



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 04:16 pm BST

PDB ID : 9T8A / pdb_00009t8a
Title : Crystal Structure of a de novo CO2 reductase A4
Authors : Levy, C.W.; Ortmayer, M.
Deposited on : 2025-11-12
Resolution : 2.08 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 : 1.8.4, CSD as541be (2020)
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 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

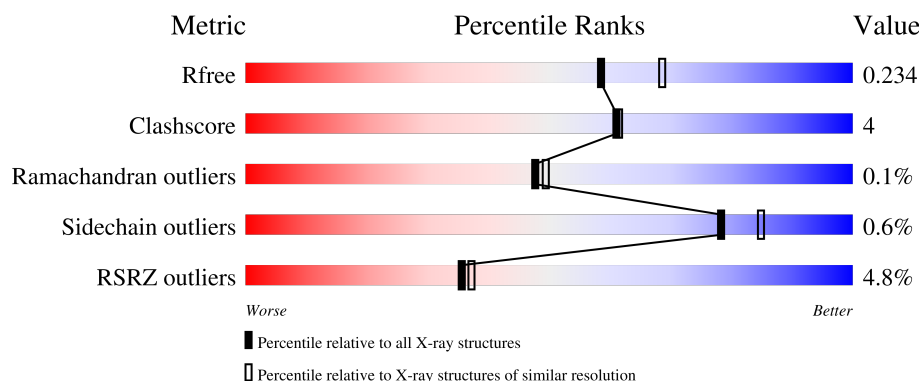
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.08 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	8172 (2.10-2.06)
Clashscore	190562	8714 (2.10-2.06)
Ramachandran outliers	187476	8641 (2.10-2.06)
Sidechain outliers	187428	8642 (2.10-2.06)
RSRZ outliers	180081	8177 (2.10-2.06)

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	166	5% 86% 8% 6%
1	B	166	4% 84% 10% 6%
1	C	166	2% 89% 5% 6%
1	D	166	8% 85% 8% 6%
1	E	166	4% 86% 8% 6%

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Mol	Chain	Length	Quality of chain
1	F	166	

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	COH	A	201	X	-	-	-
2	COH	B	201	X	-	-	-
2	COH	C	201	X	-	-	-
2	COH	D	201	X	-	-	-
2	COH	E	201	X	-	-	-
2	COH	F	201	X	-	-	-

2 Entry composition [i](#)

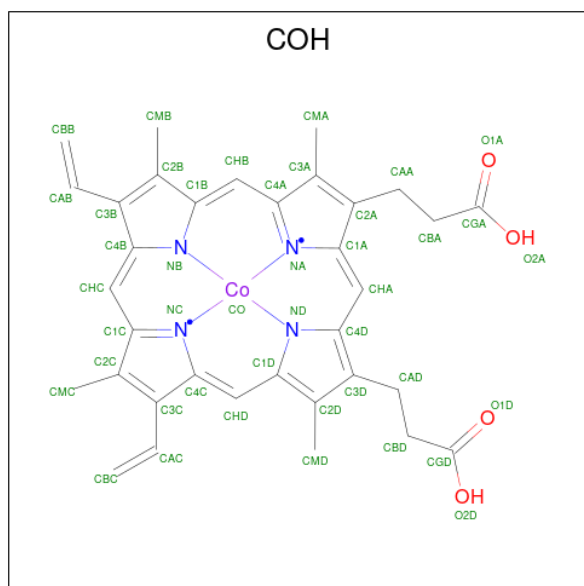
There are 7 unique types of molecules in this entry. The entry contains 16001 atoms, of which 8005 are hydrogens and 0 are deuteriums.

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 A4 CO2 reductase protein.

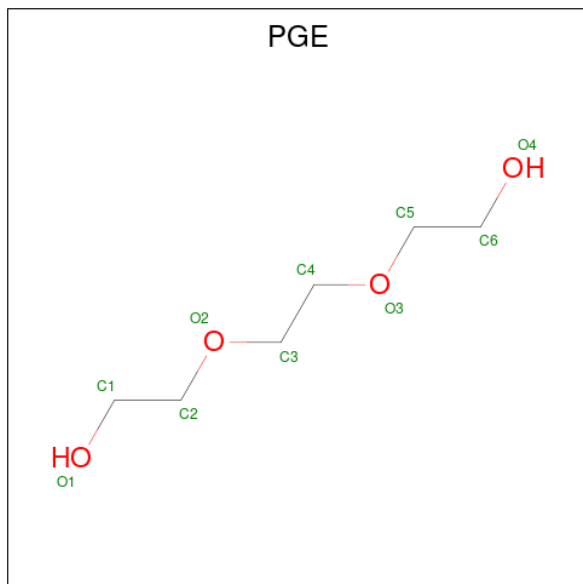
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	156	Total 2488	C 767	H 1277	N 198	O 241	S 5	0	2	0
1	B	156	Total 2502	C 772	H 1282	N 199	O 244	S 5	0	2	0
1	C	156	Total 2484	C 767	H 1273	N 198	O 241	S 5	0	0	0
1	D	156	Total 2501	C 772	H 1281	N 199	O 244	S 5	0	2	0
1	E	156	Total 2484	C 767	H 1273	N 198	O 241	S 5	0	0	0
1	F	156	Total 2494	C 771	H 1277	N 198	O 243	S 5	0	1	0

- Molecule 2 is PROTOPORPHYRIN IX CONTAINING CO (CCD ID: COH) (formula: $C_{34}H_{32}CoN_4O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		
2	B	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		
2	C	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		
2	D	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		
2	E	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		
2	F	1	Total	C	Co	H	N	O	0	0
			73	34	1	30	4	4		

- Molecule 3 is TRIETHYLENE GLYCOL (CCD ID: PGE) (formula: $C_6H_{14}O_4$).



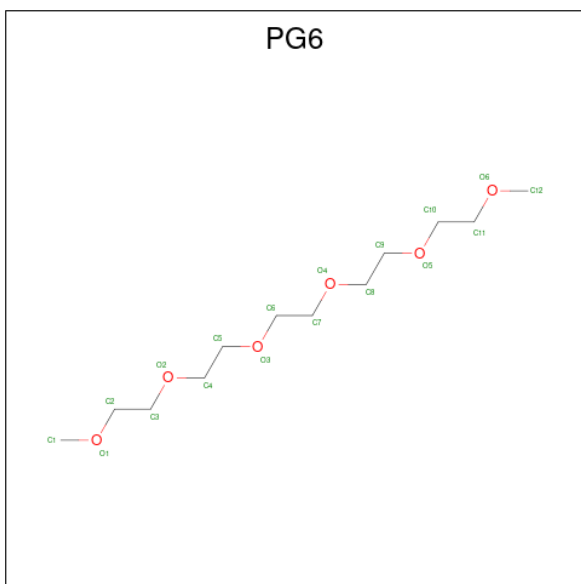
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	H	O	0	0
			24	6	14	4		
3	B	1	Total	C	H	O	0	0
			24	6	14	4		

- Molecule 4 is TETRAETHYLENE GLYCOL (CCD ID: PG4) (formula: $C_8H_{18}O_5$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	H	O	0	0
			31	8	18	5		
4	B	1	Total	C	H	O	0	0
			31	8	18	5		

- Molecule 5 is 1-(2-METHOXY-ETHOXY)-2-{2-[2-(2-METHOXY-ETHOXY)-ETHOXY]-ETHANE (CCD ID: PG6) (formula: C₁₂H₂₆O₆).



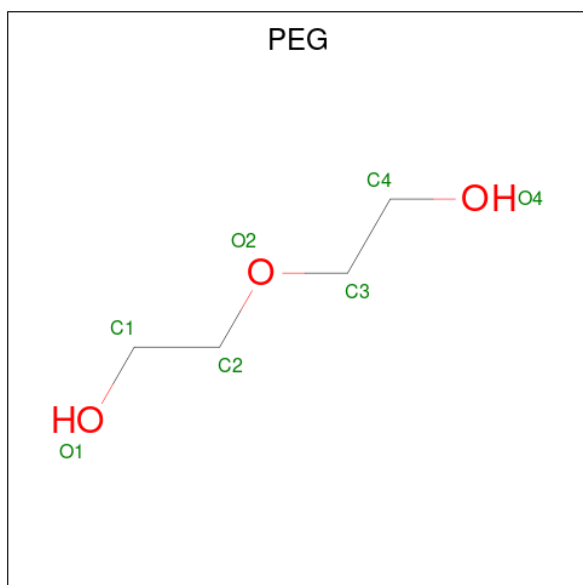
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	C	1	Total	C	H	O	0	0
			44	12	26	6		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	E	1	Total	C	H	O	0	0
			44	12	26	6		
5	F	1	Total	C	H	O	0	0
			44	12	26	6		

- Molecule 6 is DI(HYDROXYETHYL)ETHER (CCD ID: PEG) (formula: C₄H₁₀O₃).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
6	D	1	Total	C	H	O	0	0
			17	4	10	3		
6	D	1	Total	C	H	O	0	0
			17	4	10	3		

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	61	Total	O	0	0
			61	61		
7	B	50	Total	O	0	0
			50	50		
7	C	82	Total	O	0	0
			82	82		
7	D	43	Total	O	0	0
			43	43		
7	E	30	Total	O	0	0
			30	30		

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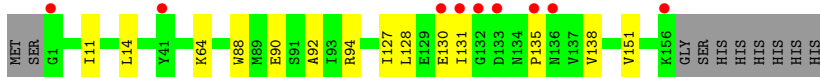
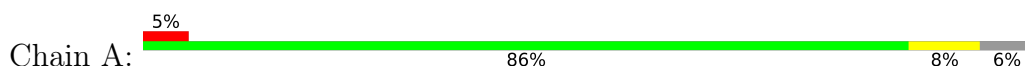
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	F	68	Total	O	0	0
			68	68		

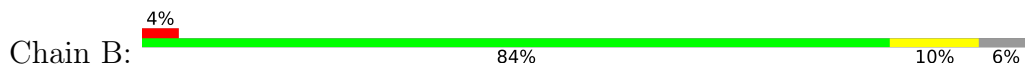
3 Residue-property plots

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.

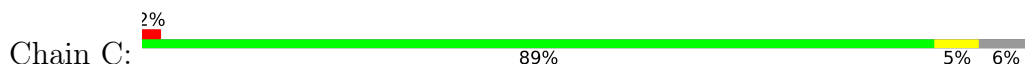
- Molecule 1: A4 CO2 reductase protein



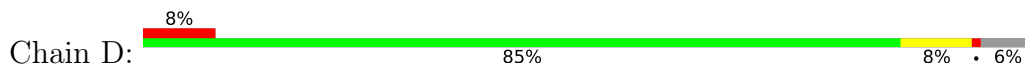
- Molecule 1: A4 CO2 reductase protein



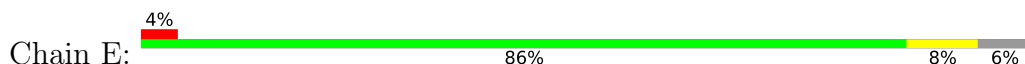
- Molecule 1: A4 CO2 reductase protein



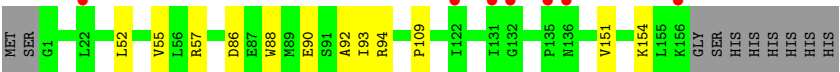
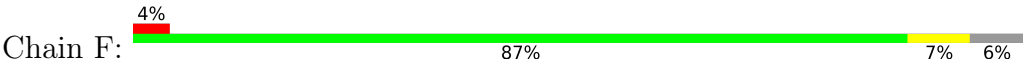
- Molecule 1: A4 CO2 reductase protein



