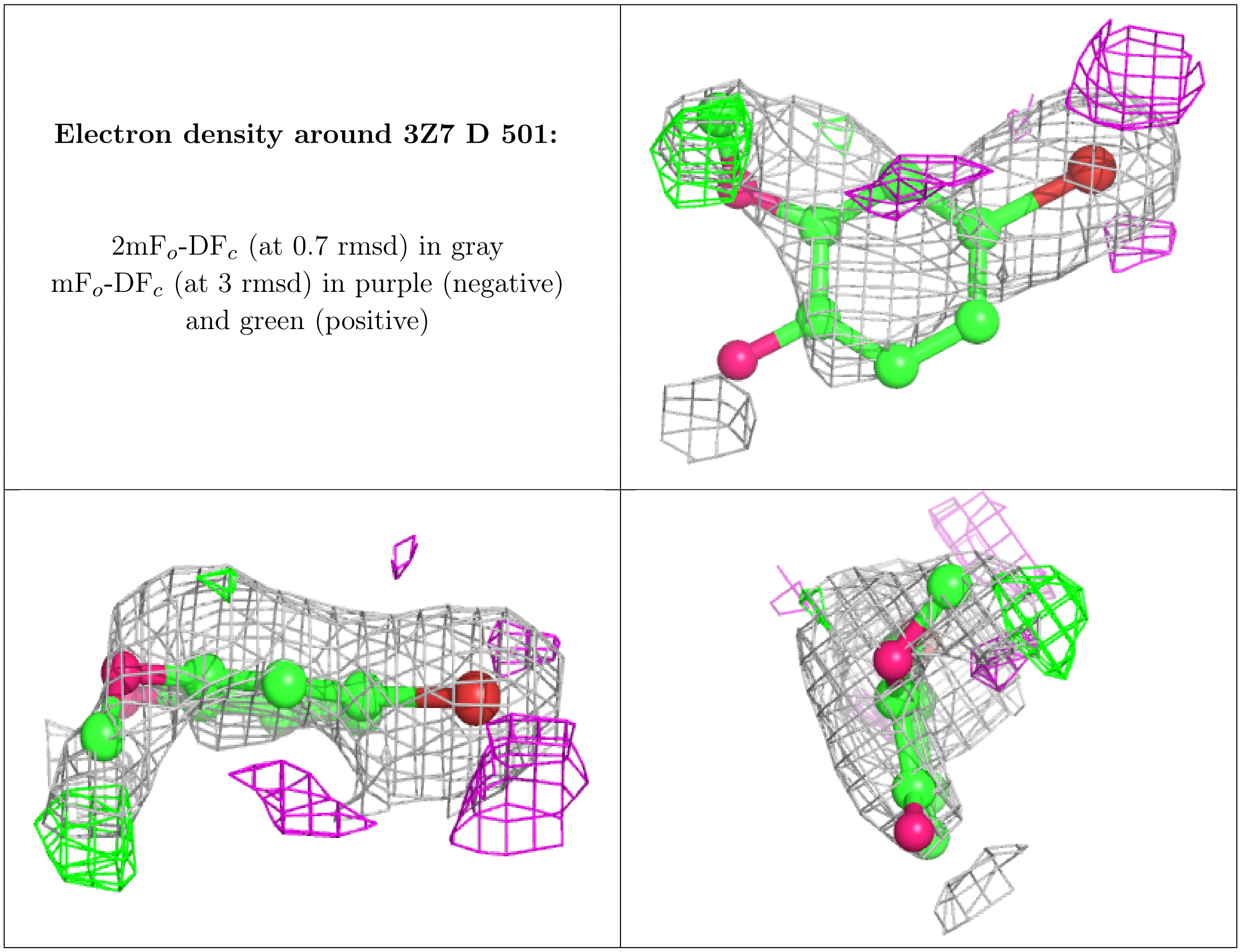
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)







