WORLDWIDE wwPDB

PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report (i)

Dec 7, 2023 – 09:01 pm GMT

PDB ID	:	6S0Q
Title	:	Structure of the A2A adenosine receptor determined at SwissFEL using native-SAD at 4.57 keV from 50,000 diffraction patterns
Authors	:	Nass, K.; Cheng, R.; Vera, L.; Mozzanica, A.; Redford, S.; Ozerov, D.; Basu, S.; James, D.; Knopp, G.; Cirelli, C.; Martiel, I.; Casadei, C.; Weinert, T.; Nogly, P.; Skopintsev, P.; Usov, I.; Leonarski, F.; Geng, T.; Rappas, M.; Dore, A.S.; Cooke, R.; Nasrollahi Shirazi, S.; Dworkowski, F.; Sharpe, M.; Olieric, N.; Steinmetz, M.O.; Schertler, G.; Abela, R.; Patthey, L.; Schmitt, B.; Hennig, M.; Standfuss, J.; Wang, M.; Milne, J.C.
Deposited on	:	2019-06-18
Resolution	:	2.65 Å(reported)

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

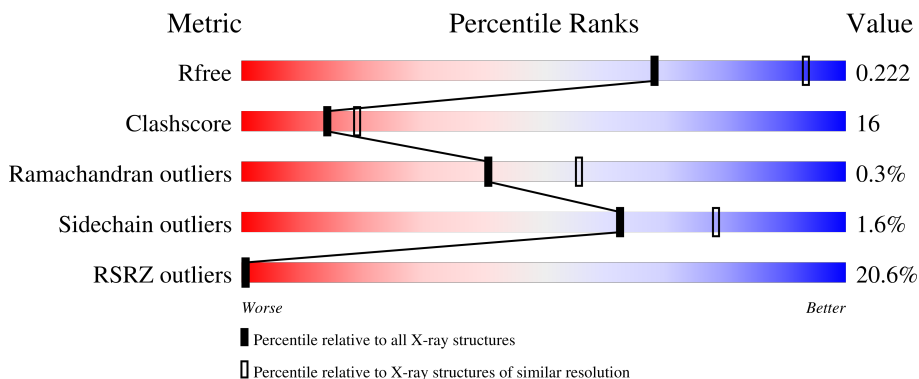|		
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158

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 2.65 Å.

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

Metric	Percentile Ranks	Value
Rfree		0.222
Clashscore		16
Ramachandran outliers		0.3%
Sidechain outliers		1.6%
RSRZ outliers		20.6%

Worse ... *Better*

▌Percentile relative to all X-ray structures

▐ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1332 (2.68-2.64)
Clashscore	141614	1374 (2.68-2.64)
Ramachandran outliers	138981	1349 (2.68-2.64)
Sidechain outliers	138945	1349 (2.68-2.64)
RSRZ outliers	127900	1318 (2.68-2.64)

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	433	18% — 72% 17% · 10%

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	OLA	A	1205	-	-	-	X
4	OLB	A	1210	-	-	-	X
6	CLR	A	1213	X	-	-	-
6	CLR	A	1214	X	-	-	-
6	CLR	A	1215	X	-	-	-

2　Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 3286 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 Adenosine receptor A2a,Soluble cytochrome b562,Adenosine receptor A2a.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	388	Total 2998	C 1953	N 506	O 517	S 22	0	0	0

There are 33 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-8	ASP	-	expression tag	UNP P29274
A	-7	TYR	-	expression tag	UNP P29274
A	-6	LYS	-	expression tag	UNP P29274
A	-5	ASP	-	expression tag	UNP P29274
A	-4	ASP	-	expression tag	UNP P29274
A	-3	ASP	-	expression tag	UNP P29274
A	-2	ASP	-	expression tag	UNP P29274
A	-1	GLY	-	expression tag	UNP P29274
A	0	ALA	-	expression tag	UNP P29274
A	1	PRO	-	expression tag	UNP P29274
A	54	LEU	ALA	engineered mutation	UNP P29274
A	88	ALA	THR	engineered mutation	UNP P29274
A	107	ALA	ARG	engineered mutation	UNP P29274
A	122	ALA	LYS	engineered mutation	UNP P29274
A	154	ALA	ASN	engineered mutation	UNP P29274
A	202	ALA	LEU	engineered mutation	UNP P29274
A	1007	TRP	MET	engineered mutation	UNP P0ABE7
A	1102	ILE	HIS	engineered mutation	UNP P0ABE7
A	1106	LEU	-	linker	UNP P0ABE7
A	235	ALA	LEU	engineered mutation	UNP P29274
A	239	ALA	VAL	engineered mutation	UNP P29274
A	277	ALA	SER	engineered mutation	UNP P29274
A	318	ALA	-	expression tag	UNP P29274
A	319	HIS	-	expression tag	UNP P29274
A	320	HIS	-	expression tag	UNP P29274
A	321	HIS	-	expression tag	UNP P29274

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
A	322	HIS	-	expression tag	UNP P29274
A	323	HIS	-	expression tag	UNP P29274
A	324	HIS	-	expression tag	UNP P29274
A	325	HIS	-	expression tag	UNP P29274
A	326	HIS	-	expression tag	UNP P29274
A	327	HIS	-	expression tag	UNP P29274
A	328	HIS	-	expression tag	UNP P29274

- Molecule 2 is 4-{2-[(7-amino-2-furan-2-yl[1,2,4]triazolo[1,5-a][1,3,5]triazin-5-yl)amino]ethyl} phenol (three-letter code: ZMA) (formula: $C_{16}H_{15}N_7O_2$).
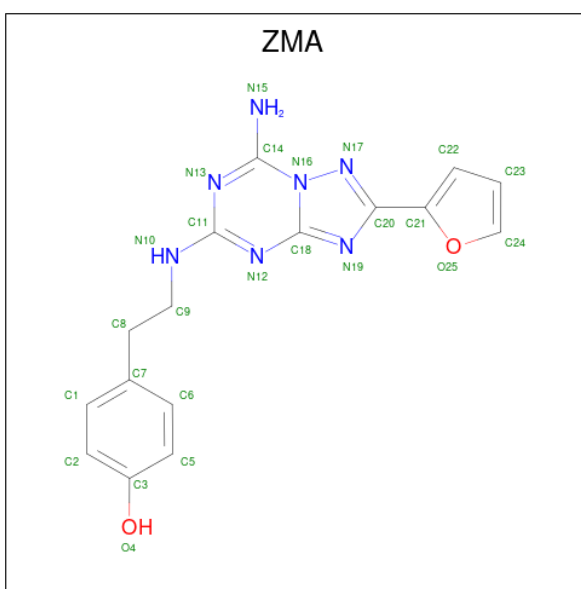
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	25	16	7	2	0	0

- Molecule 3 is OLEIC ACID (three-letter code: OLA) (formula: $C_{18}H_{34}O_2$).