- Molecule 1: A4 CO2 reductase protein



- Molecule 1: A4 CO2 reductase protein



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	44.21Å 161.74Å 74.59Å 90.00° 105.72° 90.00°	Depositor
Resolution (Å)	71.80 – 2.08 71.80 – 2.08	Depositor EDS
% Data completeness (in resolution range)	99.9 (71.80-2.08) 93.6 (71.80-2.08)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.60 (at 2.00Å)	Xtriage
Refinement program	PHENIX 1.20_4459	Depositor
R, R_{free}	0.198 , 0.233 0.199 , 0.234	Depositor DCC
R_{free} test set	1782 reflections (2.63%)	wwPDB-VP
Wilson B-factor (Å ²)	28.9	Xtriage
Anisotropy	0.275	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.40 , 42.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.034 for h,-k,-h-l	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	16001	wwPDB-VP
Average B, all atoms (Å ²)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.91% 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: PG4, PGE, COH, PEG, PG6

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	0.11	0/1231	0.23	0/1650
1	B	0.11	0/1239	0.22	0/1660
1	C	0.12	0/1221	0.23	0/1637
1	D	0.11	0/1235	0.23	0/1656
1	E	0.11	0/1221	0.22	0/1637
1	F	0.11	0/1230	0.23	0/1649
All	All	0.11	0/7377	0.23	0/9889

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1211	1277	1269	10	0
1	B	1220	1282	1269	10	0
1	C	1211	1273	1276	5	0
1	D	1220	1281	1277	11	0
1	E	1211	1273	1277	11	0
1	F	1217	1277	1282	9	0
2	A	43	30	30	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	43	30	30	4	0
2	C	43	30	30	3	0
2	D	43	30	30	3	0
2	E	43	30	30	6	0
2	F	43	30	30	5	0
3	A	10	14	14	0	0
3	B	10	14	14	0	0
4	A	13	18	18	0	0
4	B	13	18	18	0	0
5	C	18	26	26	3	0
5	E	18	26	26	2	0
5	F	18	26	26	2	0
6	D	14	20	20	0	0
7	A	61	0	0	0	2
7	B	50	0	0	1	0
7	C	82	0	0	1	1
7	D	43	0	0	1	0
7	E	30	0	0	0	1
7	F	68	0	0	1	0
All	All	7996	8005	7992	66	2

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 4.

All (66) 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:128:LEU:HD22	1:A:138:VAL:HG12	1.69	0.75
1:B:156:LYS:O	7:B:301:HOH:O	2.11	0.68
1:C:37:GLU:OE1	7:C:301:HOH:O	2.15	0.64
1:F:92:ALA:HB2	2:F:201:COH:HMC3	1.79	0.63
1:F:86:ASP:OD1	1:F:154:LYS:NZ	2.31	0.62
2:B:201:COH:HHH	2:B:201:COH:HBC1	1.81	0.62
1:E:92:ALA:HB2	2:E:201:COH:HMC3	1.82	0.61
1:F:93:ILE:HG23	1:F:109:PRO:HB2	1.84	0.59
1:A:88:TRP:HZ3	1:A:151:VAL:HG21	1.67	0.59
2:F:201:COH:HBD2	5:F:202:PG6:H12	1.83	0.58
1:D:128:LEU:HD22	1:D:138:VAL:HG12	1.86	0.58
2:F:201:COH:HMD2	7:F:330:HOH:O	2.04	0.57
1:D:69:LYS:NZ	7:D:302:HOH:O	2.38	0.56
1:A:90:GLU:OE2	1:A:94:ARG:NE	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:88:TRP:CZ3	1:A:151:VAL:HG21	2.41	0.55
2:E:201:COH:HBD2	5:E:202:PG6:H12	1.88	0.54
1:D:131:ILE:HG23	1:D:132:GLY:H	1.74	0.52
1:E:88:TRP:HZ3	1:E:151:VAL:HG21	1.75	0.52
1:E:18:GLU:OE2	2:E:201:COH:O2A	2.29	0.51
1:E:131:ILE:HD13	1:E:137:VAL:HG11	1.91	0.50
1:C:57:ARG:HH11	5:C:202:PG6:H11	1.76	0.50
1:F:90:GLU:OE2	1:F:94:ARG:NE	2.45	0.50
1:A:11:ILE:HD12	1:A:64:LYS:HB3	1.94	0.49
1:B:69:LYS:NZ	1:E:77:ASP:OD2	2.37	0.49
2:C:201:COH:HAC	5:C:202:PG6:H111	1.94	0.49
1:D:13:ILE:HD11	1:D:131:ILE:HG22	1.95	0.49
2:B:201:COH:HHD	2:B:201:COH:CBC	2.42	0.49
1:B:88:TRP:HZ3	1:B:151:VAL:HG21	1.77	0.48
1:A:128:LEU:CD2	1:A:138:VAL:HG12	2.42	0.48
1:C:134:ASN:O	1:C:138:VAL:HG23	2.14	0.48
1:C:18:GLU:O	1:C:22:LEU:HD13	2.14	0.48
2:E:201:COH:CBD	5:E:202:PG6:H12	2.43	0.47
1:D:122:ILE:HD12	1:D:122:ILE:C	2.39	0.47
1:B:96:CYS:SG	1:B:99:ILE:HG12	2.56	0.46
1:E:88:TRP:CH2	2:E:201:COH:HBB2	2.51	0.46
2:F:201:COH:HMC1	2:F:201:COH:HBC1	1.97	0.46
1:F:88:TRP:CZ3	1:F:151:VAL:HG21	2.51	0.45
1:C:74:LEU:HD13	2:C:201:COH:HBB1	1.98	0.45
1:A:14:LEU:HD21	1:A:127:ILE:HD11	1.99	0.45
1:F:88:TRP:HH2	2:F:201:COH:HBB2	1.82	0.44
1:B:45:LEU:HD22	1:B:55:VAL:HG21	1.99	0.44
1:B:90:GLU:OE2	1:B:94:ARG:NE	2.50	0.44
2:D:201:COH:HHD	2:D:201:COH:CBC	2.48	0.44
1:B:88:TRP:CH2	2:B:201:COH:HBB2	2.53	0.43
1:A:127:ILE:CG2	1:A:131:ILE:HD12	2.48	0.43
1:D:24[A]:GLU:HG2	1:D:119:LEU:HD21	2.01	0.43
1:E:127:ILE:HG22	1:E:131:ILE:HD12	2.00	0.43
1:E:62:THR:HG21	2:E:201:COH:O1D	2.18	0.43
1:F:88:TRP:HZ3	1:F:151:VAL:HG21	1.84	0.43
1:D:22:LEU:HD11	1:D:52:LEU:HD22	2.01	0.43
1:E:62:THR:HG22	1:E:63:THR:O	2.19	0.42
1:F:57:ARG:HH11	5:F:202:PG6:H11	1.83	0.42
1:B:103:ALA:O	1:B:107:GLY:N	2.51	0.42
2:C:201:COH:HAC	5:C:202:PG6:C11	2.49	0.42
1:D:18:GLU:OE2	2:D:201:COH:O2A	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:88:TRP:CZ3	1:E:151:VAL:HG21	2.53	0.42
1:A:92:ALA:CA	2:A:201:COH:HMC2	2.50	0.41
1:D:35:VAL:N	1:D:36:PRO:HD2	2.35	0.41
1:A:135:PRO:HA	1:A:138:VAL:HG22	2.01	0.41
1:E:35:VAL:N	1:E:36:PRO:HD2	2.36	0.41
1:D:131:ILE:HG13	1:D:132:GLY:N	2.36	0.41
1:D:92:ALA:HB2	2:D:201:COH:HMC3	2.03	0.41
1:B:86:ASP:OD1	1:B:154:LYS:HE2	2.21	0.40
2:B:201:COH:HBC1	2:B:201:COH:CHD	2.50	0.40
1:F:52:LEU:O	1:F:55:VAL:HG22	2.22	0.40

All (2) 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)
7:A:349:HOH:O	7:E:325:HOH:O[2_646]	2.11	0.09
7:A:357:HOH:O	7:C:336:HOH:O[1_556]	2.17	0.03

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	156/166 (94%)	153 (98%)	3 (2%)	0	100	100
1	B	156/166 (94%)	151 (97%)	5 (3%)	0	100	100
1	C	154/166 (93%)	152 (99%)	2 (1%)	0	100	100
1	D	156/166 (94%)	152 (97%)	3 (2%)	1 (1%)	21	17
1	E	154/166 (93%)	152 (99%)	2 (1%)	0	100	100
1	F	155/166 (93%)	152 (98%)	3 (2%)	0	100	100
All	All	931/996 (94%)	912 (98%)	18 (2%)	1 (0%)	48	49

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	131	ILE

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	133/141 (94%)	132 (99%)	1 (1%)	73	80
1	B	134/141 (95%)	133 (99%)	1 (1%)	76	82
1	C	132/141 (94%)	131 (99%)	1 (1%)	73	80
1	D	133/141 (94%)	132 (99%)	1 (1%)	73	80
1	E	132/141 (94%)	131 (99%)	1 (1%)	73	80
1	F	133/141 (94%)	133 (100%)	0	100	100
All	All	797/846 (94%)	792 (99%)	5 (1%)	78	85

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	130	GLU
1	B	46	LYS
1	C	26	VAL
1	D	131	ILE
1	E	156	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	B	136	ASN

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](#)

15 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	$\# Z > 2$
5	PG6	C	202	-	17,17,17	0.29	0	16,16,16	0.21	0
2	COH	E	201	1	50,50,50	1.94	17 (34%)	68,82,82	1.71	11 (16%)
6	PEG	D	202	-	6,6,6	0.14	0	5,5,5	0.09	0
3	PGE	A	202	-	9,9,9	0.31	0	8,8,8	0.28	0
2	COH	C	201	1	50,50,50	1.95	16 (32%)	68,82,82	1.73	13 (19%)
5	PG6	E	202	-	17,17,17	0.29	0	16,16,16	0.19	0
6	PEG	D	203	-	6,6,6	0.11	0	5,5,5	0.10	0
3	PGE	B	202	-	9,9,9	0.29	0	8,8,8	0.35	0
2	COH	A	201	1	50,50,50	1.95	15 (30%)	68,82,82	1.80	13 (19%)
2	COH	F	201	1	50,50,50	1.96	16 (32%)	68,82,82	1.88	14 (20%)
4	PG4	B	203	-	12,12,12	0.13	0	11,11,11	0.50	0
2	COH	B	201	1	50,50,50	1.96	15 (30%)	68,82,82	1.72	11 (16%)
2	COH	D	201	1	50,50,50	1.92	15 (30%)	68,82,82	1.75	11 (16%)
4	PG4	A	203	-	12,12,12	0.15	0	11,11,11	0.35	0
5	PG6	F	202	-	17,17,17	0.31	0	16,16,16	0.27	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
5	PG6	C	202	-	-	10/15/15/15	-
2	COH	E	201	1	1/1/9/9	11/14/54/54	-
6	PEG	D	202	-	-	3/4/4/4	-
3	PGE	A	202	-	-	3/7/7/7	-
2	COH	C	201	1	1/1/9/9	7/14/54/54	-
5	PG6	E	202	-	-	9/15/15/15	-
6	PEG	D	203	-	-	1/4/4/4	-
3	PGE	B	202	-	-	3/7/7/7	-
2	COH	A	201	1	1/1/9/9	3/14/54/54	-
2	COH	F	201	1	1/1/9/9	8/14/54/54	-
4	PG4	B	203	-	-	4/10/10/10	-
2	COH	B	201	1	1/1/9/9	6/14/54/54	-
2	COH	D	201	1	1/1/9/9	5/14/54/54	-
4	PG4	A	203	-	-	4/10/10/10	-
5	PG6	F	202	-	-	8/15/15/15	-