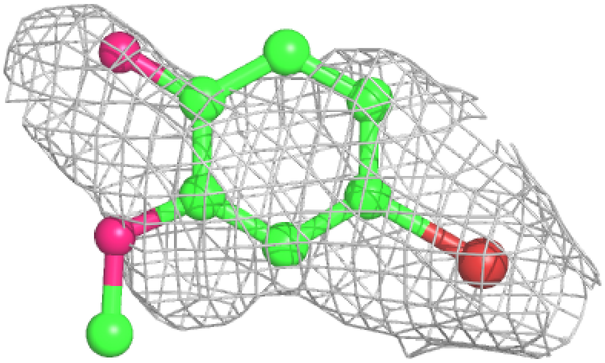


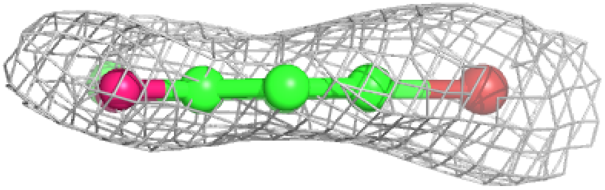
Electron density around 3Z7 D 501:

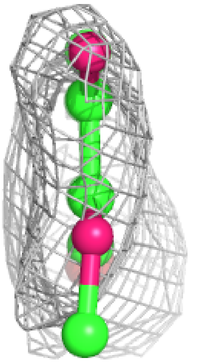
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around 3Z7 C 502:

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







Electron density around 3Z7 A 601 (B):

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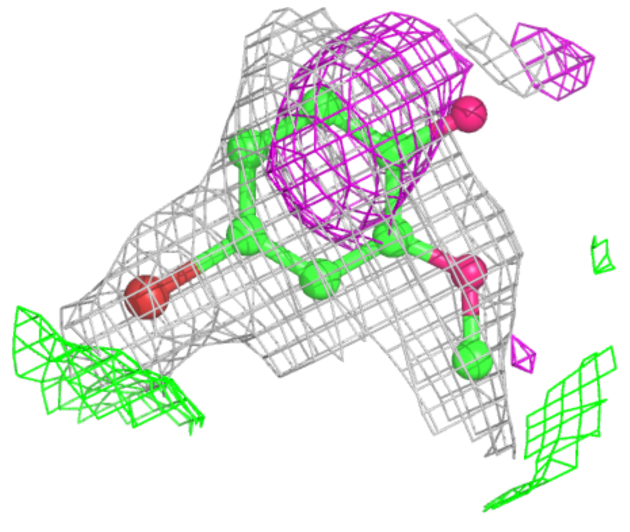
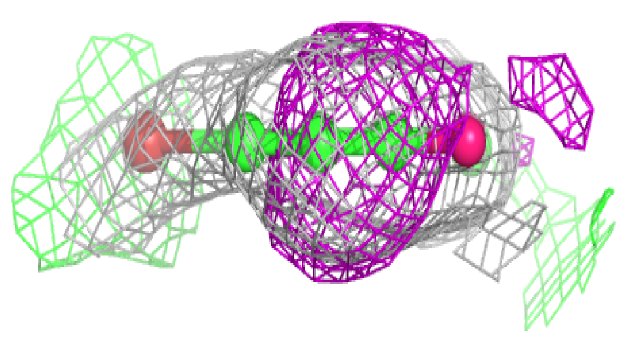
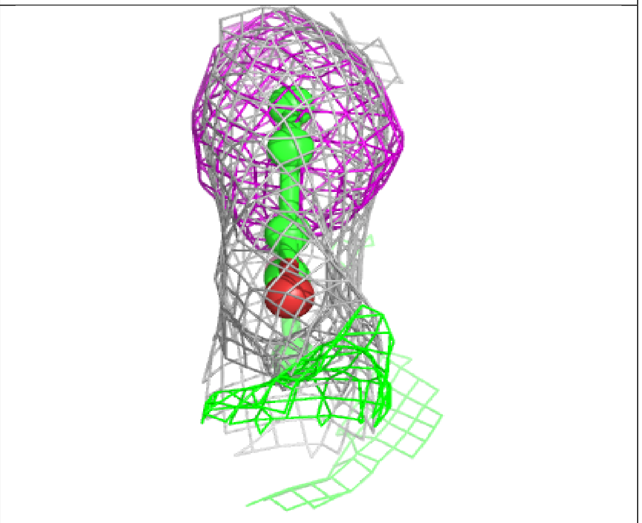
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)







Electron density around 3Z7 A 601 (C):

