Full wwPDB X-ray Structure Validation Report (i)

Jan 24, 2024 – 05:43 PM EST

PDB ID	:	8FMR
Title	:	Complex structure of K210 deletion Troponin complex with ibandronate
Authors	:	Wang, P.; Ahmed, M.; Sadek, H.
Deposited on	:	2022-12-24
Resolution	:	3.24 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 (i) 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 (1)) were used in the production of this report:

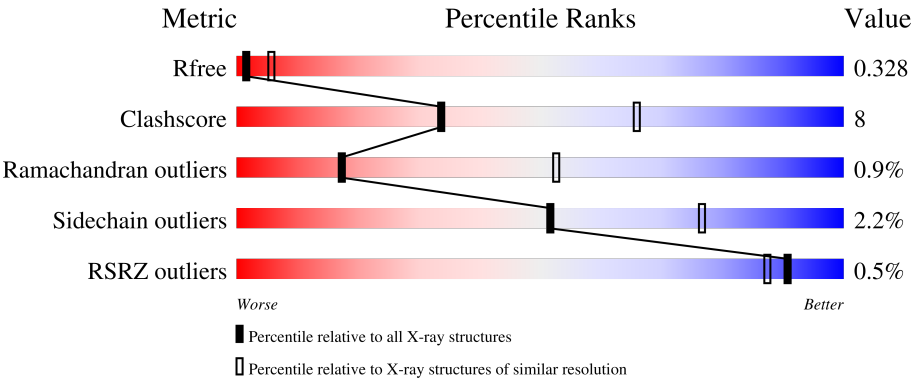
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.24 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}	130704	1619 (3.28-3.20)
Clashscore	141614	1755 (3.28-3.20)
Ramachandran outliers	138981	1728 (3.28-3.20)
Sidechain outliers	138945	1727 (3.28-3.20)
RSRZ outliers	127900	1567 (3.28-3.20)

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

Mol	Chain	Length	Quality of chain
1	A	164	% 73% 20% • 5%
1	D	164	73% 23% • •
2	B	108	50% 12% 38%
2	E	108	43% 19% • 38%
3	C	135	% 62% 16% 22%

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Mol	Chain	Length	Quality of chain
3	F	135	

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 5379 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 Troponin C, slow skeletal and cardiac muscles.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	156	Total	C	N	O	S	0	0	0
			1242	771	189	271	11			
1	D	158	Total	C	N	O	S	0	0	0
			1257	779	192	276	10			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLN	-	expression tag	UNP P63316
A	-1	GLY	-	expression tag	UNP P63316
A	0	SER	-	expression tag	UNP P63316
A	35	SER	CYS	conflict	UNP P63316
A	84	SER	CYS	conflict	UNP P63316
A	115	GLU	ASP	conflict	UNP P63316
D	-2	GLN	-	expression tag	UNP P63316
D	-1	GLY	-	expression tag	UNP P63316
D	0	SER	-	expression tag	UNP P63316
D	35	SER	CYS	conflict	UNP P63316
D	84	SER	CYS	conflict	UNP P63316
D	115	GLU	ASP	conflict	UNP P63316

- Molecule 2 is a protein called Troponin T, cardiac muscle.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	B	67	Total	C	N	O	0	0	0
			585	367	110	108			
2	E	67	Total	C	N	O	0	0	0
			585	367	110	108			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	180	GLN	-	expression tag	UNP P45379
B	181	GLY	-	expression tag	UNP P45379
B	182	SER	-	expression tag	UNP P45379
B	?	-	LYS	deletion	UNP P45379
E	180	GLN	-	expression tag	UNP P45379
E	181	GLY	-	expression tag	UNP P45379
E	182	SER	-	expression tag	UNP P45379
E	?	-	LYS	deletion	UNP P45379

- Molecule 3 is a protein called Troponin I, cardiac muscle.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	105	Total	C	N	O	S	0	0	0
			838	521	152	163	2			
3	F	110	Total	C	N	O	S	0	0	0
			866	536	160	168	2			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	80	ALA	CYS	conflict	UNP P19429
C	97	ALA	CYS	conflict	UNP P19429
F	80	ALA	CYS	conflict	UNP P19429
F	97	ALA	CYS	conflict	UNP P19429

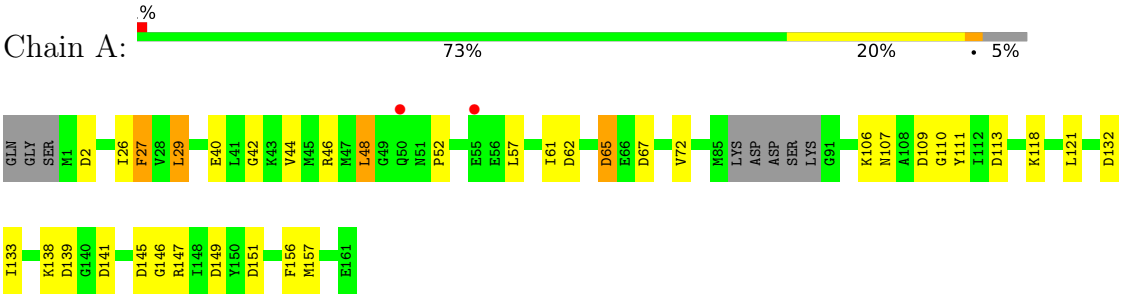
- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	3	Total	Ca	0	0
			3	3		
4	D	3	Total	Ca	0	0
			3	3		