All (94) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	201	COH	C1D-ND	-6.51	1.28	1.38
2	B	201	COH	C1D-ND	-6.49	1.28	1.38
2	F	201	COH	C1D-ND	-6.48	1.28	1.38
2	A	201	COH	C1D-ND	-6.46	1.28	1.38
2	D	201	COH	C1D-ND	-6.41	1.28	1.38
2	E	201	COH	C1D-ND	-6.41	1.28	1.38
2	B	201	COH	C4B-NB	-4.11	1.32	1.38
2	F	201	COH	C4B-NB	-4.03	1.32	1.38
2	A	201	COH	C4B-NB	-3.95	1.32	1.38
2	E	201	COH	C4B-NB	-3.93	1.32	1.38
2	C	201	COH	C4B-NB	-3.84	1.32	1.38
2	D	201	COH	C4B-NB	-3.80	1.32	1.38
2	B	201	COH	C1D-C2D	3.61	1.51	1.43
2	D	201	COH	C1D-C2D	3.56	1.51	1.43
2	C	201	COH	CO-ND	3.53	2.09	1.96
2	A	201	COH	CO-ND	3.52	2.09	1.96
2	F	201	COH	CO-ND	3.51	2.09	1.96
2	A	201	COH	C1D-C2D	3.50	1.51	1.43
2	E	201	COH	C1D-C2D	3.49	1.51	1.43
2	B	201	COH	CO-ND	3.49	2.09	1.96
2	E	201	COH	CO-ND	3.44	2.08	1.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	201	COH	CO-ND	3.40	2.08	1.96
2	F	201	COH	C1D-C2D	3.36	1.51	1.43
2	C	201	COH	C1D-C2D	3.35	1.51	1.43
2	C	201	COH	CMB-C2B	3.20	1.57	1.50
2	A	201	COH	CMB-C2B	3.11	1.57	1.50
2	B	201	COH	CMB-C2B	2.94	1.57	1.50
2	F	201	COH	CMB-C2B	2.94	1.57	1.50
2	D	201	COH	CMB-C2B	2.90	1.56	1.50
2	C	201	COH	C1C-NC	-2.83	1.33	1.38
2	E	201	COH	CMB-C2B	2.81	1.56	1.50
2	F	201	COH	C3C-C2C	2.77	1.42	1.37
2	C	201	COH	CHB-C1B	2.77	1.43	1.38
2	A	201	COH	C3C-C2C	2.77	1.42	1.37
2	F	201	COH	C1C-NC	-2.62	1.33	1.38
2	B	201	COH	C1C-NC	-2.61	1.33	1.38
2	B	201	COH	CBC-CAC	2.60	1.43	1.30
2	E	201	COH	C1C-NC	-2.60	1.33	1.38
2	D	201	COH	CBC-CAC	2.57	1.43	1.30
2	E	201	COH	CBC-CAC	2.56	1.43	1.30
2	C	201	COH	CBC-CAC	2.55	1.42	1.30
2	F	201	COH	CBC-CAC	2.55	1.42	1.30
2	B	201	COH	C1A-NA	2.53	1.43	1.39
2	A	201	COH	C1C-NC	-2.52	1.33	1.38
2	F	201	COH	CHB-C1B	2.50	1.43	1.38
2	D	201	COH	C1C-NC	-2.50	1.33	1.38
2	B	201	COH	C3C-C2C	2.49	1.42	1.37
2	E	201	COH	C1A-NA	2.49	1.43	1.39
2	D	201	COH	C1A-NA	2.49	1.43	1.39
2	A	201	COH	CBC-CAC	2.48	1.42	1.30
2	E	201	COH	CHB-C1B	2.46	1.43	1.38
2	E	201	COH	C3C-C2C	2.46	1.42	1.37
2	A	201	COH	C1A-NA	2.46	1.43	1.39
2	B	201	COH	CHD-C1D	2.43	1.44	1.39
2	D	201	COH	CHD-C1D	2.41	1.44	1.39
2	D	201	COH	C3C-C2C	2.41	1.42	1.37
2	B	201	COH	CHB-C1B	2.41	1.43	1.38
2	C	201	COH	C1A-NA	2.40	1.43	1.39
2	B	201	COH	C1A-C2A	2.38	1.49	1.45
2	A	201	COH	CHB-C1B	2.38	1.43	1.38
2	E	201	COH	C1A-C2A	2.34	1.49	1.45
2	F	201	COH	C1A-NA	2.34	1.43	1.39
2	D	201	COH	C1A-C2A	2.32	1.49	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	201	COH	C4D-ND	2.28	1.42	1.38
2	D	201	COH	CHB-C1B	2.25	1.42	1.38
2	C	201	COH	C3C-C2C	2.22	1.41	1.37
2	D	201	COH	C4D-ND	2.22	1.42	1.38
2	A	201	COH	CHD-C1D	2.22	1.44	1.39
2	E	201	COH	CHD-C1D	2.20	1.44	1.39
2	A	201	COH	C4D-ND	2.18	1.42	1.38
2	C	201	COH	C4D-ND	2.18	1.42	1.38
2	F	201	COH	C1A-C2A	2.17	1.48	1.45
2	F	201	COH	C4D-ND	2.16	1.42	1.38
2	F	201	COH	CHD-C1D	2.15	1.44	1.39
2	E	201	COH	C4D-ND	2.14	1.42	1.38
2	C	201	COH	CHD-C1D	2.12	1.44	1.39
2	D	201	COH	CMD-C2D	2.11	1.55	1.50
2	B	201	COH	CMD-C2D	2.10	1.55	1.50
2	A	201	COH	C1A-C2A	2.10	1.48	1.45
2	C	201	COH	CHD-C4C	-2.09	1.34	1.38
2	E	201	COH	CMD-C2D	2.09	1.55	1.50
2	C	201	COH	CMD-C2D	2.07	1.55	1.50
2	E	201	COH	CHD-C4C	-2.07	1.34	1.38
2	F	201	COH	CHD-C4C	-2.06	1.34	1.38
2	A	201	COH	O2D-CGD	-2.05	1.23	1.30
2	A	201	COH	CMD-C2D	2.04	1.55	1.50
2	B	201	COH	O2D-CGD	-2.04	1.23	1.30
2	F	201	COH	O2D-CGD	-2.04	1.23	1.30
2	F	201	COH	CMD-C2D	2.03	1.55	1.50
2	E	201	COH	O2D-CGD	-2.03	1.23	1.30
2	C	201	COH	O2D-CGD	-2.02	1.23	1.30
2	D	201	COH	O2D-CGD	-2.02	1.24	1.30
2	E	201	COH	CO-NC	2.00	2.02	1.96
2	C	201	COH	C4C-NC	-2.00	1.35	1.39

All (73) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	201	COH	C4C-C3C-C2C	-5.43	102.81	107.11
2	F	201	COH	C3C-C4C-NC	5.27	115.13	109.67
2	B	201	COH	C4C-C3C-C2C	-5.27	102.93	107.11
2	A	201	COH	C3B-C2B-C1B	-4.99	102.31	107.08
2	B	201	COH	C3B-C2B-C1B	-4.91	102.39	107.08
2	E	201	COH	C4C-C3C-C2C	-4.88	103.24	107.11
2	E	201	COH	C3C-C4C-NC	4.84	114.68	109.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	201	COH	C4C-C3C-C2C	-4.83	103.28	107.11
2	A	201	COH	C3C-C4C-NC	4.82	114.66	109.67
2	A	201	COH	C2B-C1B-NB	4.79	114.93	110.81
2	A	201	COH	C4C-C3C-C2C	-4.79	103.31	107.11
2	D	201	COH	C2B-C1B-NB	4.72	114.87	110.81
2	F	201	COH	C3B-C2B-C1B	-4.69	102.59	107.08
2	D	201	COH	C3B-C2B-C1B	-4.66	102.62	107.08
2	C	201	COH	C4C-C3C-C2C	-4.63	103.44	107.11
2	C	201	COH	C3B-C2B-C1B	-4.58	102.71	107.08
2	C	201	COH	C3C-C4C-NC	4.53	114.36	109.67
2	E	201	COH	C3B-C2B-C1B	-4.42	102.86	107.08
2	B	201	COH	C2B-C1B-NB	4.39	114.58	110.81
2	C	201	COH	C2B-C1B-NB	4.32	114.52	110.81
2	D	201	COH	C3C-C4C-NC	4.30	114.12	109.67
2	E	201	COH	C2B-C1B-NB	4.21	114.43	110.81
2	B	201	COH	C3C-C4C-NC	4.21	114.03	109.67
2	F	201	COH	C2B-C1B-NB	4.08	114.31	110.81
2	A	201	COH	C1A-NA-C4A	-3.93	100.93	105.05
2	D	201	COH	C1A-NA-C4A	-3.89	100.97	105.05
2	B	201	COH	C1A-NA-C4A	-3.61	101.27	105.05
2	F	201	COH	C1A-NA-C4A	-3.45	101.43	105.05
2	E	201	COH	C1A-NA-C4A	-3.16	101.74	105.05
2	F	201	COH	CAA-C2A-C3A	3.15	133.74	127.88
2	C	201	COH	C1A-NA-C4A	-3.04	101.87	105.05
2	F	201	COH	CBA-CAA-C2A	2.96	120.86	112.63
2	C	201	COH	CMB-C2B-C3B	2.77	135.09	128.30
2	D	201	COH	C3A-C4A-NA	2.75	114.00	110.83
2	A	201	COH	C3A-C4A-NA	2.75	113.99	110.83
2	F	201	COH	C2D-C1D-ND	2.74	112.36	109.69
2	C	201	COH	CMD-C2D-C3D	2.74	131.53	125.61
2	C	201	COH	C2D-C1D-ND	2.71	112.33	109.69
2	F	201	COH	CHC-C1C-NC	-2.68	119.90	124.82
2	F	201	COH	CAA-C2A-C1A	-2.63	120.07	124.66
2	B	201	COH	C3A-C4A-NA	2.62	113.84	110.83
2	F	201	COH	CMD-C2D-C3D	2.57	131.16	125.61
2	A	201	COH	C2D-C1D-ND	2.55	112.17	109.69
2	A	201	COH	CHC-C1C-NC	-2.54	120.15	124.82
2	F	201	COH	C3A-C4A-NA	2.51	113.71	110.83
2	F	201	COH	CMC-C2C-C1C	-2.50	121.24	125.04
2	D	201	COH	CMD-C2D-C3D	2.49	130.98	125.61
2	E	201	COH	C2D-C1D-ND	2.47	112.09	109.69
2	C	201	COH	CMC-C2C-C1C	-2.45	121.31	125.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	201	COH	CHC-C1C-NC	-2.42	120.36	124.82
2	B	201	COH	CMD-C2D-C3D	2.41	130.81	125.61
2	A	201	COH	CMD-C2D-C3D	2.39	130.77	125.61
2	E	201	COH	CMD-C2D-C3D	2.38	130.76	125.61
2	D	201	COH	CHB-C4A-C3A	-2.34	121.33	124.98
2	B	201	COH	CMC-C2C-C1C	-2.33	121.49	125.04
2	D	201	COH	CMC-C2C-C1C	-2.27	121.59	125.04
2	E	201	COH	C3A-C4A-NA	2.26	113.42	110.83
2	C	201	COH	CHC-C1C-NC	-2.23	120.72	124.82
2	A	201	COH	CMC-C2C-C1C	-2.22	121.65	125.04
2	C	201	COH	CBC-CAC-C3C	-2.22	116.59	127.62
2	B	201	COH	C2D-C1D-ND	2.18	111.81	109.69
2	B	201	COH	CHC-C1C-NC	-2.16	120.85	124.82
2	C	201	COH	CBA-CAA-C2A	2.15	118.60	112.63
2	D	201	COH	C2D-C1D-ND	2.15	111.78	109.69
2	E	201	COH	C1D-C2D-C3D	-2.13	104.33	106.83
2	C	201	COH	CMC-C2C-C3C	2.13	133.52	128.30
2	A	201	COH	CHB-C4A-C3A	-2.13	121.66	124.98
2	E	201	COH	CBD-CAD-C3D	-2.11	106.75	112.63
2	A	201	COH	CMB-C2B-C3B	2.09	133.43	128.30
2	F	201	COH	CMC-C2C-C3C	2.08	133.40	128.30
2	A	201	COH	C1D-C2D-C3D	-2.07	104.41	106.83
2	D	201	COH	CHC-C1C-NC	-2.02	121.10	124.82
2	B	201	COH	CHB-C4A-C3A	-2.02	121.82	124.98

