Full wwPDB X-ray Structure Validation Report ⓘ

Nov 22, 2021 – 01:06 pm GMT

PDB ID	:	6SNV
Title	:	DNA mismatch repair proteins MLH1 and MLH3
Authors	:	Dai, J.; Chervy, P.; Legrand, P.; Ropars, V.; Charbonnier, J.B.
Deposited on	:	2019-08-27
Resolution	:	2.50 Å(reported)

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

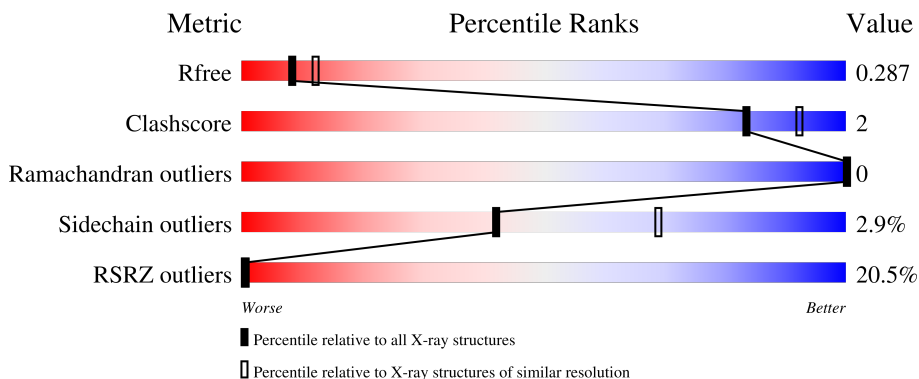|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.23.2
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0267
CCP4	:	7.1.010 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.23.2

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 2.50 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		0.287
Clashscore		2
Ramachandran outliers		0
Sidechain outliers		2.9%
RSRZ outliers		20.5%

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	4661 (2.50-2.50)
Clashscore	141614	5346 (2.50-2.50)
Ramachandran outliers	138981	5231 (2.50-2.50)
Sidechain outliers	138945	5233 (2.50-2.50)
RSRZ outliers	127900	4559 (2.50-2.50)

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	265	23% / 89% / 9% / •
1	D	265	33% / 86% / 12% / •
2	B	239	10% / 86% / 7% / 7%
2	E	239	11% / 84% / 9% / 7%

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 7871 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 DNA mismatch repair protein MLH1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	260	Total 2129	C 1372	N 345	O 405	S 7	0	0	0
1	D	260	Total 2129	C 1372	N 345	O 405	S 7	0	0	0

- Molecule 2 is a protein called DNA mismatch repair protein MLH3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	222	Total 1792	C 1153	N 299	O 326	S 14	0	0	0
2	E	222	Total 1792	C 1153	N 299	O 326	S 14	0	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	B	2	Total 2	Zn 2	0	0
3	E	2	Total 2	Zn 2	0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	3	Total 3	O 3	0	0
4	B	7	Total 7	O 7	0	0
4	D	1	Total 1	O 1	0	0

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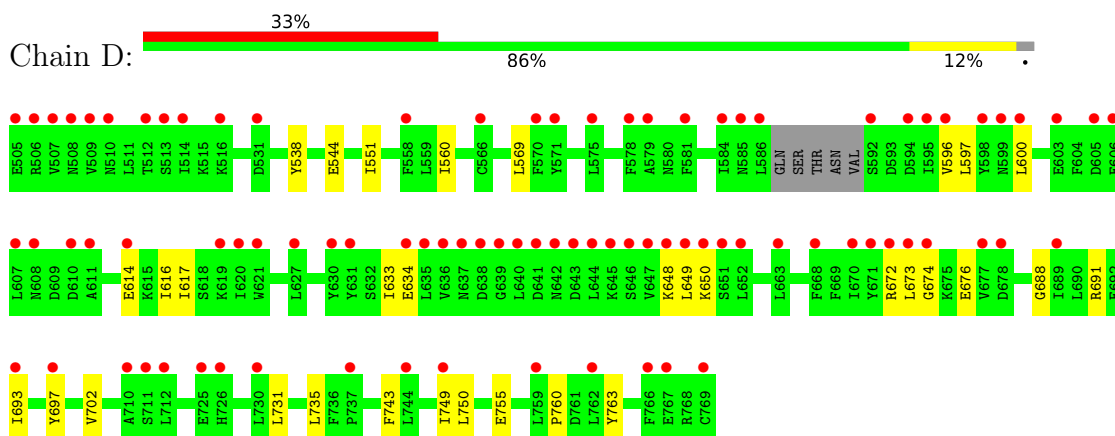| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	E	14	Total 14	O 14	0	0