OLA
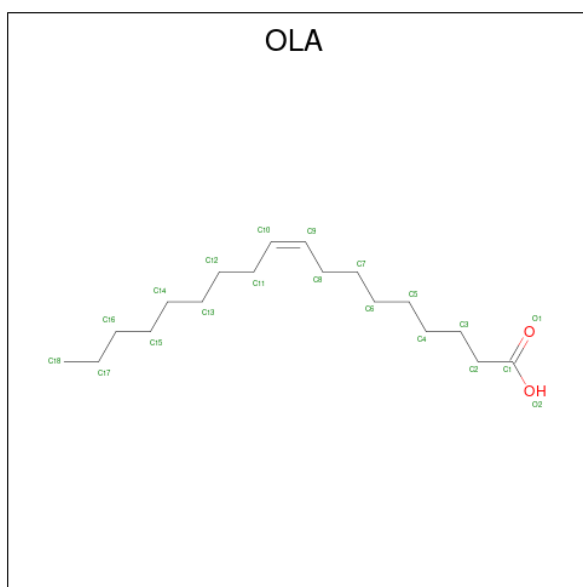
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total 20	C 18	O 2	0	0
3	A	1	Total 15	C 13	O 2	0	0
3	A	1	Total 9	C 7	O 2	0	0
3	A	1	Total 18	C 16	O 2	0	0
3	A	1	Total 10	C 10		0	0
3	A	1	Total 7	C 7		0	0
3	A	1	Total 17	C 15	O 2	0	0

- Molecule 4 is (2S)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (three-letter code: OLB) (formula: $C_{21}H_{40}O_4$).

OLB
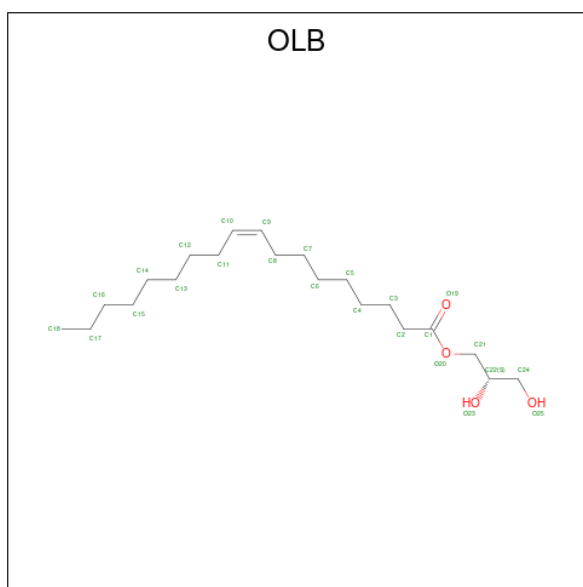
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 19	C 15	O 4	0	0
4	A	1	Total 20	C 16	O 4	0	0

- Molecule 5 is (2R)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (three-letter code: OLC) (formula: $C_{21}H_{40}O_4$).
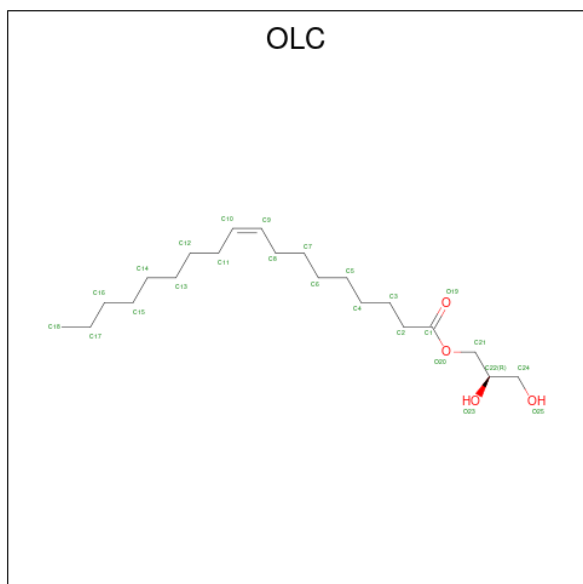
OLC

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total 25	C 21	O 4	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total 19	C 15	O 4	0	0

- Molecule 6 is CHOLESTEROL (three-letter code: CLR) (formula: $C_{27}H_{46}O$).
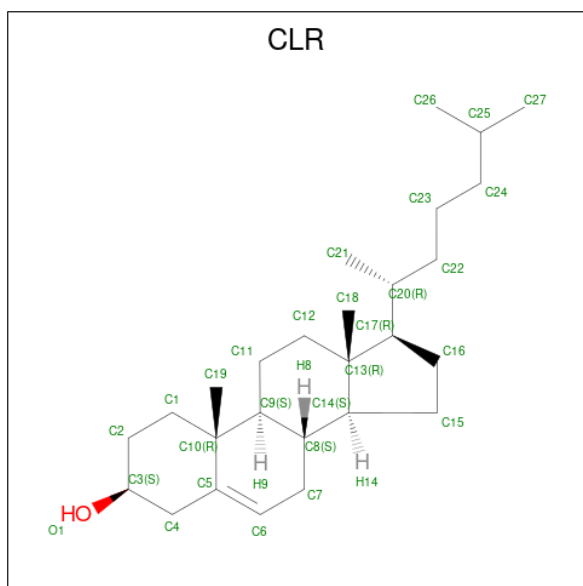
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total 28	C 27	O 1	0	0
6	A	1	Total 28	C 27	O 1	0	0
6	A	1	Total 28	C 27	O 1	0	0