All (6) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	A	201	COH	NB
2	B	201	COH	NB
2	C	201	COH	NB
2	D	201	COH	NB
2	E	201	COH	NB
2	F	201	COH	NB

All (85) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	201	COH	C2B-C3B-CAB-CBB
2	B	201	COH	C4B-C3B-CAB-CBB
2	D	201	COH	C2B-C3B-CAB-CBB
2	E	201	COH	C2B-C3B-CAB-CBB

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Mol	Chain	Res	Type	Atoms
2	E	201	COH	C4B-C3B-CAB-CBB
2	F	201	COH	C1A-C2A-CAA-CBA
2	F	201	COH	C2B-C3B-CAB-CBB
2	F	201	COH	C4B-C3B-CAB-CBB
2	F	201	COH	C3A-C2A-CAA-CBA
3	B	202	PGE	O2-C3-C4-O3
5	E	202	PG6	O3-C6-C7-O4
4	A	203	PG4	O3-C5-C6-O4
5	C	202	PG6	O4-C8-C9-O5
5	F	202	PG6	O3-C6-C7-O4
2	B	201	COH	C1A-C2A-CAA-CBA
5	E	202	PG6	O5-C10-C11-O6
5	F	202	PG6	O5-C10-C11-O6
2	B	201	COH	C3A-C2A-CAA-CBA
3	A	202	PGE	O2-C3-C4-O3
5	C	202	PG6	O2-C4-C5-O3
5	E	202	PG6	O1-C2-C3-O2
4	B	203	PG4	O1-C1-C2-O2
4	B	203	PG4	O4-C7-C8-O5
6	D	202	PEG	O1-C1-C2-O2
6	D	202	PEG	O2-C3-C4-O4
5	F	202	PG6	O4-C8-C9-O5
5	C	202	PG6	O3-C6-C7-O4
3	A	202	PGE	O1-C1-C2-O2
3	A	202	PGE	O3-C5-C6-O4
5	F	202	PG6	C3-C2-O1-C1
2	E	201	COH	C2A-CAA-CBA-CGA
2	E	201	COH	C2C-C3C-CAC-CBC
2	D	201	COH	C4B-C3B-CAB-CBB
2	E	201	COH	C4C-C3C-CAC-CBC
2	A	201	COH	C2A-CAA-CBA-CGA
2	C	201	COH	C3D-CAD-CBD-CGD
4	A	203	PG4	O4-C7-C8-O5
5	F	202	PG6	O1-C2-C3-O2
2	F	201	COH	C2A-CAA-CBA-CGA
5	E	202	PG6	O4-C8-C9-O5
3	B	202	PGE	O3-C5-C6-O4
4	B	203	PG4	O3-C5-C6-O4
5	F	202	PG6	C9-C8-O4-C7
2	C	201	COH	C2C-C3C-CAC-CBC
5	C	202	PG6	C9-C8-O4-C7
4	B	203	PG4	C4-C3-O2-C2

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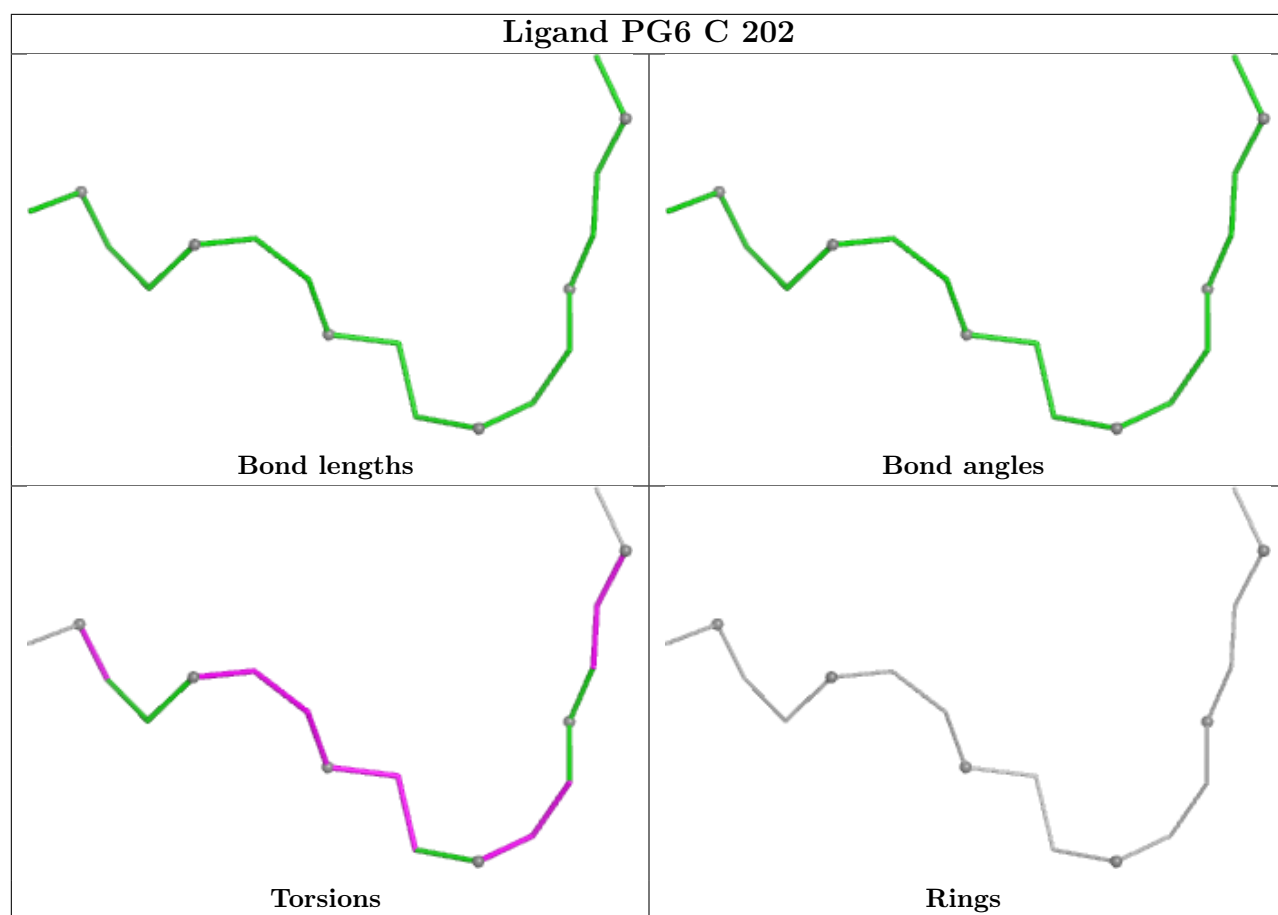
Mol	Chain	Res	Type	Atoms
5	E	202	PG6	C2-C3-O2-C4
5	F	202	PG6	C4-C5-O3-C6
6	D	202	PEG	C4-C3-O2-C2
5	C	202	PG6	C4-C5-O3-C6
6	D	203	PEG	O1-C1-C2-O2
5	E	202	PG6	C11-C10-O5-C9
5	E	202	PG6	C8-C9-O5-C10
2	C	201	COH	C4C-C3C-CAC-CBC
4	A	203	PG4	O2-C3-C4-O3
2	E	201	COH	CAD-CBD-CGD-O1D
2	F	201	COH	CAD-CBD-CGD-O1D
2	D	201	COH	CAD-CBD-CGD-O1D
2	F	201	COH	CAD-CBD-CGD-O2D
2	D	201	COH	CAD-CBD-CGD-O2D
2	C	201	COH	CAA-CBA-CGA-O2A
5	C	202	PG6	C5-C4-O2-C3
2	B	201	COH	CAD-CBD-CGD-O1D
2	E	201	COH	CAA-CBA-CGA-O2A
5	E	202	PG6	C10-C11-O6-C12
2	B	201	COH	CAD-CBD-CGD-O2D
2	C	201	COH	CAA-CBA-CGA-O1A
5	C	202	PG6	C10-C11-O6-C12
5	F	202	PG6	C8-C9-O5-C10
2	A	201	COH	CAD-CBD-CGD-O2D
2	C	201	COH	CAD-CBD-CGD-O1D
2	E	201	COH	CAA-CBA-CGA-O1A
2	D	201	COH	C2A-CAA-CBA-CGA
4	A	203	PG4	C1-C2-O2-C3
2	A	201	COH	CAD-CBD-CGD-O1D
3	B	202	PGE	C3-C4-O3-C5
2	E	201	COH	C3A-C2A-CAA-CBA
2	E	201	COH	CAD-CBD-CGD-O2D
5	C	202	PG6	C3-C2-O1-C1
5	C	202	PG6	C7-C6-O3-C5
2	E	201	COH	C1A-C2A-CAA-CBA
2	F	201	COH	CAA-CBA-CGA-O2A
5	C	202	PG6	O5-C10-C11-O6
5	E	202	PG6	C6-C7-O4-C8
2	C	201	COH	CAD-CBD-CGD-O2D

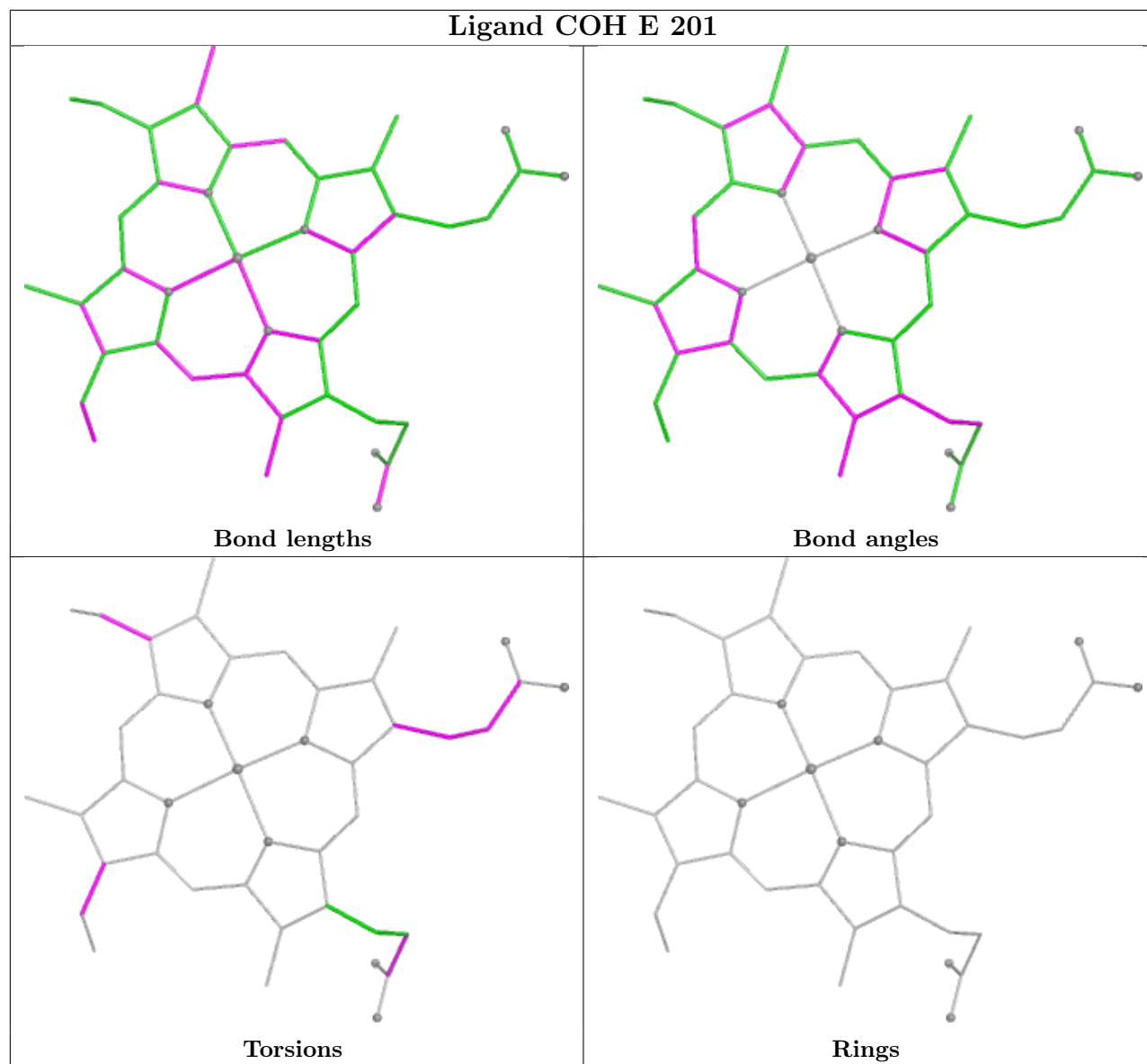
There are no ring outliers.