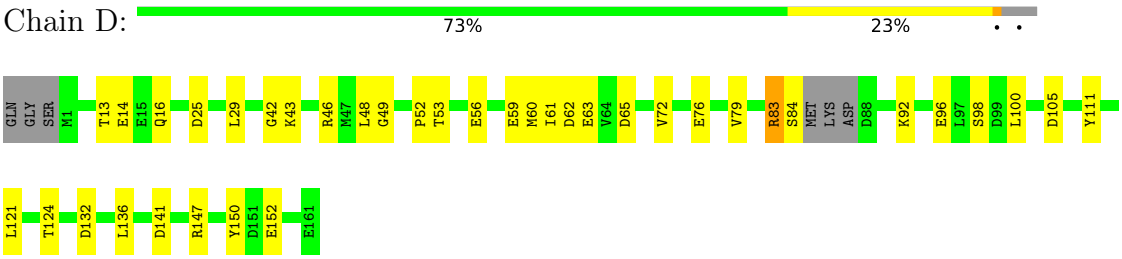
3 Residue-property plots (i)

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.

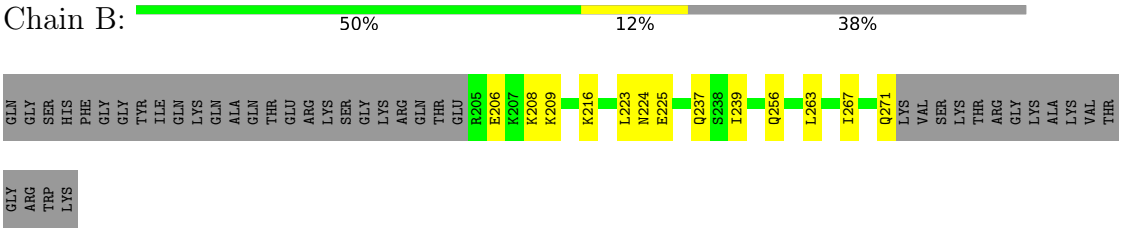
• Molecule 1: Troponin C, slow skeletal and cardiac muscles



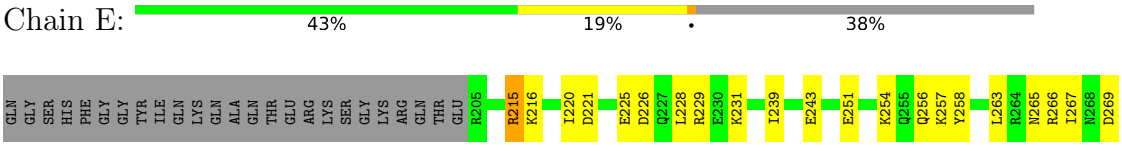
• Molecule 1: Troponin C, slow skeletal and cardiac muscles



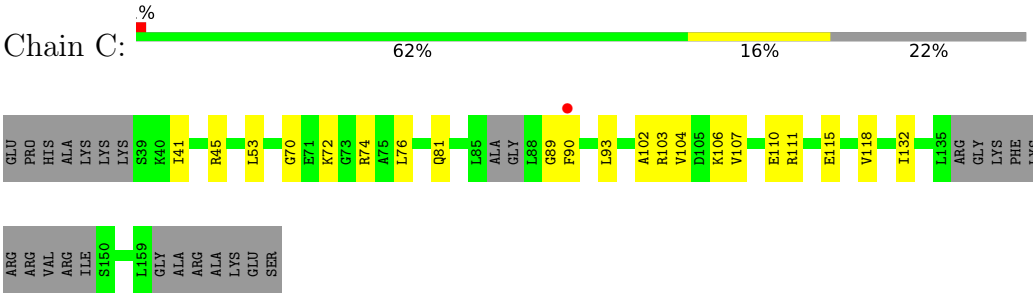
• Molecule 2: Troponin T, cardiac muscle



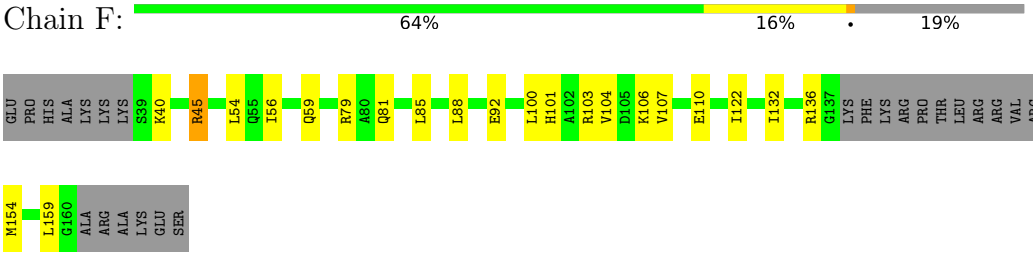
• Molecule 2: Troponin T, cardiac muscle



• Molecule 3: Troponin I, cardiac muscle



• Molecule 3: Troponin I, cardiac muscle



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	39.53Å 169.31Å 69.41Å 90.00° 102.12° 90.00°	Depositor
Resolution (Å)	43.39 – 3.24 43.39 – 3.24	Depositor EDS
% Data completeness (in resolution range)	76.7 (43.39-3.24) 76.8 (43.39-3.24)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.01 (at 3.25Å)	Xtriage
Refinement program	PHENIX 1.15.2_3472	Depositor
R, R_{free}	0.261 , 0.330 0.262 , 0.328	Depositor DCC
R_{free} test set	563 reflections (5.16%)	wwPDB-VP
Wilson B-factor (Å^2)	48.8	Xtriage
Anisotropy	0.273	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 8.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.85	EDS
Total number of atoms	5379	wwPDB-VP
Average B, all atoms (Å^2)	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.64% 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