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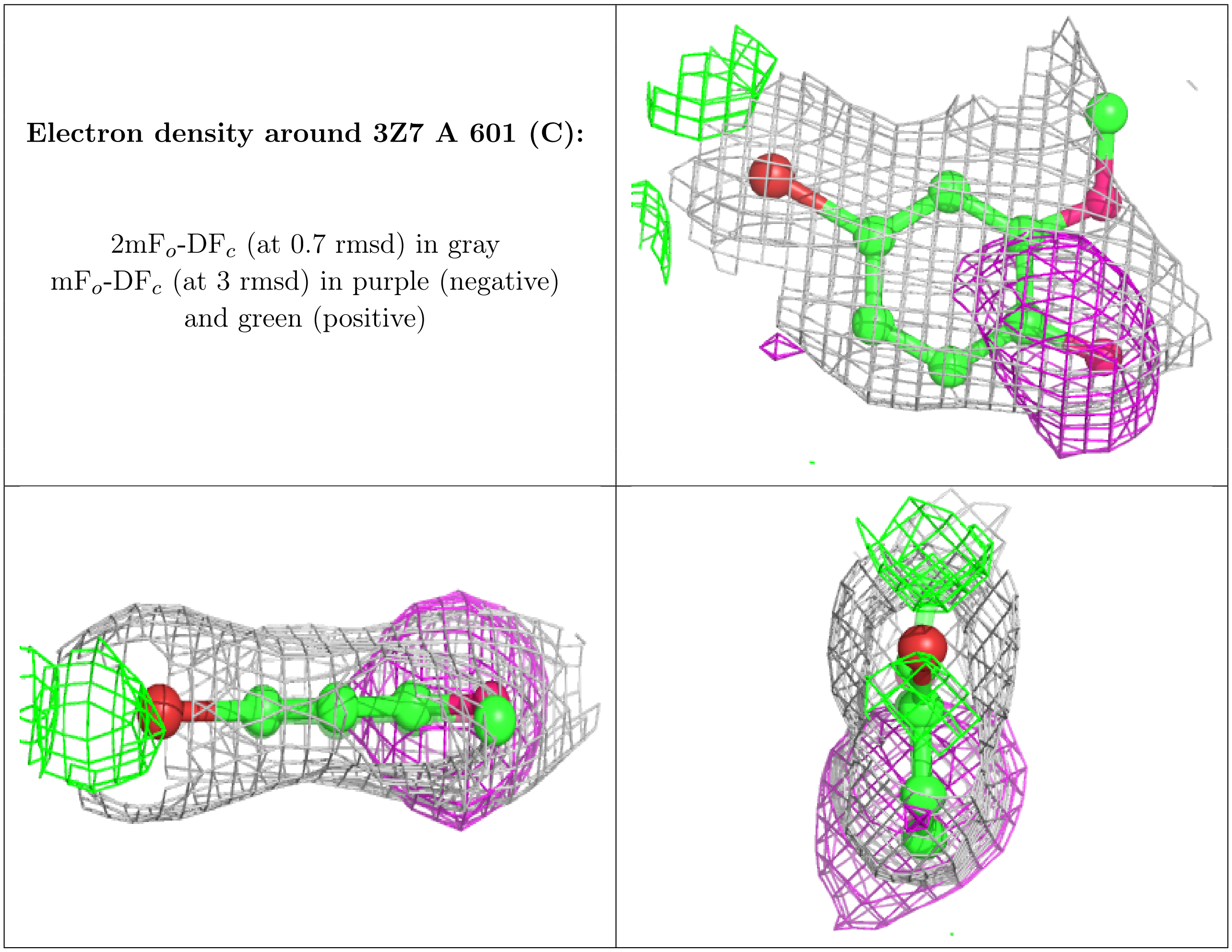
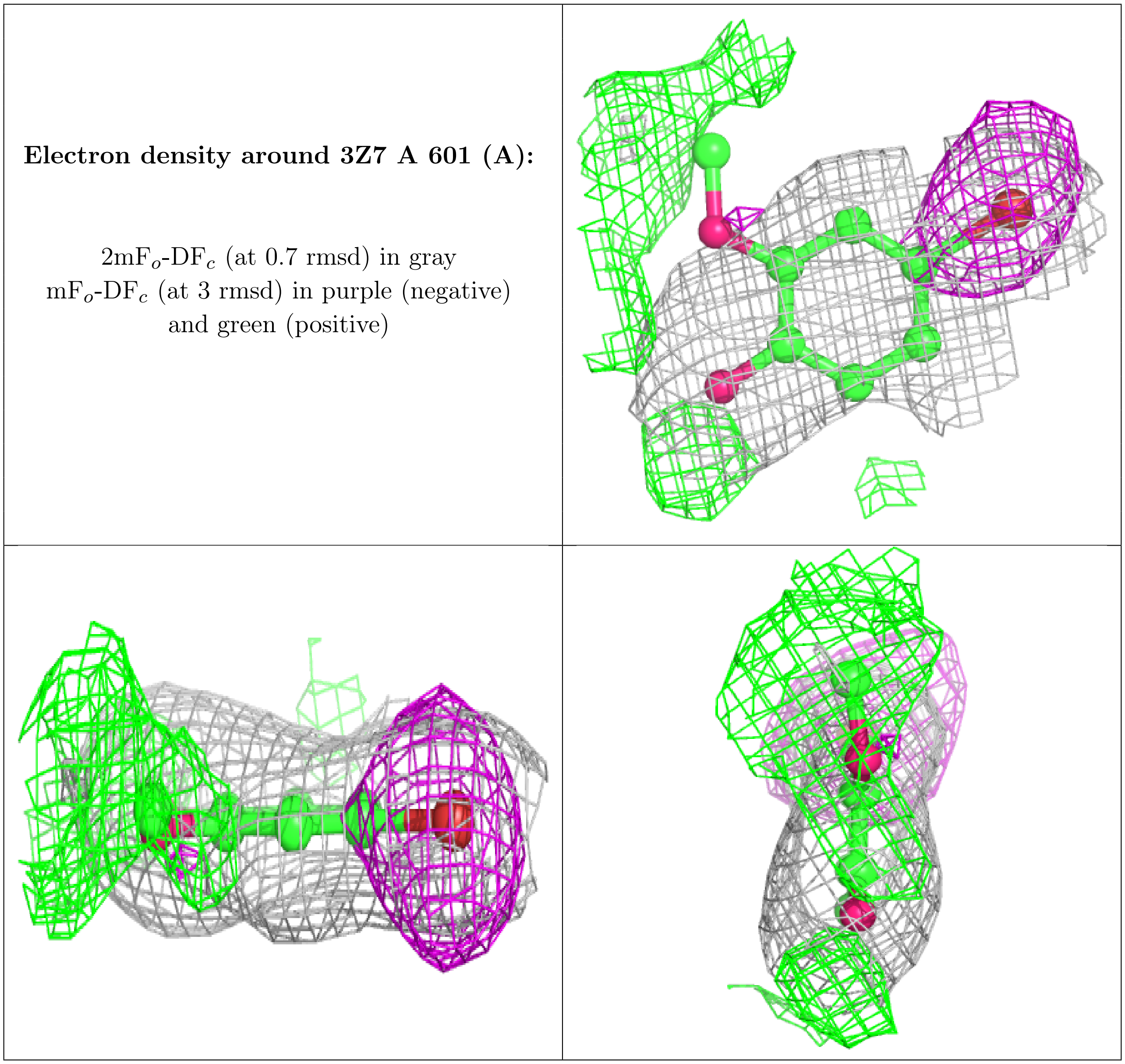
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)