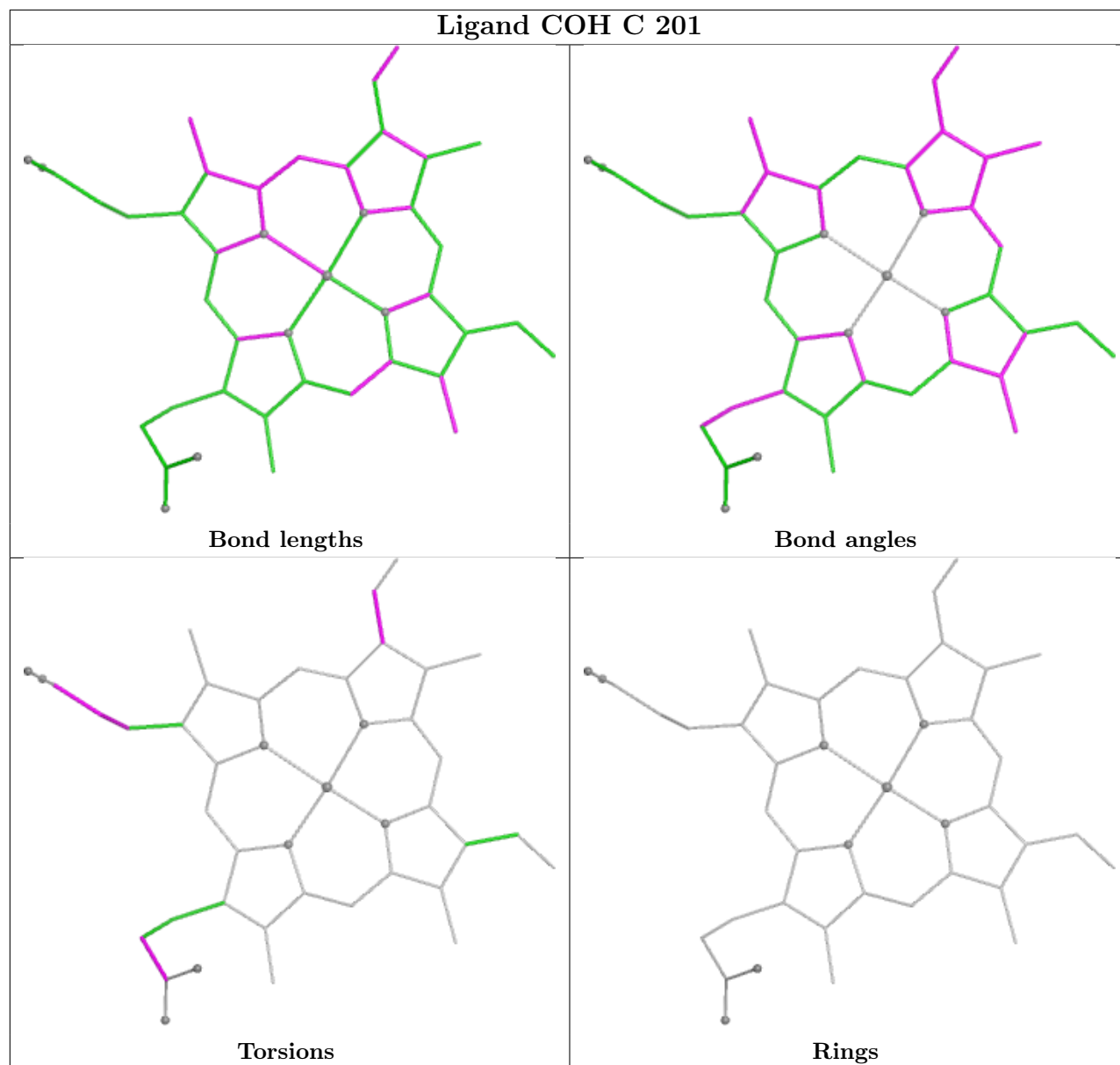
9 monomers are involved in 24 short contacts:

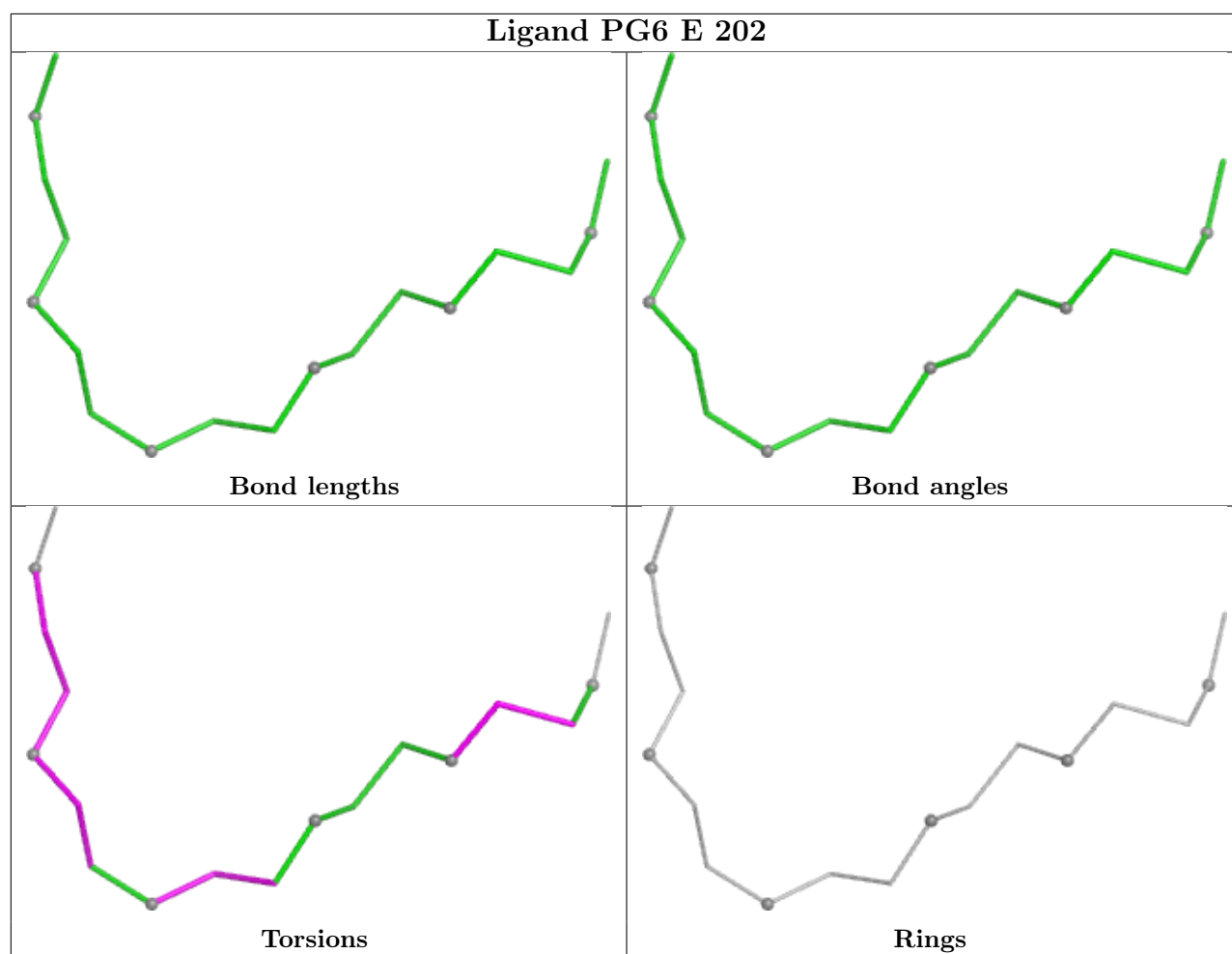
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	C	202	PG6	3	0
2	E	201	COH	6	0
2	C	201	COH	3	0
5	E	202	PG6	2	0
2	A	201	COH	1	0
2	F	201	COH	5	0
2	B	201	COH	4	0
2	D	201	COH	3	0
5	F	202	PG6	2	0

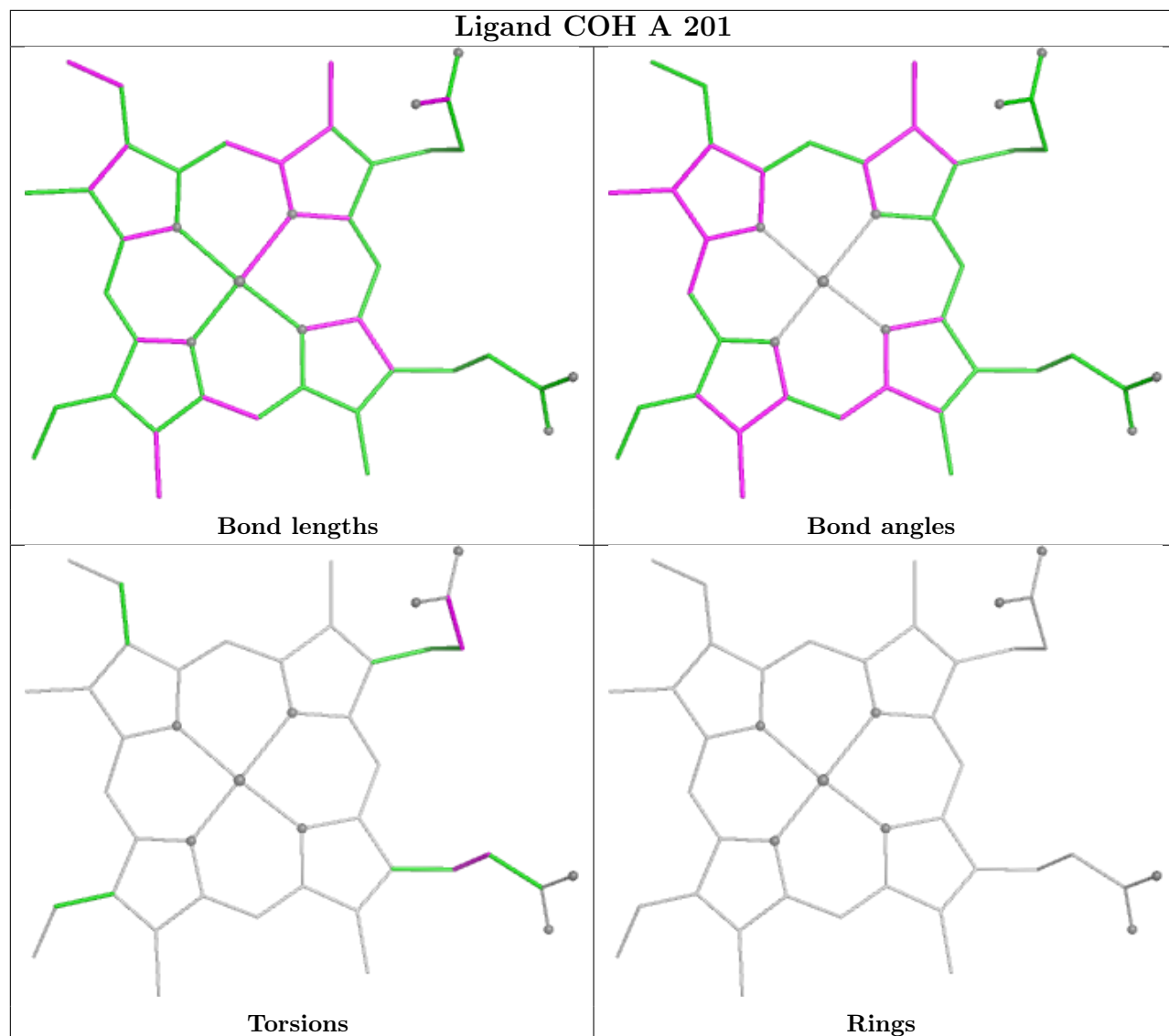
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