5.1 Standard geometry

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

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	0.26	0/1254	0.41	0/1675
1	D	0.26	0/1269	0.41	0/1695
2	B	0.24	0/591	0.37	0/786
2	E	0.26	0/591	0.38	0/786
3	C	0.24	0/840	0.39	0/1120
3	F	0.24	0/869	0.39	0/1159
All	All	0.25	0/5414	0.40	0/7221

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	1242	0	1175	25	0
1	D	1257	0	1187	23	0
2	B	585	0	600	12	0
2	E	585	0	600	18	0
3	C	838	0	874	15	0
3	F	866	0	902	18	0
4	A	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	D	3	0	0	0	0
All	All	5379	0	5338	91	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 8.

All (91) 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:D:79:VAL:O	1:D:83:ARG:HG3	1.81	0.79
3:F:56:ILE:HA	3:F:59:GLN:HB2	1.70	0.74
1:D:132:ASP:OD2	3:F:45:ARG:NH1	2.21	0.73
2:E:251:GLU:OE2	2:E:254:LYS:NZ	2.22	0.71
2:B:225:GLU:HG2	3:C:90:PHE:HB2	1.74	0.68
2:B:216:LYS:HE2	3:C:102:ALA:HB2	1.77	0.66
1:A:121:LEU:HD23	3:C:53:LEU:HD21	1.79	0.65
1:A:62:ASP:HA	1:A:65:ASP:HB2	1.79	0.63
1:D:65:ASP:HA	1:D:76:GLU:OE2	1.99	0.63
1:A:145:ASP:OD1	1:A:147:ARG:HG2	2.01	0.61
1:A:111:TYR:HB3	1:A:147:ARG:HB2	1.82	0.61
1:A:52:PRO:HB2	1:A:57:LEU:HD22	1.83	0.60
1:D:48:LEU:HD21	3:F:154:MET:HA	1.82	0.60
2:E:256:GLN:HE22	3:F:122:ILE:HG13	1.68	0.58
1:A:107:ASN:ND2	1:A:109:ASP:OD2	2.35	0.58
2:B:239:ILE:HG12	3:C:104:VAL:HG22	1.85	0.58
2:B:267:ILE:HG12	3:C:132:ILE:HB	1.88	0.56
1:D:92:LYS:HD2	3:F:54:LEU:HD13	1.87	0.56
1:A:42:GLY:O	1:A:46:ARG:HG2	2.05	0.56
1:D:61:ILE:HG23	1:D:72:VAL:HG23	1.87	0.55
1:A:121:LEU:HD13	1:A:133:ILE:HG12	1.89	0.54
1:A:61:ILE:HG23	1:A:72:VAL:HG23	1.90	0.54
1:D:84:SER:OG	3:F:151:ALA:N	2.28	0.54
2:E:265:ASN:O	2:E:269:ASP:N	2.38	0.53
1:D:53:THR:HG23	1:D:56:GLU:OE2	2.07	0.53
1:A:132:ASP:HA	3:C:41:ILE:HD13	1.92	0.52
1:A:139:ASP:HB3	1:A:156:PHE:HE1	1.75	0.52
1:D:150:TYR:HD2	2:E:266:ARG:HD2	1.74	0.52
2:E:256:GLN:NE2	3:F:122:ILE:HG13	2.26	0.51
1:A:113:ASP:OD1	1:A:113:ASP:N	2.43	0.49
1:D:63:GLU:OE2	1:D:83:ARG:NH2	2.46	0.49
2:E:225:GLU:HA	2:E:228:LEU:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:243:GLU:HG2	3:F:107:VAL:HG11	1.94	0.48
1:D:42:GLY:O	1:D:46:ARG:HD2	2.13	0.48
3:F:132:ILE:O	3:F:136:ARG:HG3	2.14	0.48
1:D:96:GLU:O	1:D:100:LEU:HG	2.14	0.48
1:A:26:ILE:HA	1:A:29:LEU:HG	1.96	0.47
2:E:228:LEU:HD12	2:E:231:LYS:HB3	1.97	0.47
2:B:225:GLU:N	2:B:225:GLU:OE1	2.45	0.47
1:A:109:ASP:OD1	1:A:110:GLY:N	2.47	0.47
1:D:62:ASP:HA	1:D:65:ASP:HB2	1.94	0.47
1:A:141:ASP:OD2	1:A:146:GLY:N	2.34	0.47
3:C:111:ARG:NH1	3:C:115:GLU:OE2	2.46	0.47
3:F:88:LEU:HD22	3:F:92:GLU:HB3	1.96	0.46
2:E:257:LYS:HD3	2:E:257:LYS:HA	1.78	0.46
3:C:72:LYS:HG2	3:C:76:LEU:HD12	1.98	0.45
3:F:159:LEU:HD23	3:F:159:LEU:HA	1.78	0.45
2:E:243:GLU:OE2	3:F:79:ARG:HB3	2.15	0.45
3:C:103:ARG:O	3:C:107:VAL:HG23	2.16	0.45
2:B:256:GLN:HE22	3:C:118:VAL:HG13	1.81	0.45
2:E:239:ILE:HG13	3:F:104:VAL:HG22	1.98	0.45
1:A:27:PHE:CZ	1:A:44:VAL:HG21	2.52	0.44
1:D:59:GLU:O	1:D:63:GLU:HG3	2.17	0.44
2:E:216:LYS:HG2	3:F:101:HIS:CE1	2.53	0.44
2:E:225:GLU:OE1	2:E:229:ARG:NH2	2.48	0.44
1:A:156:PHE:HD2	1:A:157:MET:HG2	1.83	0.44
1:A:118:LYS:HA	1:A:121:LEU:HD12	1.99	0.44
1:D:98:SER:HB2	1:D:150:TYR:OH	2.18	0.44
1:D:121:LEU:HD11	1:D:136:LEU:HD12	2.00	0.44
1:A:109:ASP:OD1	1:A:111:TYR:N	2.46	0.44
2:B:223:LEU:HD23	2:B:223:LEU:HA	1.78	0.44
3:F:81:GLN:OE1	3:F:81:GLN:N	2.39	0.43
3:F:100:LEU:O	3:F:104:VAL:HG23	2.16	0.43
2:E:215:ARG:CB	2:E:215:ARG:HH11	2.31	0.43
3:C:81:GLN:H	3:C:81:GLN:HG2	1.65	0.43
2:E:263:LEU:O	2:E:267:ILE:HG13	2.19	0.43
3:C:89:GLY:O	3:C:93:LEU:N	2.52	0.43
1:A:118:LYS:HG3	1:A:133:ILE:HD13	2.00	0.42
1:D:13:THR:N	1:D:16:GLN:OE1	2.51	0.42
1:D:141:ASP:HA	1:D:152:GLU:OE2	2.20	0.42
3:C:106:LYS:O	3:C:110:GLU:HG3	2.18	0.42
3:F:106:LYS:O	3:F:110:GLU:HG3	2.19	0.42
1:A:132:ASP:OD2	3:C:45:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:70:GLY:O	3:C:74:ARG:HG3	2.20	0.42
2:B:223:LEU:HB3	2:B:224:ASN:H	1.49	0.42
1:D:121:LEU:O	1:D:124:THR:OG1	2.32	0.41
2:E:220:ILE:HG23	2:E:228:LEU:HD11	2.01	0.41
1:A:44:VAL:O	1:A:48:LEU:HB2	2.21	0.41
1:A:138:LYS:HE2	1:A:138:LYS:HB3	1.76	0.41
2:B:206:GLU:HB2	2:B:209:LYS:HB3	2.02	0.41
2:B:263:LEU:O	2:B:267:ILE:HG13	2.21	0.41
2:B:267:ILE:O	2:B:271:GLN:HG3	2.20	0.41
1:A:40:GLU:OE2	1:A:40:GLU:N	2.46	0.41
1:A:149:ASP:OD1	1:A:149:ASP:N	2.52	0.41
1:D:25:ASP:O	1:D:29:LEU:HD13	2.21	0.41
1:D:105:ASP:OD2	2:E:258:TYR:OH	2.28	0.41
3:F:85:LEU:HA	3:F:88:LEU:HD12	2.01	0.41
2:B:208:LYS:HD3	2:B:208:LYS:HA	1.93	0.40
2:E:226:ASP:HA	2:E:229:ARG:HH12	1.86	0.40
1:D:56:GLU:O	1:D:60:MET:HG3	2.22	0.40
1:D:111:TYR:CG	1:D:147:ARG:HD2	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	152/164 (93%)	131 (86%)	19 (12%)	2 (1%)	12 44
1	D	154/164 (94%)	132 (86%)	20 (13%)	2 (1%)	12 44
2	B	65/108 (60%)	60 (92%)	5 (8%)	0	100 100
2	E	65/108 (60%)	61 (94%)	3 (5%)	1 (2%)	10 41
3	C	99/135 (73%)	93 (94%)	6 (6%)	0	100 100
3	F	106/135 (78%)	101 (95%)	4 (4%)	1 (1%)	17 52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	641/814 (79%)	578 (90%)	57 (9%)	6 (1%)	17 52