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: Adenosine receptor A2a,Soluble cytochrome b562,Adenosine receptor A2a
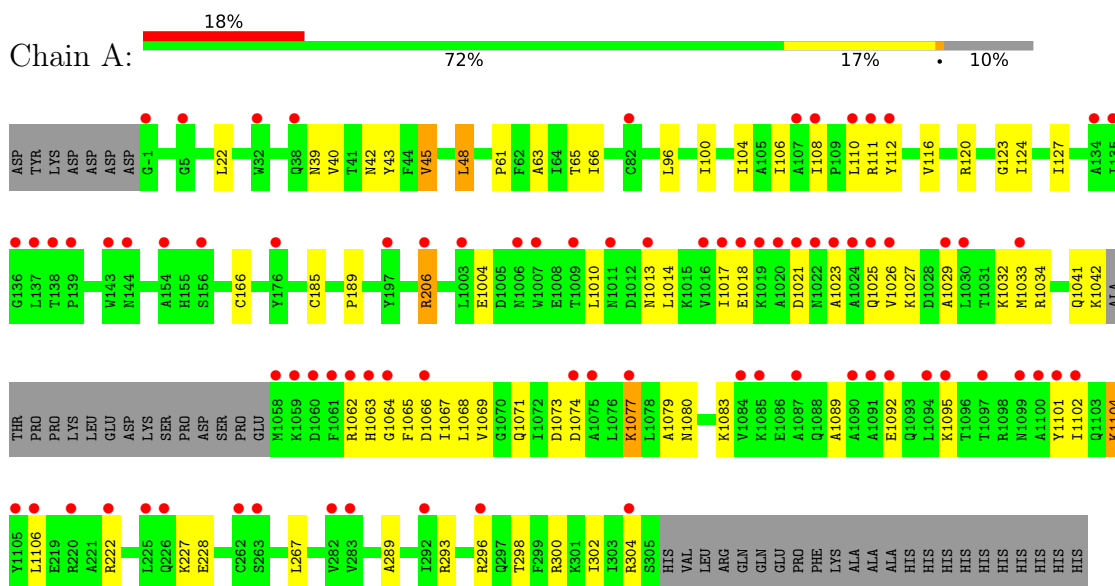
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	40.34Å 180.66Å 143.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.49 – 2.65 35.76 – 2.65	Depositor EDS
% Data completeness (in resolution range)	100.0 (34.49-2.65) 93.8 (35.76-2.65)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$<I/\sigma(I)>$ [1]	0.87 (at 2.65Å)	Xtriage
Refinement program	PHENIX (1.13_2998: ???)	Depositor
R, R_{free}	0.194 , 0.221 0.195 , 0.222	Depositor DCC
R_{free} test set	786 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å²)	90.8	Xtriage
Anisotropy	0.056	Xtriage
Bulk solvent k_{sol}(e/Å³), B_{sol}(Å²)	0.30 , 97.2	EDS
L-test for twinning [2]	$<\|L\|>=0.48$, $<L^2>=0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	3286	wwPDB-VP
Average B, all atoms (Å²)	101.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.87% of the height of the origin peak. No significant pseudotranslation is detected.*

---

[1]Intensities estimated from amplitudes.
[2]Theoretical values of $<\|L\|>$, $<L^2>$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ZMA, OLC, CLR, OLA, OLB

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	0.50	1/3062 (0.0%)	0.58	1/4164 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	45	VAL	CB-CG1	-6.90	1.38	1.52

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	48	LEU	CA-CB-CG	5.33	127.55	115.30

There are no chirality outliers.

There are no planarity outliers.

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	2998	0	3068	65	0
2	A	25	0	15	0	0
3	A	96	0	141	3	0
4	A	39	0	52	1	0
5	A	44	0	65	2	0
6	A	84	0	117	38	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	3286	0	3458	105	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 16.

The worst 5 of 105 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)
6:A:1215:CLR:C14	6:A:1215:CLR:C8	1.78	1.61
6:A:1213:CLR:C7	6:A:1213:CLR:C8	1.75	1.59
6:A:1213:CLR:C8	6:A:1213:CLR:C14	1.78	1.58
6:A:1214:CLR:C7	6:A:1214:CLR:C8	1.76	1.57
6:A:1214:CLR:C8	6:A:1214:CLR:C14	1.79	1.57

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	384/433 (89%)	375 (98%)	8 (2%)	1 (0%)	41	56

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1064	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	312/353 (88%)	307 (98%)	5 (2%)	62	78

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

Mol	Chain	Res	Type
1	A	39	ASN
1	A	206	ARG
1	A	1077	LYS
1	A	1083	LYS
1	A	1104	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1013	ASN
1	A	1093	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

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	#$|Z| > 2$
2	ZMA	A	1201	-	21,28,28	1.92	3 (14%)	20,39,39	2.31	7 (35%)
6	CLR	A	1215	-	31,31,31	9.16	22 (70%)	48,48,48	3.62	21 (43%)
4	OLB	A	1210	-	19,19,24	0.93	1 (5%)	20,20,25	1.21	1 (5%)
3	OLA	A	1203	-	14,14,19	0.91	1 (7%)	14,14,19	1.05	2 (14%)
3	OLA	A	1205	-	17,17,19	0.84	1 (5%)	17,17,19	1.01	1 (5%)
3	OLA	A	1202	-	19,19,19	0.82	1 (5%)	19,19,19	0.94	1 (5%)
3	OLA	A	1207	-	6,6,19	0.32	0	5,5,19	0.42	0
3	OLA	A	1206	-	9,9,19	1.04	1 (11%)	8,8,19	0.71	0
3	OLA	A	1204	-	8,8,19	0.74	0	8,8,19	1.26	1 (12%)
6	CLR	A	1213	-	31,31,31	9.08	20 (64%)	48,48,48	3.66	21 (43%)
6	CLR	A	1214	-	31,31,31	9.07	19 (61%)	48,48,48	3.63	22 (45%)
4	OLB	A	1209	-	18,18,24	0.89	1 (5%)	18,19,25	1.21	1 (5%)
5	OLC	A	1212	-	18,18,24	0.95	1 (5%)	18,19,25	1.13	2 (11%)
3	OLA	A	1208	-	16,16,19	0.86	1 (6%)	16,16,19	1.04	1 (6%)
5	OLC	A	1211	-	24,24,24	0.81	2 (8%)	25,25,25	1.17	2 (8%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	ZMA	A	1201	-	-	0/6/10/10	0/4/4/4
4	OLB	A	1210	-	-	8/19/19/24	-
3	OLA	A	1203	-	-	5/12/12/17	-
3	OLA	A	1202	-	-	10/17/17/17	-
3	OLA	A	1205	-	-	13/15/15/17	-
3	OLA	A	1207	-	-	2/4/4/17	-
3	OLA	A	1206	-	-	4/7/7/17	-
3	OLA	A	1204	-	-	2/6/6/17	-
4	OLB	A	1209	-	-	5/18/18/24	-
6	CLR	A	1213	-	2/2/10/11	3/10/68/68	0/4/4/4
6	CLR	A	1215	-	2/2/10/11	1/10/68/68	0/4/4/4

Continued on next page...