Electron density around 3Z7 A 601 (A):

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 3Z7 A 604:

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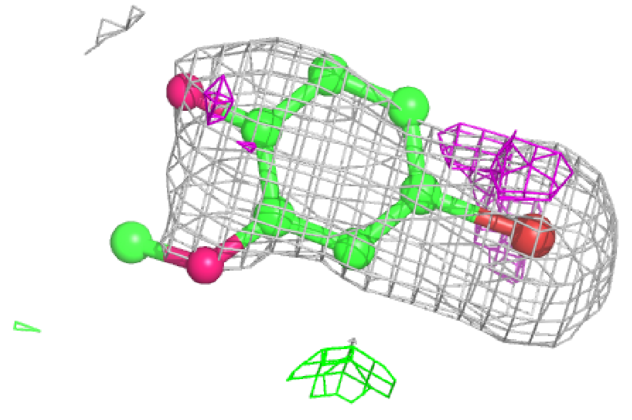
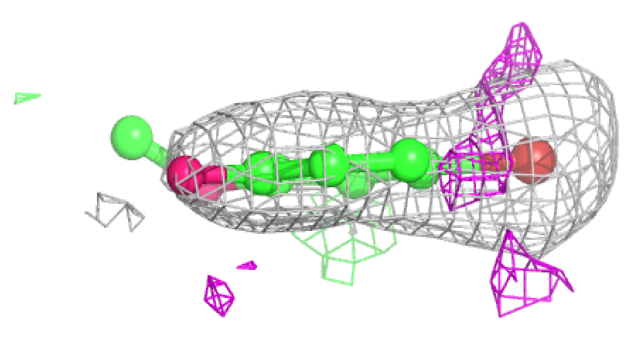
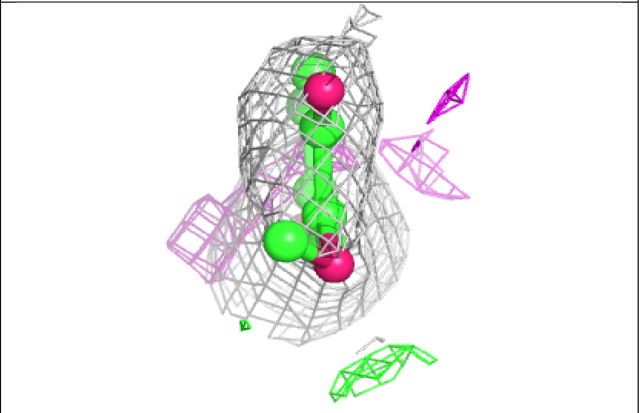
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