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	F	40	LYS
1	A	67	ASP
1	A	29	LEU
1	D	49	GLY
2	E	221	ASP
1	D	52	PRO

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	137/144 (95%)	131 (96%)	6 (4%)	28 61
1	D	139/144 (96%)	136 (98%)	3 (2%)	52 76
2	B	63/96 (66%)	62 (98%)	1 (2%)	62 82
2	E	63/96 (66%)	62 (98%)	1 (2%)	62 82
3	C	89/112 (80%)	89 (100%)	0	100 100
3	F	90/112 (80%)	88 (98%)	2 (2%)	52 76
All	All	581/704 (82%)	568 (98%)	13 (2%)	52 76

All (13) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	ASP
1	A	27	PHE
1	A	48	LEU
1	A	65	ASP
1	A	106	LYS
1	A	151	ASP

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Mol	Chain	Res	Type
2	B	237	GLN
1	D	14	GLU
1	D	43	LYS
1	D	83	ARG
2	E	215	ARG
3	F	45	ARG
3	F	103	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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 monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 6 ligands modelled in this entry, 6 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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, 95^{th} 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	156/164 (95%)	0.08	2 (1%) 77 68	23, 47, 76, 99	0
1	D	158/164 (96%)	0.04	0 100 100	18, 44, 77, 87	0
2	B	67/108 (62%)	-0.22	0 100 100	18, 39, 67, 81	0
2	E	67/108 (62%)	-0.27	0 100 100	12, 32, 71, 83	0
3	C	105/135 (77%)	-0.04	1 (0%) 82 75	23, 43, 76, 99	0
3	F	110/135 (81%)	-0.12	0 100 100	13, 37, 68, 82	0
All	All	663/814 (81%)	-0.05	3 (0%) 91 87	12, 42, 74, 99	0

All (3) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	55	GLU	3.0
3	C	90	PHE	2.5
1	A	50	GLN	2.0

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

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

6.3 Carbohydrates

There are no monosaccharides in this entry.