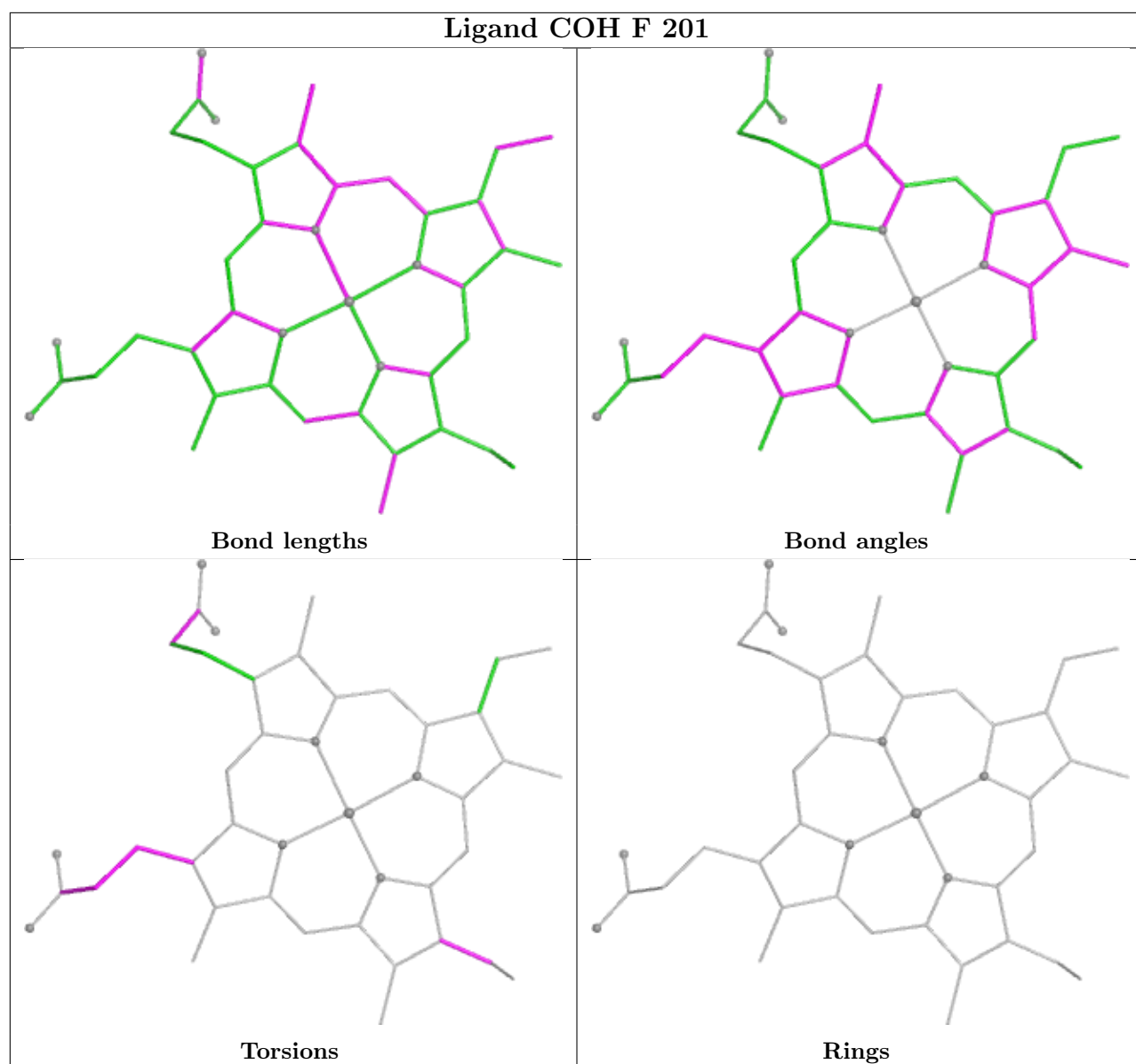


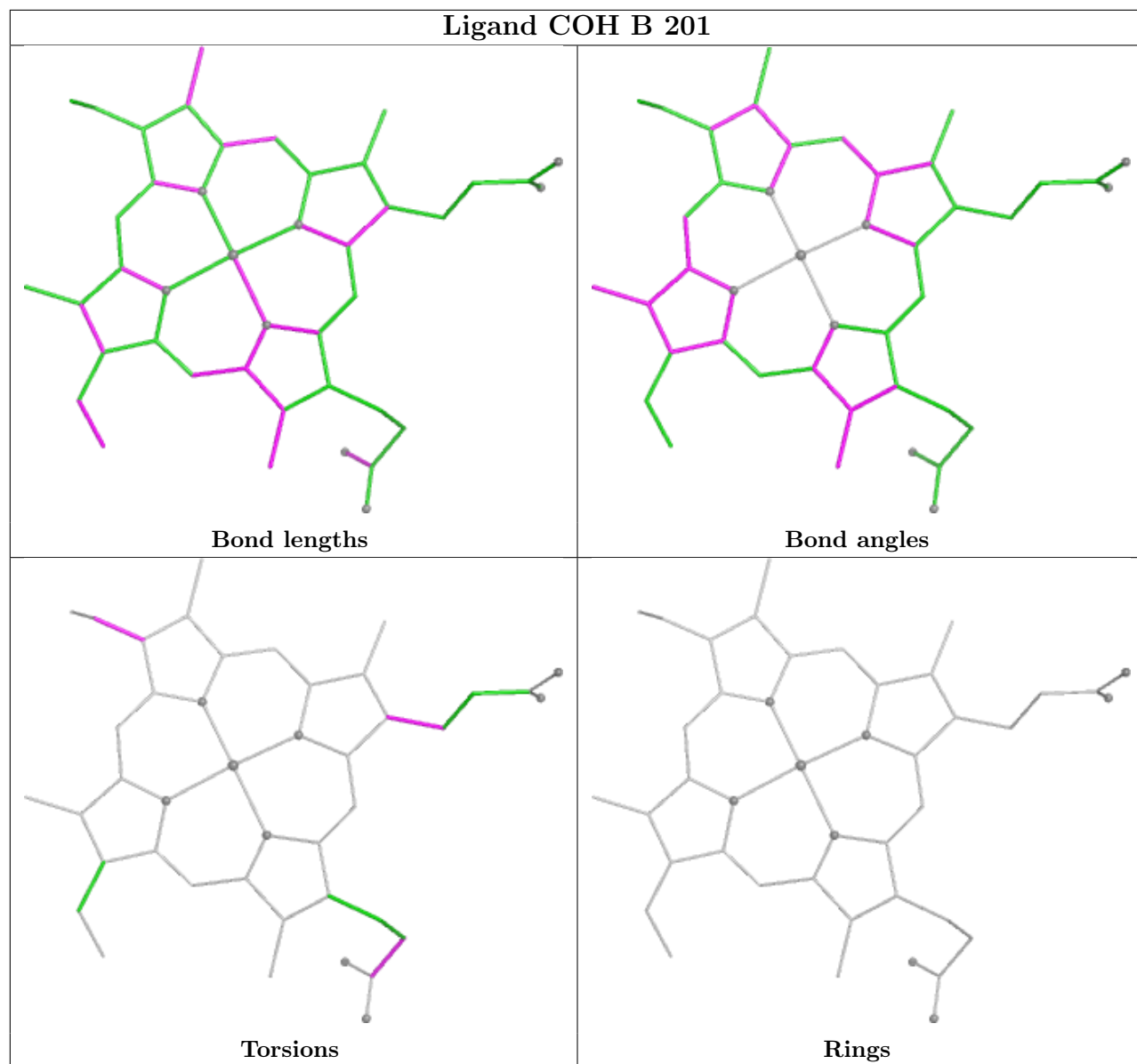


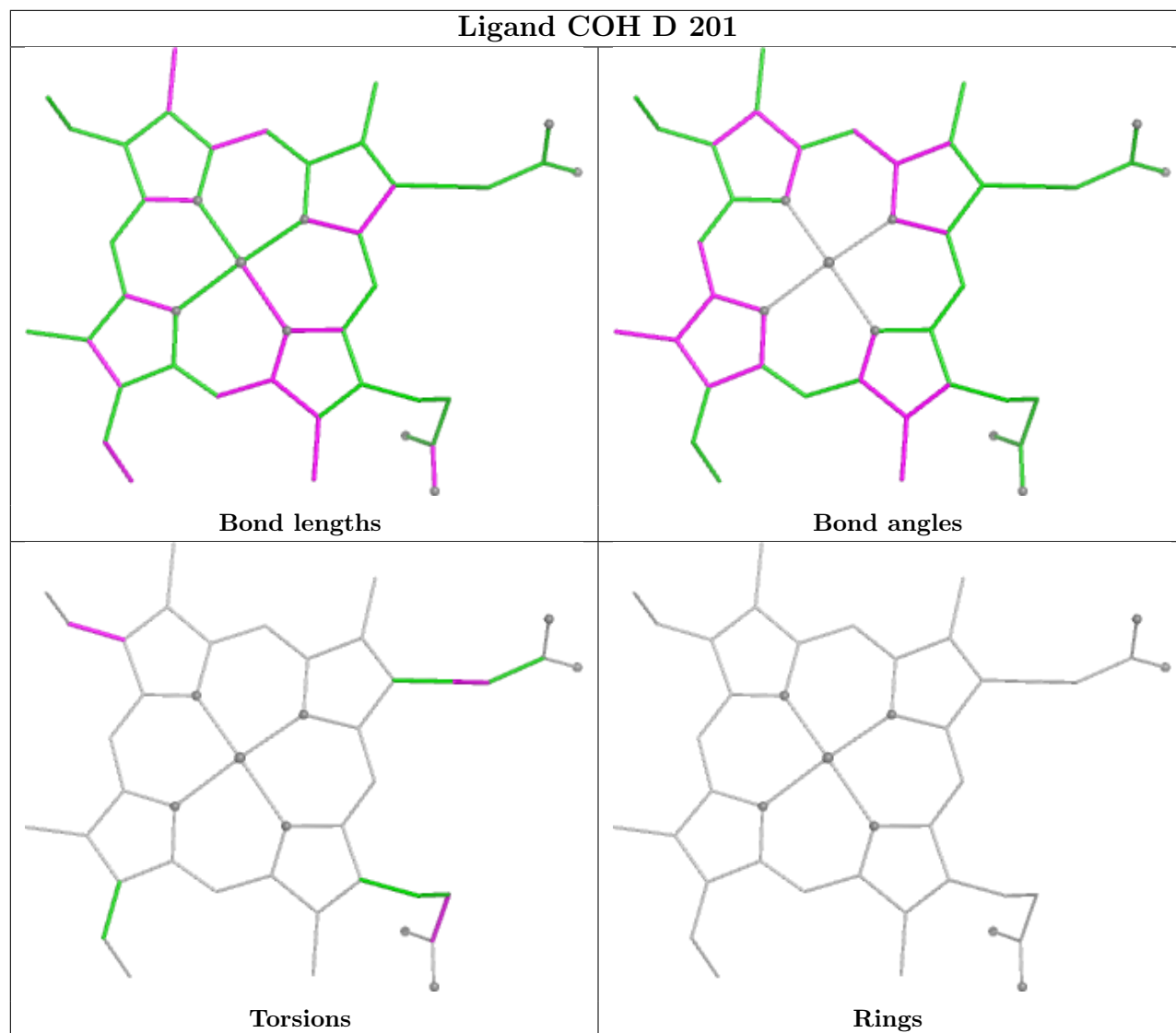


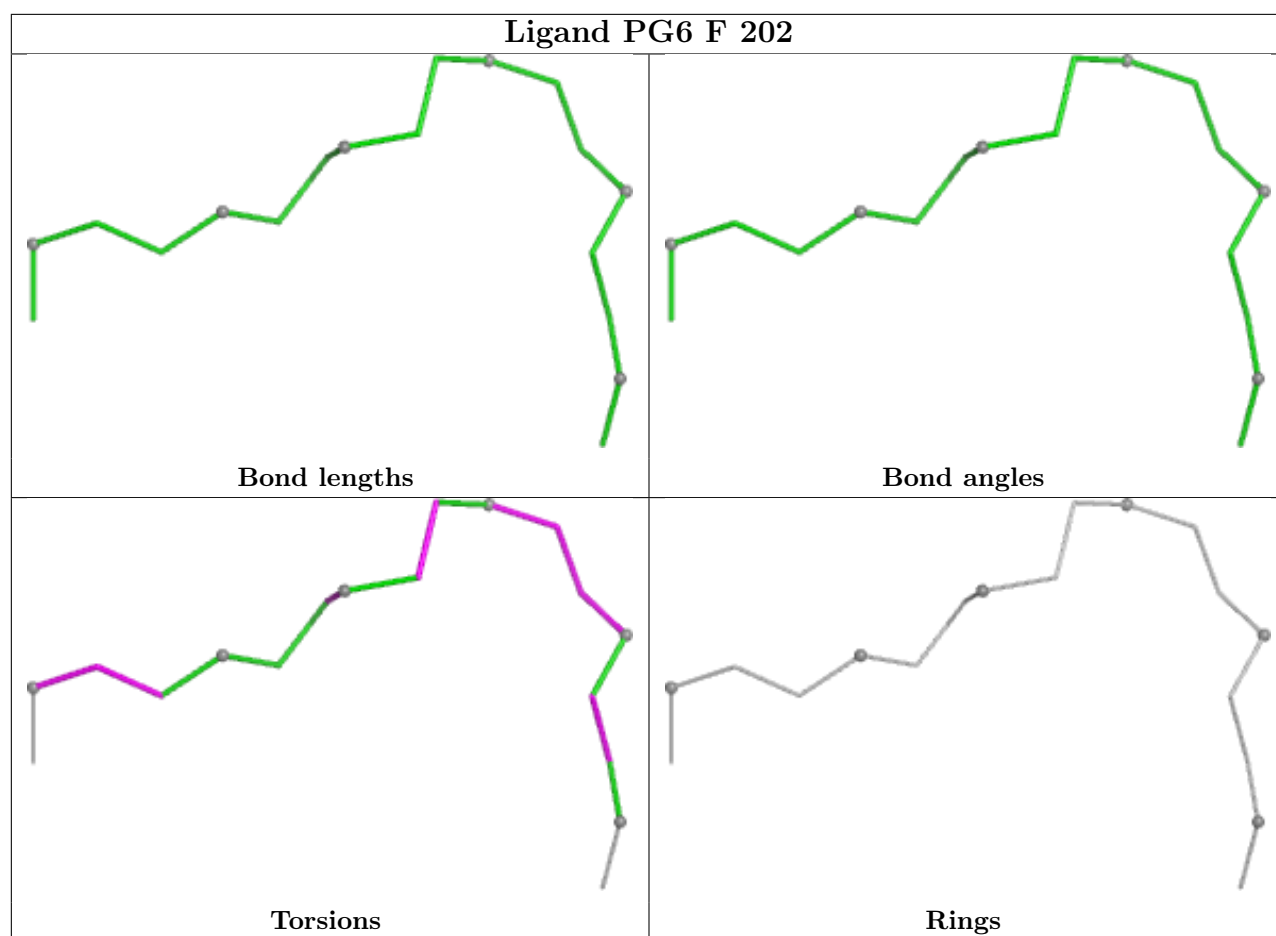












5.7 Other polymers [i](#)

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

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	156/166 (93%)	0.19	9 (5%) 29 30	28, 40, 72, 109	0
1	B	156/166 (93%)	0.27	6 (3%) 44 46	22, 43, 68, 92	1 (0%)
1	C	156/166 (93%)	0.14	3 (1%) 66 69	29, 39, 66, 99	0
1	D	156/166 (93%)	0.59	13 (8%) 17 18	28, 51, 94, 129	1 (0%)
1	E	156/166 (93%)	0.58	7 (4%) 38 40	35, 54, 87, 110	0
1	F	156/166 (93%)	0.29	7 (4%) 38 40	23, 43, 78, 110	1 (0%)
All	All	936/996 (93%)	0.34	45 (4%) 35 37	22, 44, 80, 129	3 (0%)

All (45) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	131	ILE	5.6
1	A	131	ILE	5.5
1	D	132	GLY	4.1
1	A	156	LYS	3.9
1	B	1	GLY	3.8
1	D	135	PRO	3.6
1	A	130	GLU	3.5
1	D	128	LEU	3.3
1	E	156	LYS	3.3
1	A	132	GLY	3.2
1	E	137	VAL	3.2
1	F	156	LYS	3.1
1	E	136	ASN	3.1
1	F	131	ILE	3.0
1	B	156	LYS	3.0
1	B	131	ILE	2.9
1	F	132	GLY	2.8
1	E	131	ILE	2.8
1	E	122	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
1	D	134	ASN	2.6
1	F	136	ASN	2.6
1	D	41	TYR	2.6
1	D	136	ASN	2.6
1	B	9[A]	LYS	2.6
1	E	133	ASP	2.5
1	F	135	PRO	2.5
1	D	122	ILE	2.5
1	D	133	ASP	2.5
1	C	1	GLY	2.5
1	A	1	GLY	2.4
1	A	133	ASP	2.3
1	D	46	LYS	2.3
1	E	134	ASN	2.3
1	F	22	LEU	2.3
1	D	125	LYS	2.3
1	A	136	ASN	2.3