W O R L D W I D E
wwPDB
PROTEIN DATA BANK

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	OLC	A	1212	-	-	7/18/18/24	-
6	CLR	A	1214	-	2/2/10/11	3/10/68/68	0/4/4/4
3	OLA	A	1208	-	-	10/14/14/17	-
5	OLC	A	1211	-	-	12/24/24/24	-

The worst 5 of 74 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	1213	CLR	C8-C9	-21.43	1.12	1.53
6	A	1215	CLR	C8-C9	-21.42	1.12	1.53
6	A	1214	CLR	C8-C9	-21.35	1.12	1.53
6	A	1213	CLR	C13-C14	-18.89	1.19	1.55
6	A	1215	CLR	C13-C14	-18.60	1.19	1.55

The worst 5 of 83 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A	1215	CLR	C18-C13-C12	-13.11	89.88	110.59
6	A	1215	CLR	C12-C13-C14	11.72	125.46	107.27
6	A	1213	CLR	C18-C13-C12	-11.59	92.29	110.59
6	A	1214	CLR	C18-C13-C12	-11.34	92.68	110.59
6	A	1213	CLR	C12-C13-C14	10.95	124.26	107.27

5 of 6 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
6	A	1213	CLR	C8
6	A	1213	CLR	C9
6	A	1214	CLR	C8
6	A	1214	CLR	C9
6	A	1215	CLR	C8

5 of 85 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1209	OLB	C21-C22-C24-O25
5	A	1211	OLC	C21-C22-C24-O25
5	A	1211	OLC	O23-C22-C24-O25
4	A	1210	OLB	O19-C1-O20-C21
4	A	1210	OLB	C2-C1-O20-C21

There are no ring outliers.

7 monomers are involved in 42 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	A	1215	CLR	13	0
4	A	1210	OLB	1	0
3	A	1202	OLA	3	0
6	A	1213	CLR	12	0
6	A	1214	CLR	13	0
5	A	1212	OLC	1	0
5	A	1211	OLC	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand ZMA A 1201

Bond lengths   Bond angles

Torsions   Rings

Ligand CLR A 1215

Bond lengths

Bond angles

Torsions

Rings

Ligand OLB A 1210

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1203

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1205

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1202

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1207

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1206

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1204

Bond lengths

Bond angles

Torsions

Rings

Ligand CLR A 1213

Bond lengths

Bond angles

Torsions

Rings

Ligand CLR A 1214

Bond lengths

Bond angles

Torsions

Rings

Ligand OLB A 1209

Bond lengths

Bond angles

Torsions

Rings

Ligand OLC A 1212

Bond lengths

Bond angles

Torsions

Rings

Ligand OLA A 1208

Bond lengths

Bond angles

Torsions

Rings

Ligand OLC A 1211

Bond lengths

Bond angles

Torsions

Rings

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	388/433 (89%)	1.19	80 (20%)	1	1	68, 93, 136, 175	0

The worst 5 of 80 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1091	ALA	8.5
1	A	1060	ASP	8.0
1	A	1061	PHE	7.2
1	A	111	ARG	6.8
1	A	1062	ARG	6.8