6.4 Ligands

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

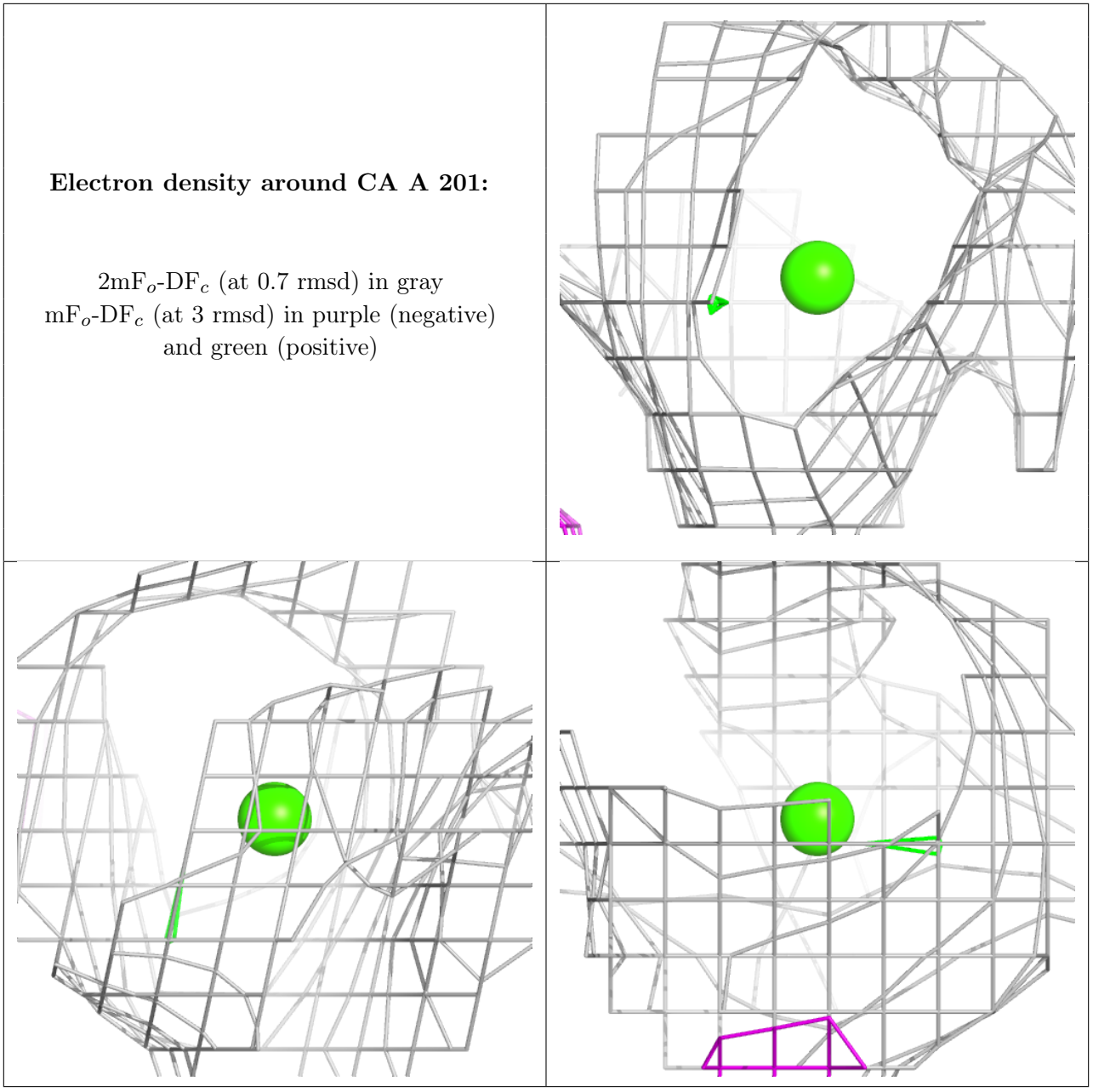
median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	CA	A	201	1/1	0.90	0.17	43,43,43,43	0
4	CA	A	203	1/1	0.94	0.10	34,34,34,34	0
4	CA	D	201	1/1	0.95	0.13	70,70,70,70	0
4	CA	A	202	1/1	0.97	0.11	38,38,38,38	0
4	CA	D	202	1/1	0.97	0.09	29,29,29,29	0
4	CA	D	203	1/1	0.98	0.12	33,33,33,33	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.