1	D	130	GLU	2.2
1	A	135	PRO	2.1
1	B	2	PRO	2.1
1	C	132	GLY	2.1
1	B	40	LYS	2.1
1	C	133	ASP	2.0
1	A	41	TYR	2.0
1	F	122	ILE	2.0
1	D	126	LYS	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

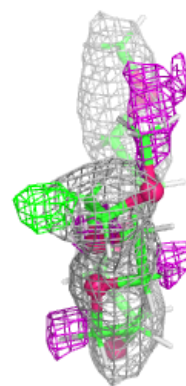
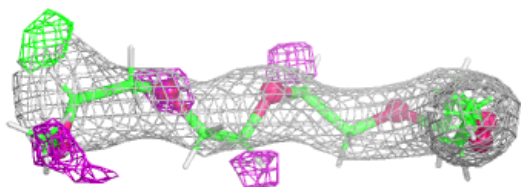
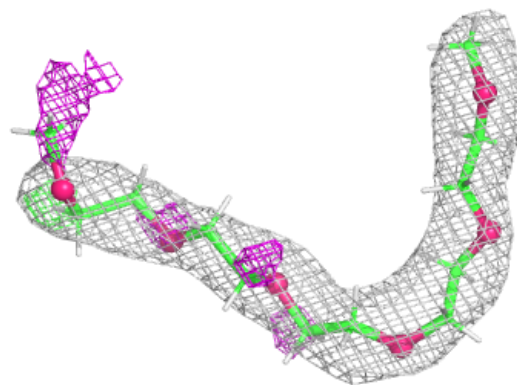
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
6	PEG	D	202	7/7	0.76	0.17	42,51,59,61	0
5	PG6	E	202	18/18	0.81	0.18	51,63,70,74	0
4	PG4	B	203	13/13	0.82	0.14	47,63,79,80	0
3	PGE	B	202	10/10	0.83	0.14	40,53,62,71	0
5	PG6	F	202	18/18	0.85	0.16	42,58,75,76	0
5	PG6	C	202	18/18	0.86	0.14	33,48,64,69	0
4	PG4	A	203	13/13	0.87	0.13	41,50,60,62	0
3	PGE	A	202	10/10	0.89	0.12	31,45,60,70	0
6	PEG	D	203	7/7	0.89	0.13	46,55,66,66	0
2	COH	E	201	43/43	0.94	0.14	33,46,59,67	0
2	COH	D	201	43/43	0.95	0.11	25,38,52,58	0
2	COH	A	201	43/43	0.95	0.12	23,35,55,58	0
2	COH	F	201	43/43	0.95	0.12	28,40,55,55	0
2	COH	B	201	43/43	0.95	0.14	25,36,50,52	0
2	COH	C	201	43/43	0.96	0.10	24,35,52,57	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.

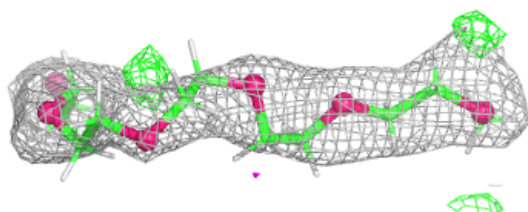
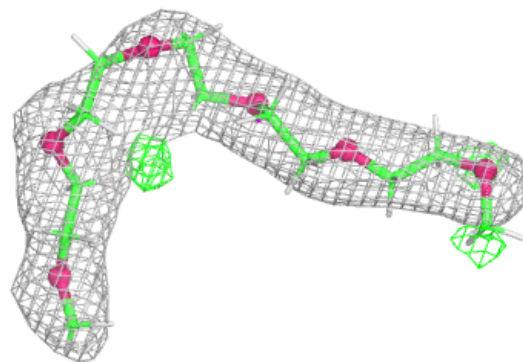
Electron density around PG6 E 202:

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

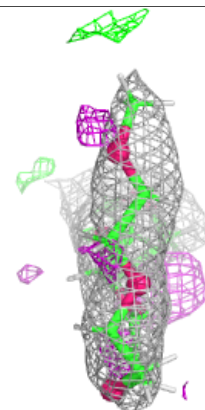
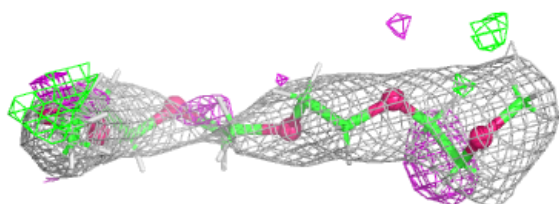
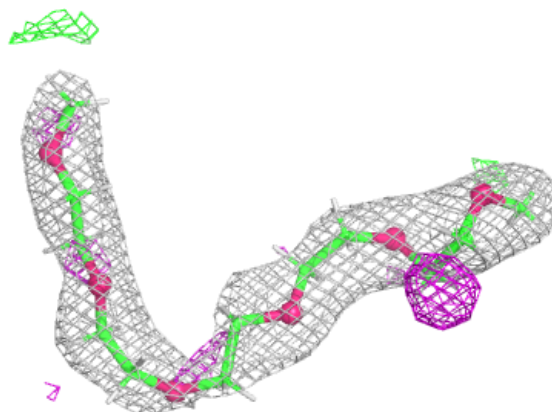


Electron density around PG6 F 202:

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

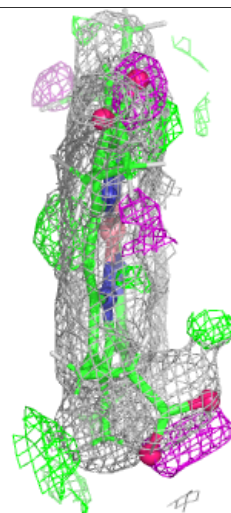
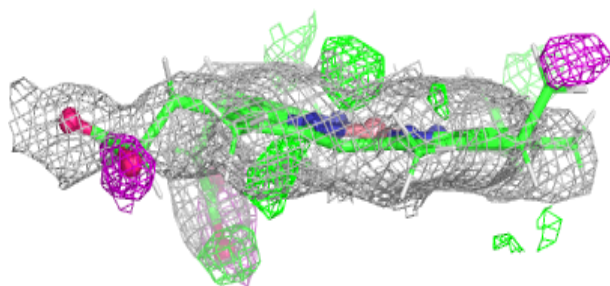
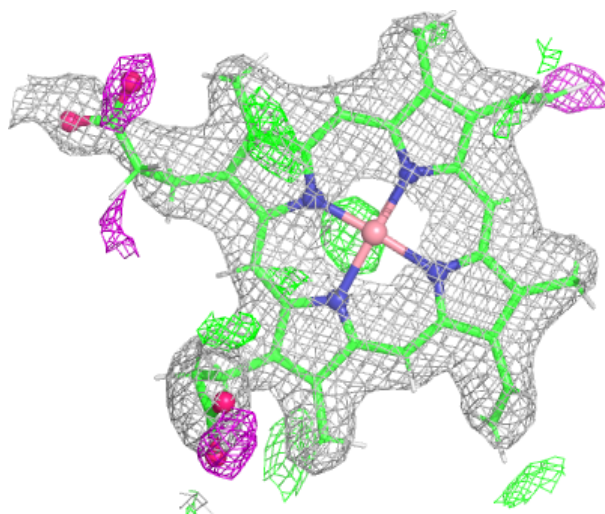
**Electron density around PG6 C 202:**

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



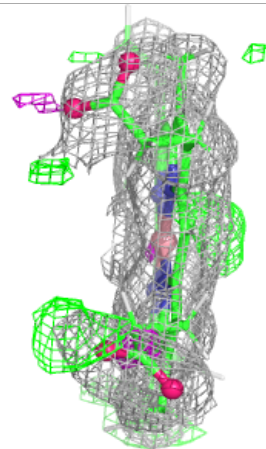
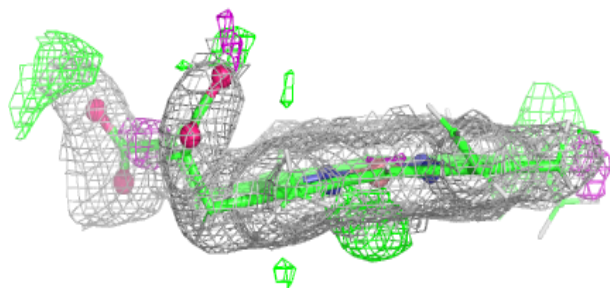
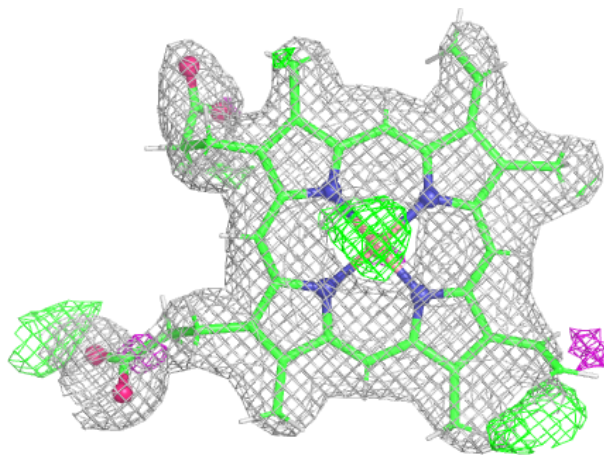
Electron density around COH E 201:

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



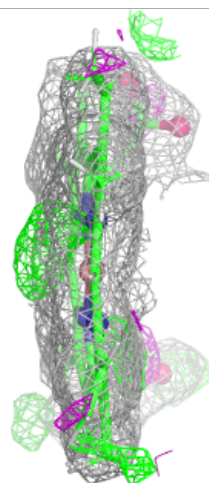
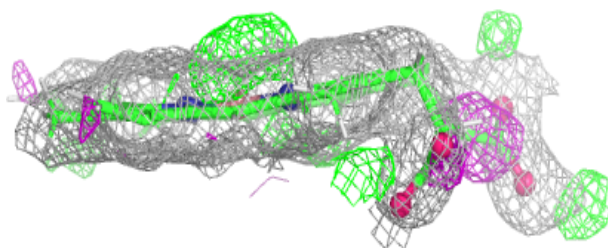
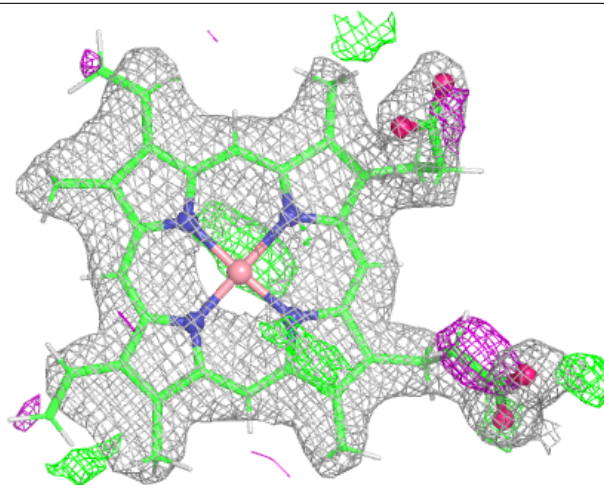
Electron density around COH D 201:

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



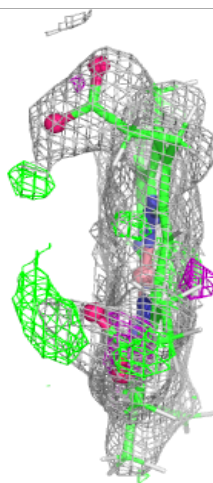
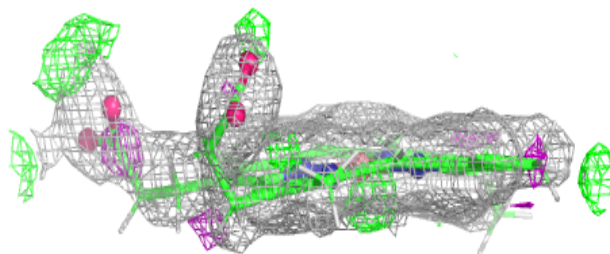
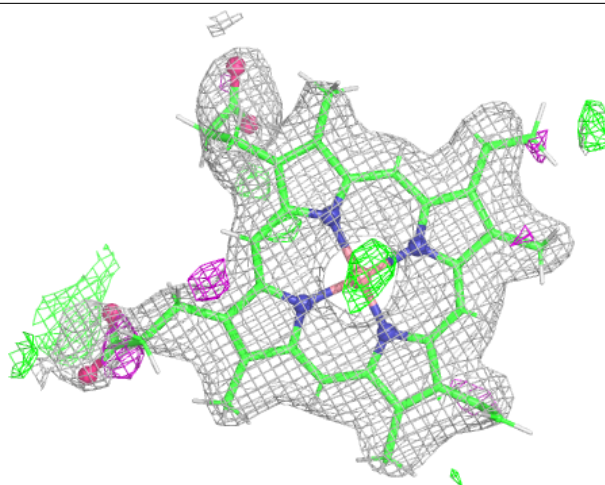
Electron density around COH A 201:

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



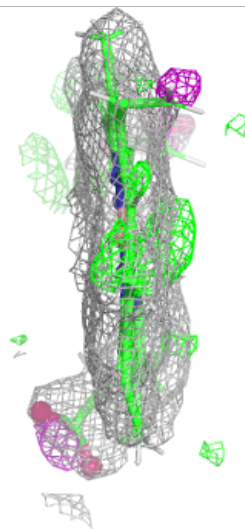
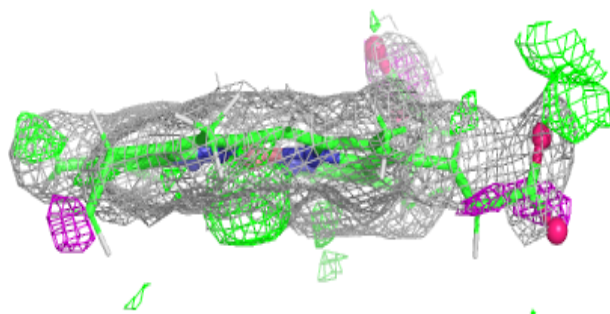
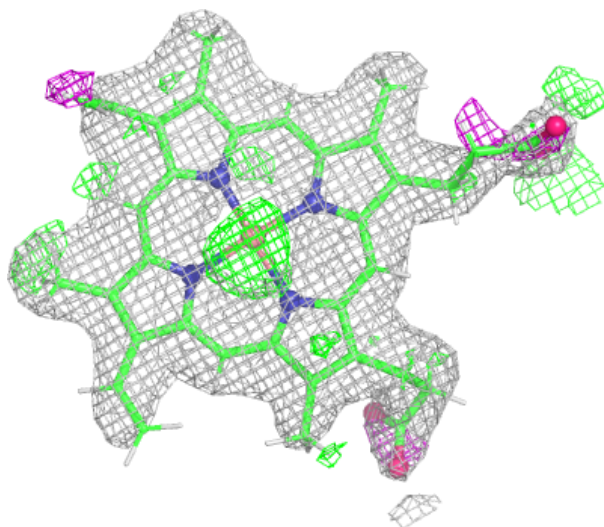
Electron density around COH F 201:

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and green (positive)



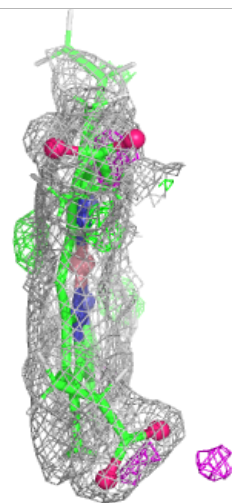
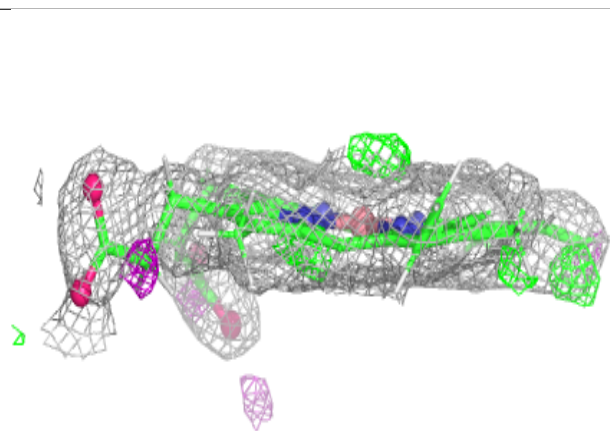
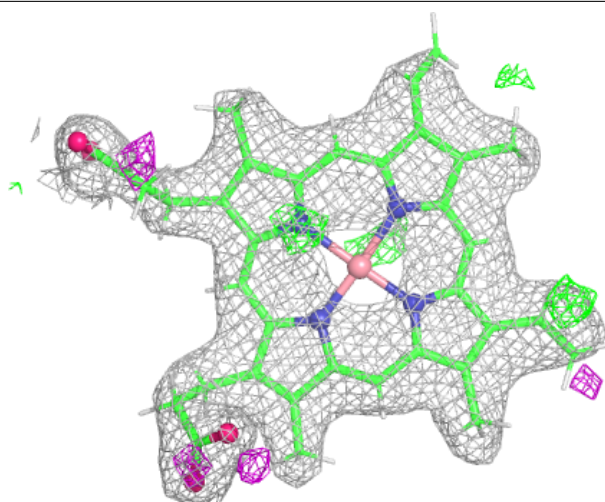
Electron density around COH B 201:

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



Electron density around COH C 201:

$2mF_o-DF_c$ (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.