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	OLA	A	1205	18/20	0.63	0.54	92,102,114,119	0
3	OLA	A	1203	15/20	0.66	0.18	103,107,120,125	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
3	OLA	A	1204	9/20	0.71	0.34	93,97,105,116	0
5	OLC	A	1212	19/25	0.71	0.35	94,106,125,127	0
3	OLA	A	1202	20/20	0.72	0.35	90,109,120,128	0
4	OLB	A	1210	20/25	0.75	0.41	104,116,121,125	0
3	OLA	A	1208	17/20	0.78	0.36	93,100,108,115	0
5	OLC	A	1211	25/25	0.81	0.56	92,104,120,124	0
4	OLB	A	1209	19/25	0.81	0.23	87,101,119,120	0
3	OLA	A	1207	7/20	0.83	0.37	89,96,100,104	0
6	CLR	A	1213	28/28	0.86	0.29	92,100,110,120	0
6	CLR	A	1215	28/28	0.86	0.28	88,97,108,110	0
3	OLA	A	1206	10/20	0.89	0.41	83,91,95,100	0
6	CLR	A	1214	28/28	0.92	0.23	90,97,101,114	0
2	ZMA	A	1201	25/25	0.93	0.28	69,77,91,105	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 OLA A 1205:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
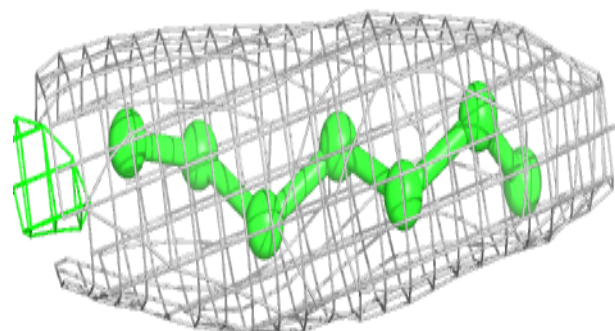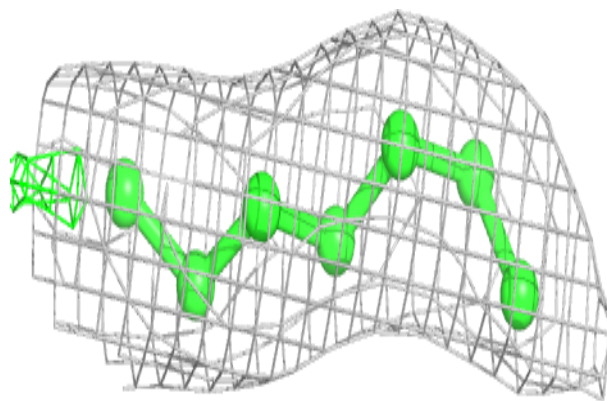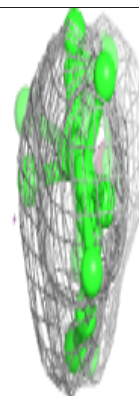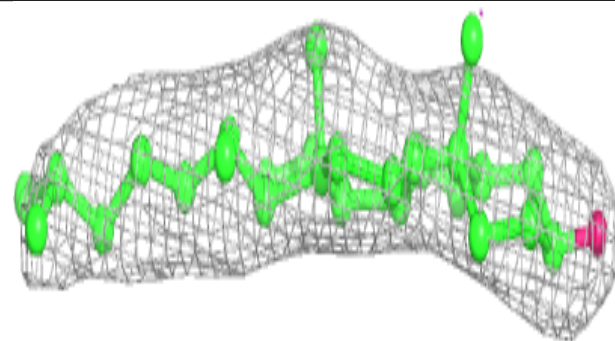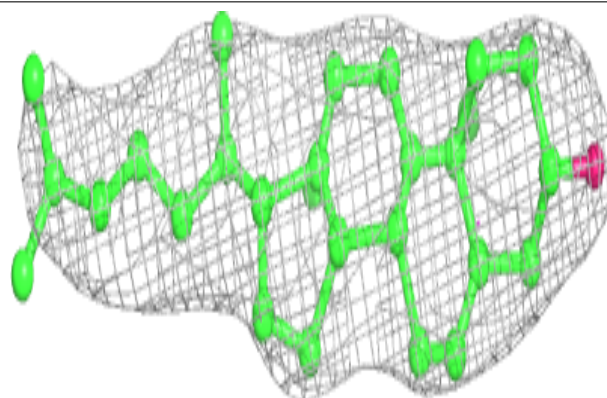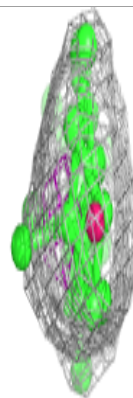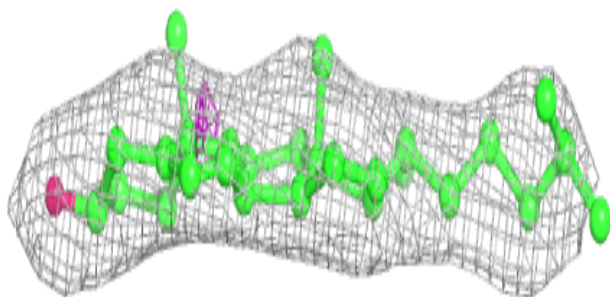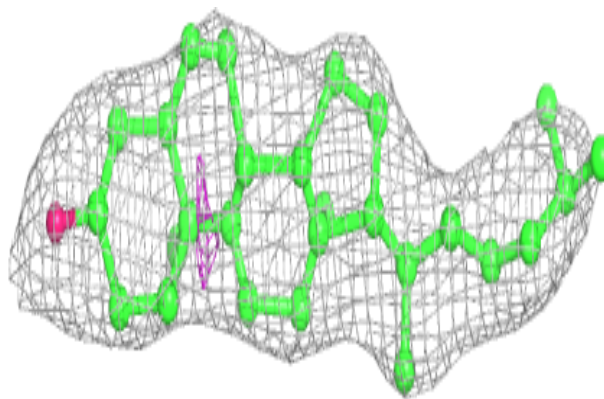and green (positive)