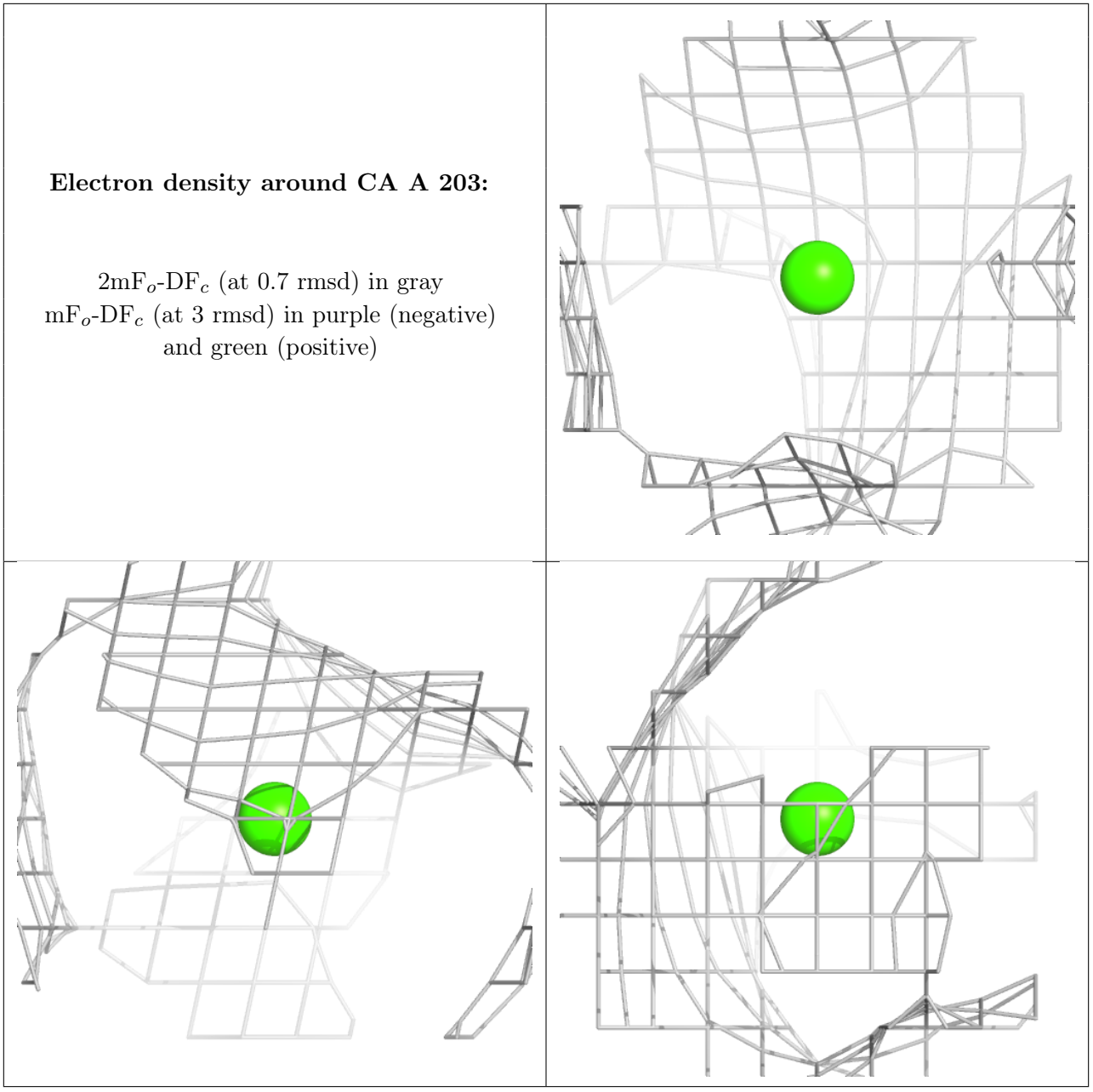
Electron density around CA A 201:

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



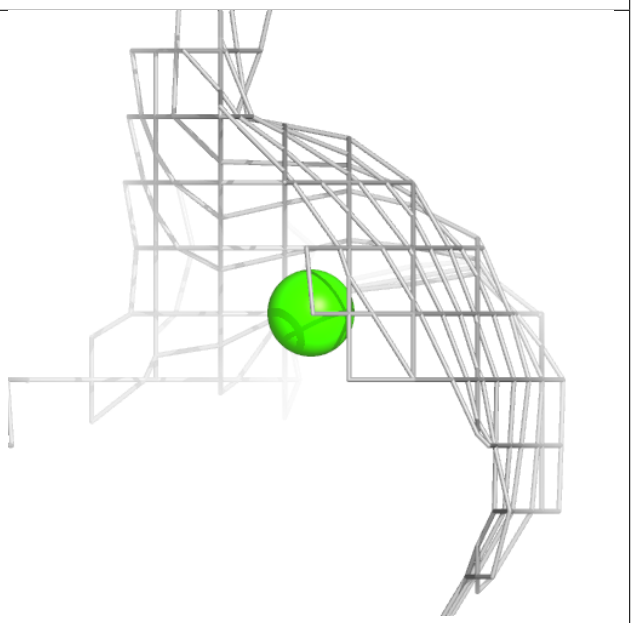
Electron density around CA A 203:

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



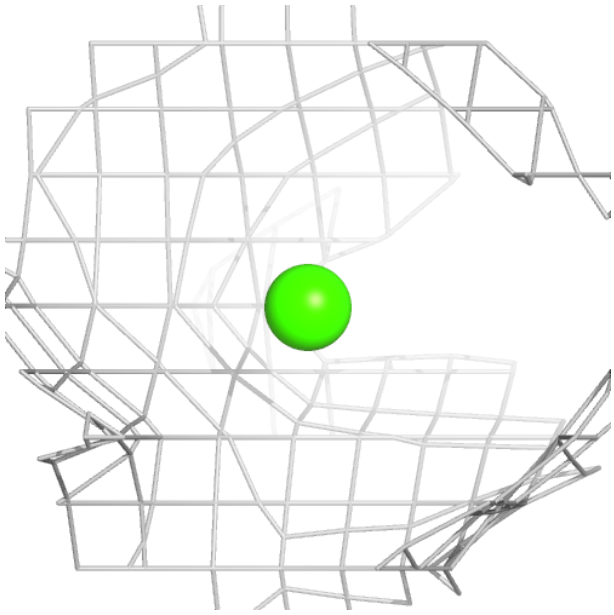
Electron density around CA D 201:

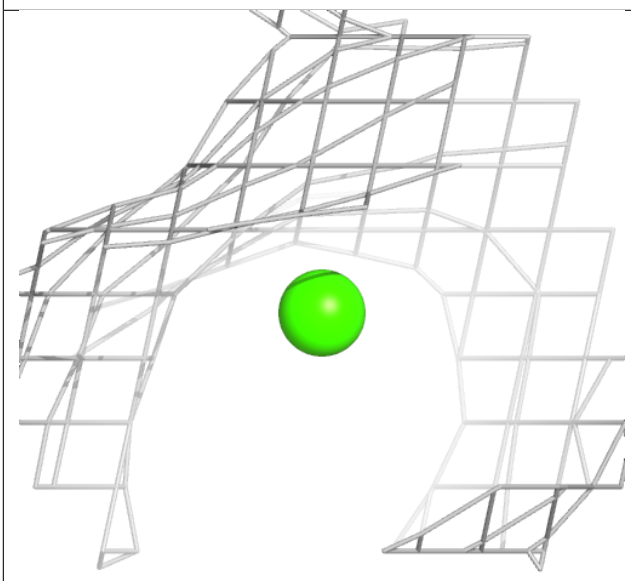
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

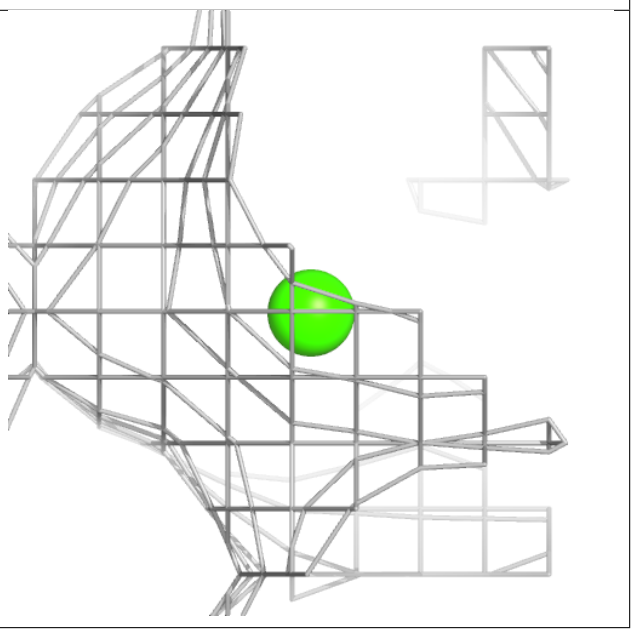


Electron density around CA A 202:

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

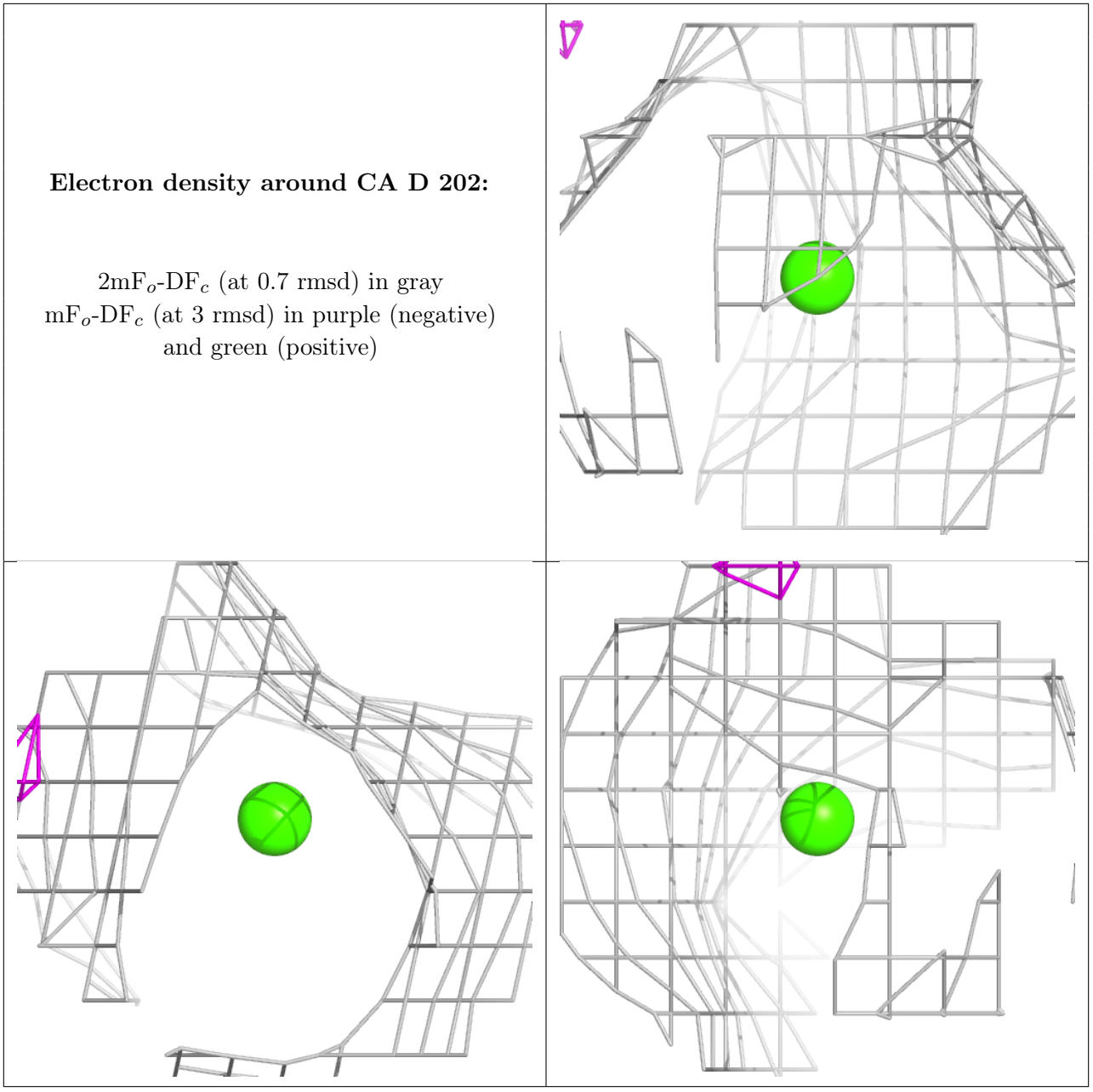






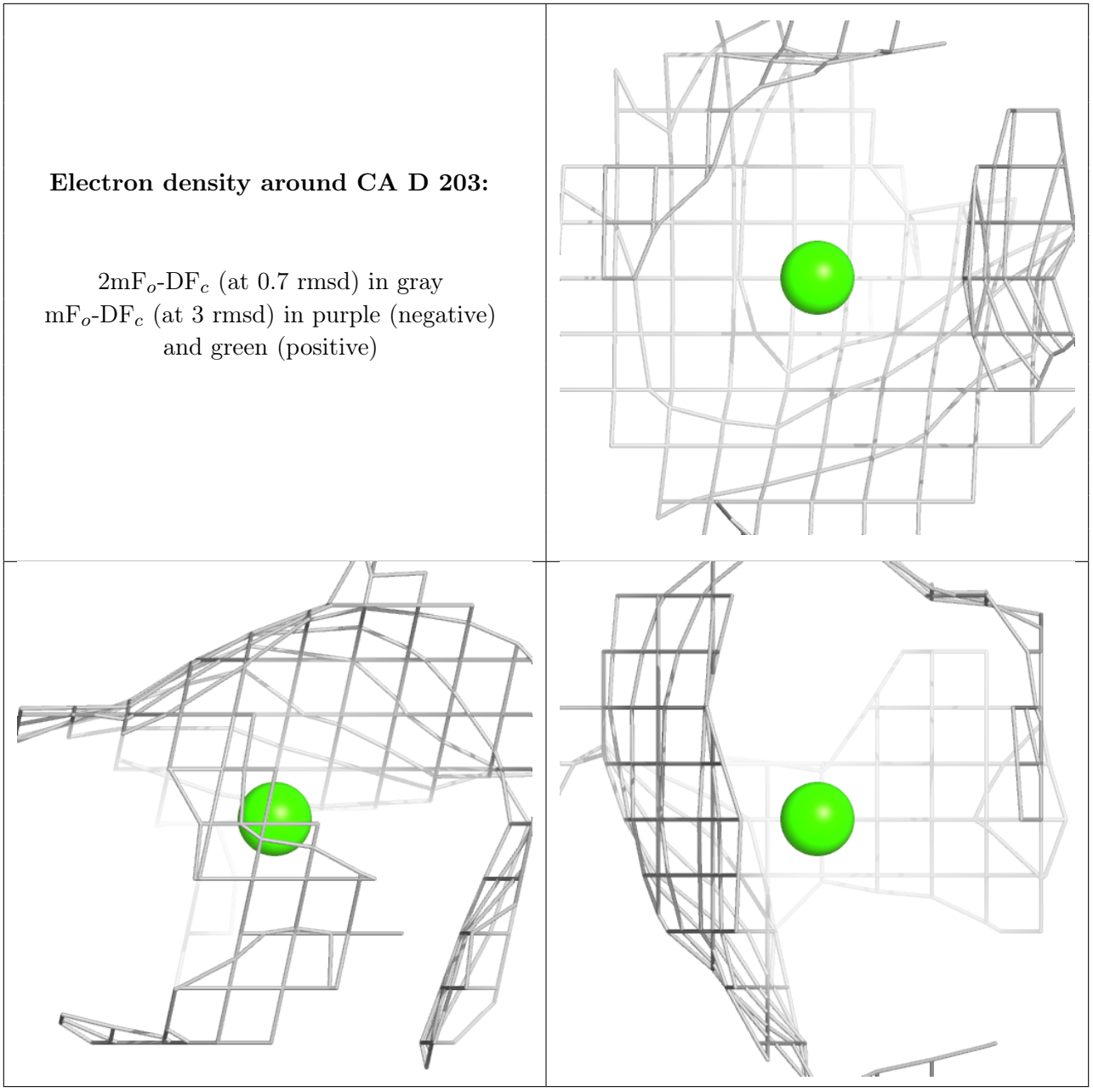
Electron density around CA D 202:

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



Electron density around CA D 203:

$2mF_o$-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.