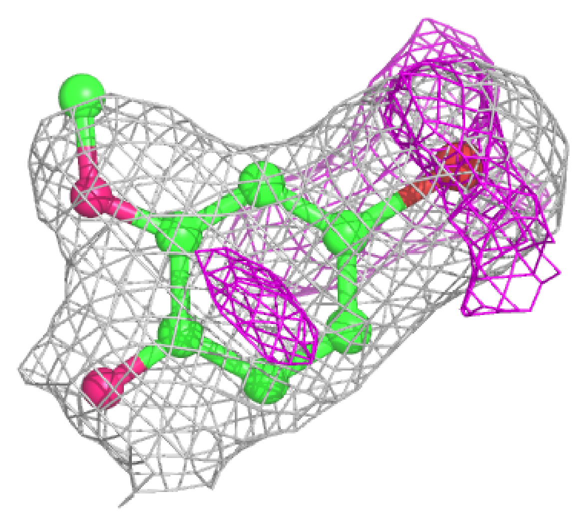


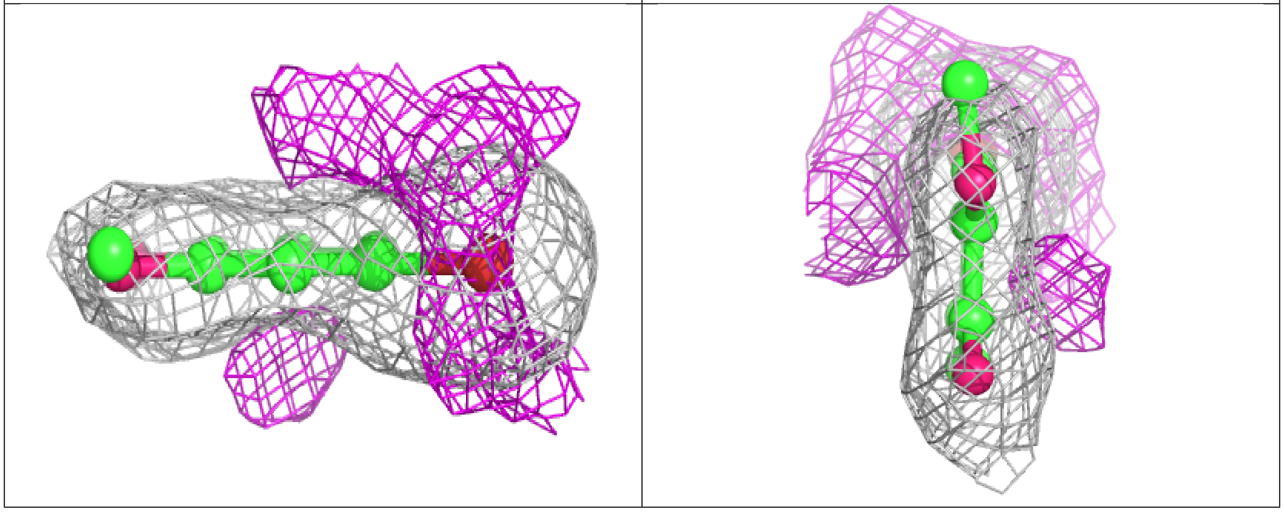




Electron density around 3Z7 A 602:

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





6.5 Other polymers ⓘ

There are no such residues in this entry.