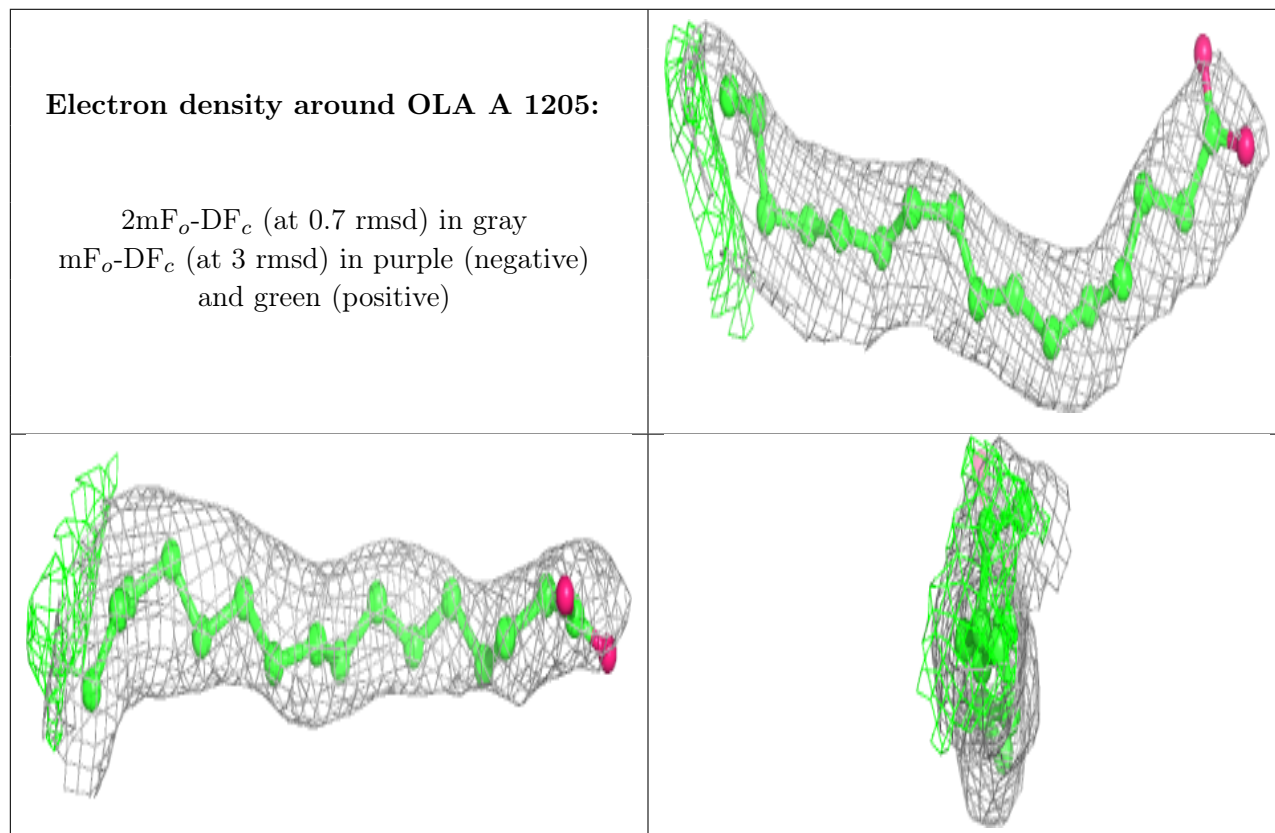
Electron density around OLA A 1203:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)
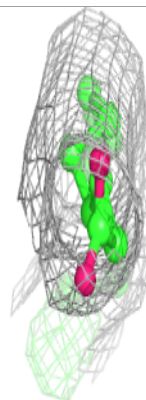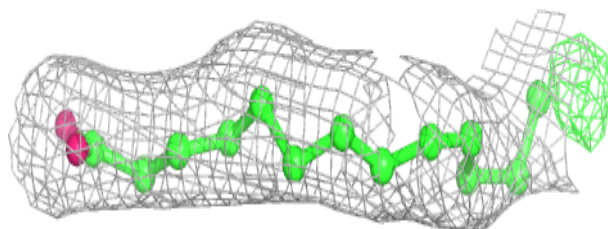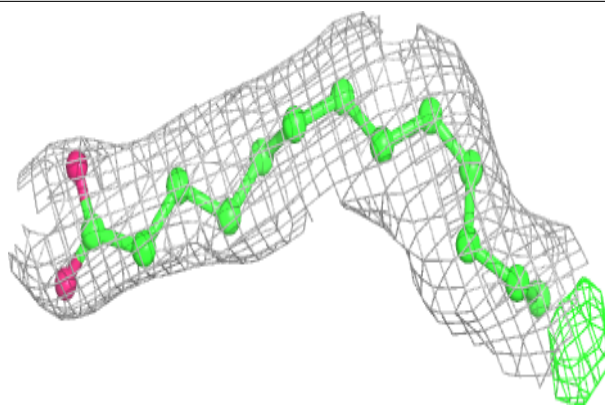
Electron density around OLA A 1204:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
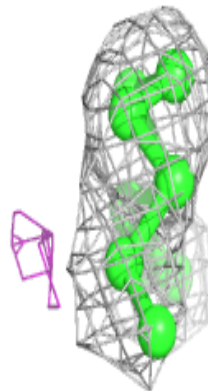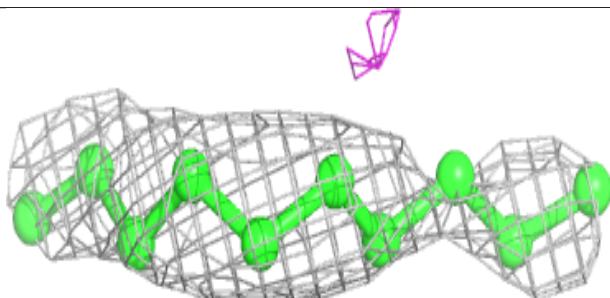and green (positive)
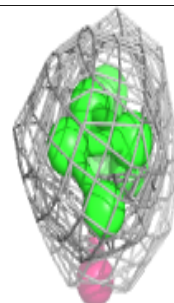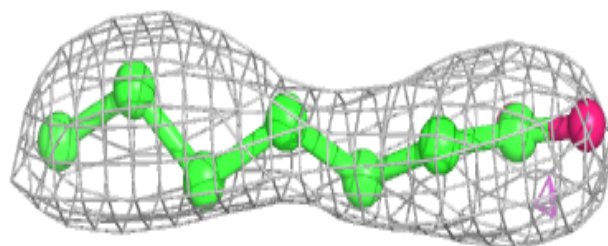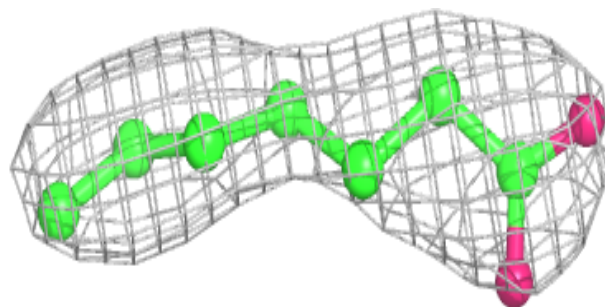
Electron density around OLC A 1212:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
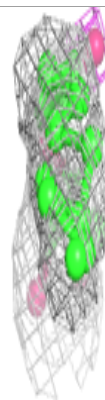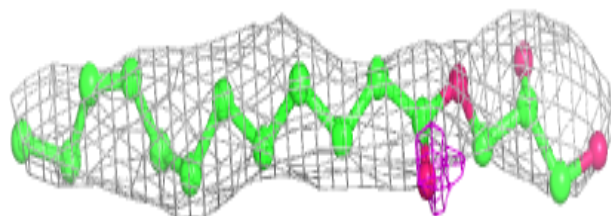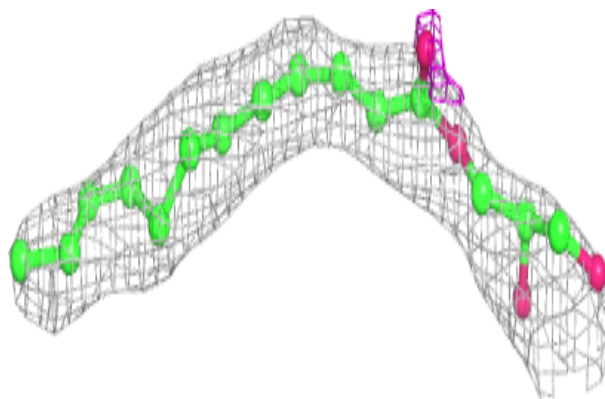
Electron density around OLA A 1202:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
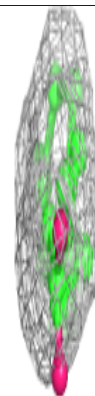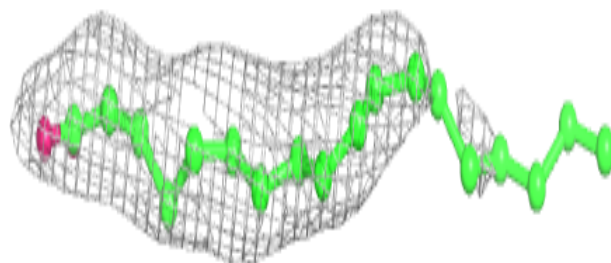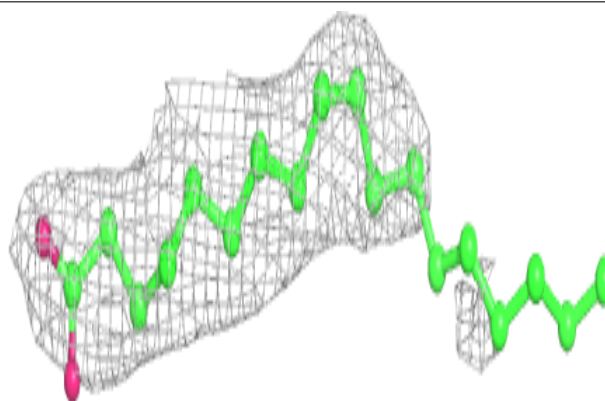
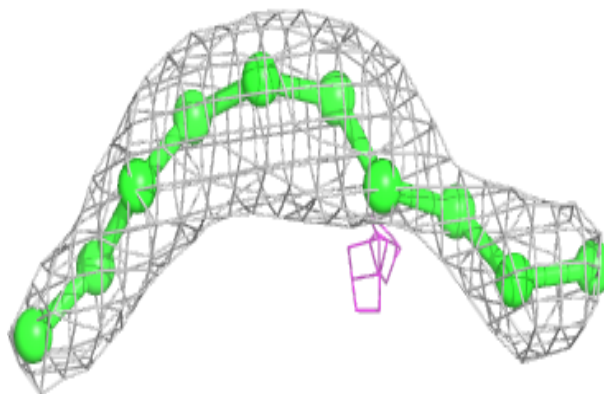**Electron density around OLB A 1210:**

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
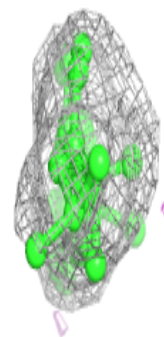and green (positive)
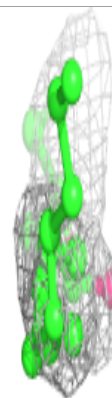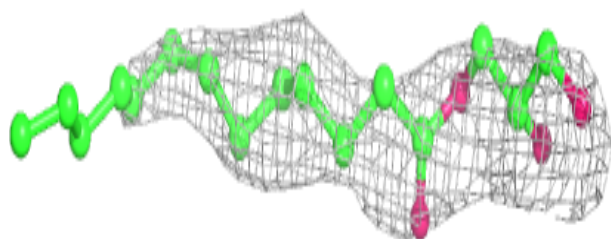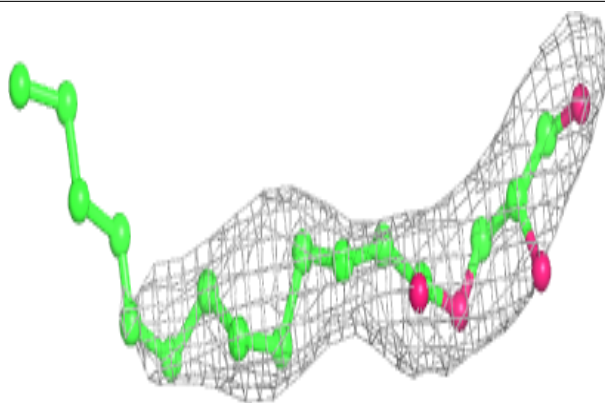
Electron density around OLA A 1208:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)
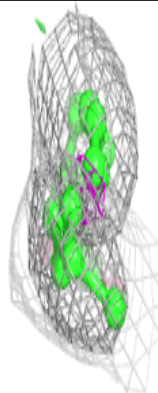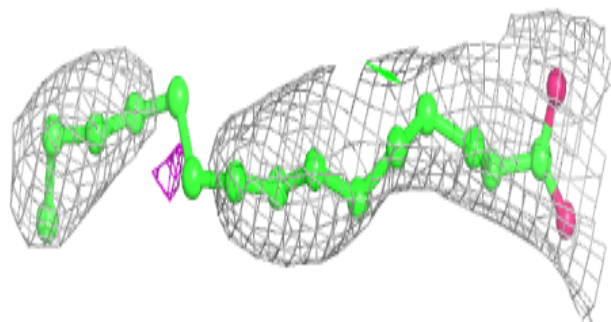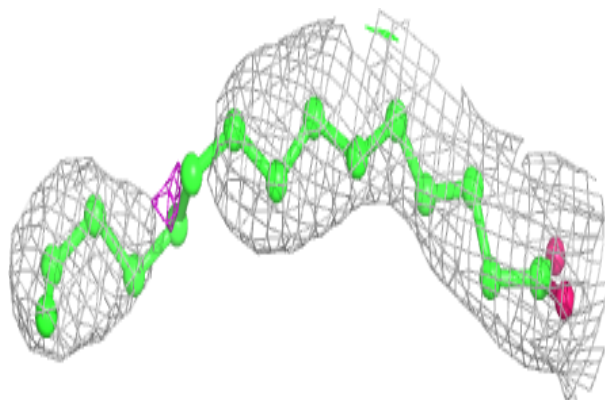
Electron density around OLC A 1211:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
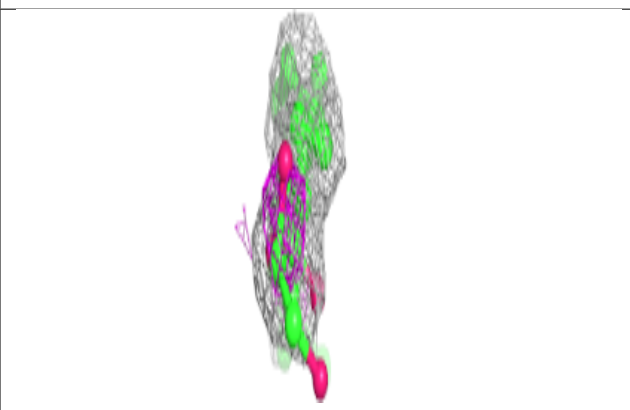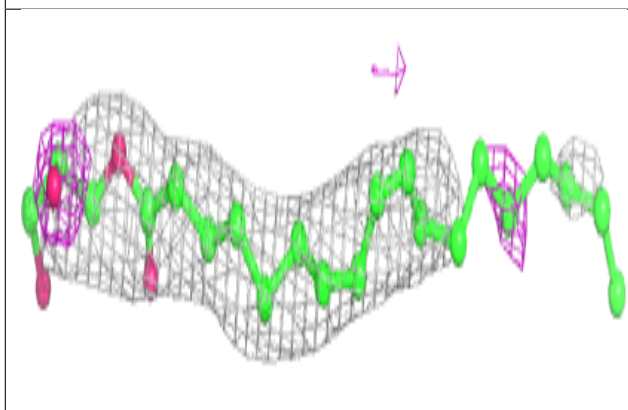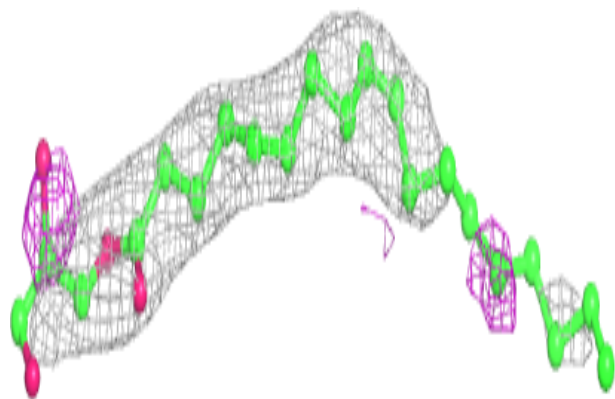
Electron density around OLB A 1209:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
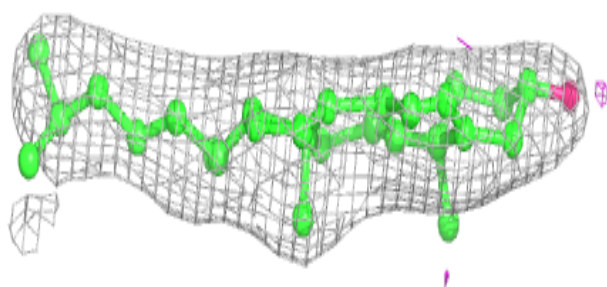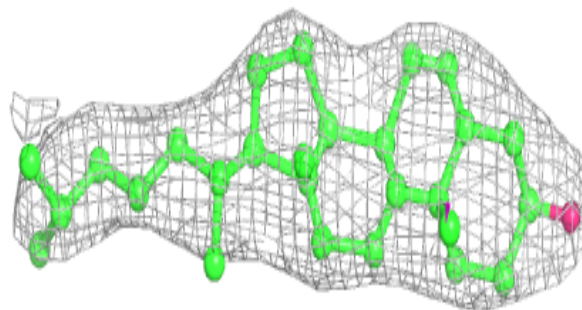$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
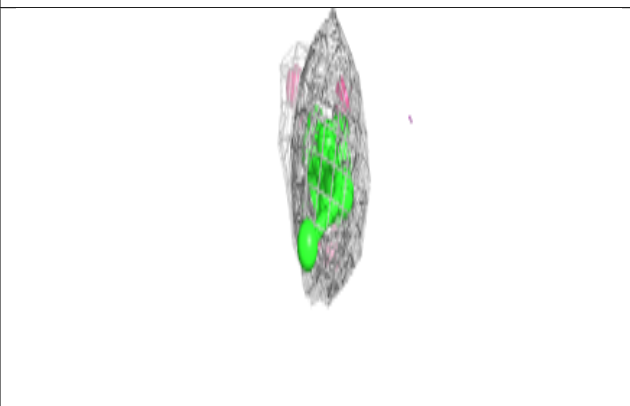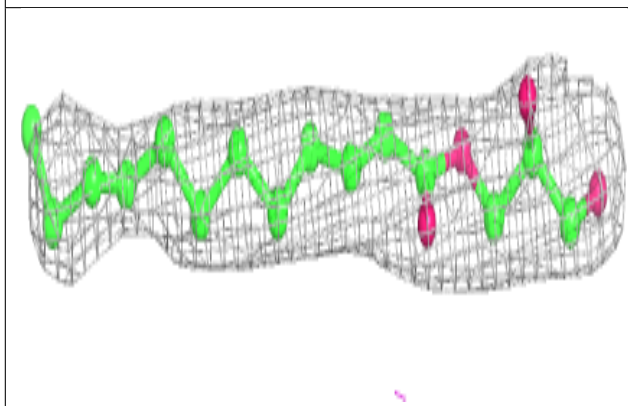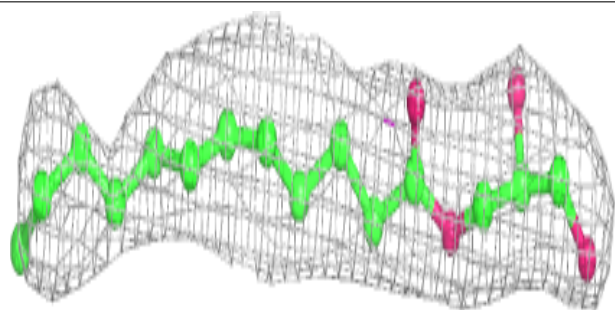
Electron density around OLA A 1207:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
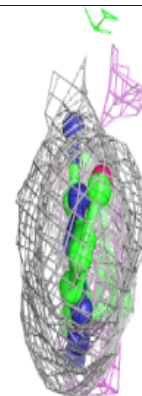and green (positive)
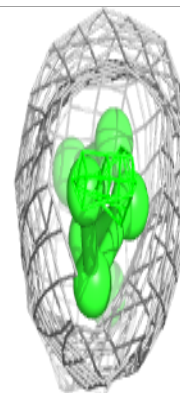
Electron density around CLR A 1213:

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

Electron density around CLR A 1215:

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

Electron density around OLA A 1206:

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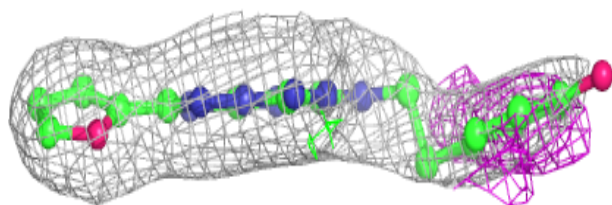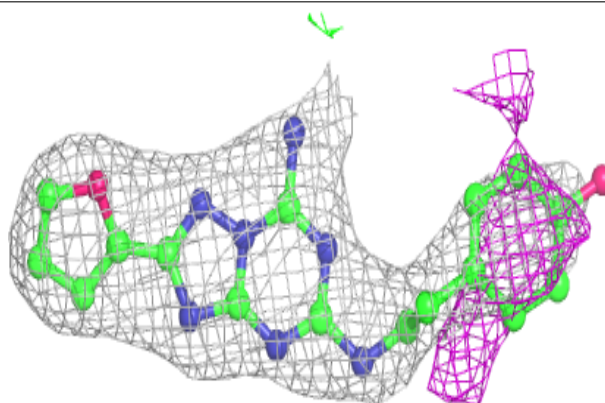mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around CLR A 1214:

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 ZMA A 1201:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.