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.
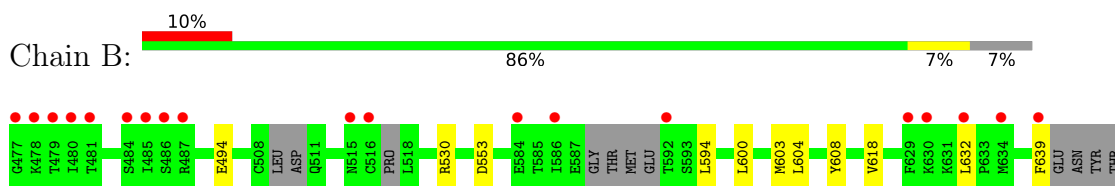
• Molecule 1: DNA mismatch repair protein MLH1
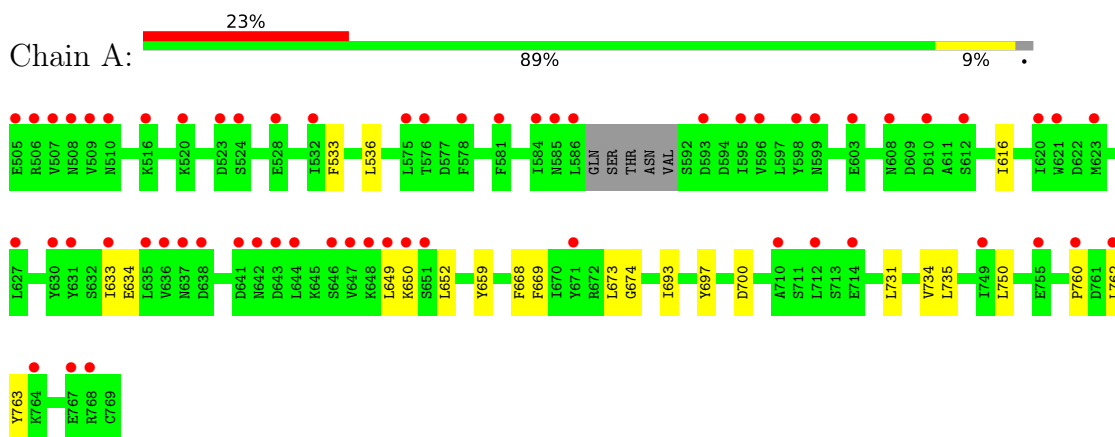
• Molecule 1: DNA mismatch repair protein MLH1

• Molecule 2: DNA mismatch repair protein MLH3

SER VAL ASP K647 L648 Y649 W650 W651 K652 Y653 S654 P658 F661 I664 E700 V709 A712 GLU LEU LYS

• Molecule 2: DNA mismatch repair protein MLH3

Chain E:

G477 K478 T479 I480 T481 D482 F483 S484 I485 S486 R487 S488 V489 Y493 E494 V495 I506 R507 C508 LEU ASP Q511 S512 I513 H514 N515 C516 PRO L518 R530 D553 I559 E587 GLY THR MET GLU T592 S593 L594 L600 M603 L604 Y608 K616 A623 L626

F629 K630 H638 F639 GLU ASN TYR THR SER VAL ASP K647 P658 F661 I664 S667 E700 V709 P710 I711 A712 GLU LEU LYS
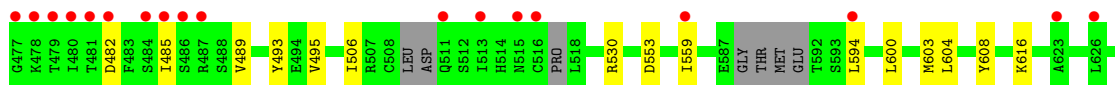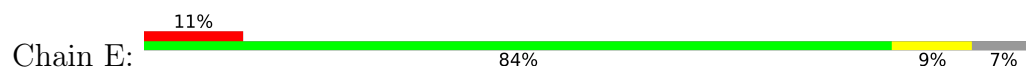
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	90.89Å 134.81Å 102.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	44.66 – 2.50 44.67 – 2.50	Depositor EDS
% Data completeness (in resolution range)	68.1 (44.66-2.50) 68.1 (44.67-2.50)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.64 (at 2.51Å)	Xtriage
Refinement program	BUSTER 2.10.3	Depositor
R, R_{free}	0.229 , 0.271 0.242 , 0.287	Depositor DCC
R_{free} test set	1496 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å^2)	59.5	Xtriage
Anisotropy	0.070	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	(Not available) , (Not available)	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	0.93	EDS
Total number of atoms	7871	wwPDB-VP
Average B, all atoms (Å^2)	90.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 63.05 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.0259e-05. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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

5 Model quality (i)

5.1 Standard geometry (i)

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

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	0.41	0/2167	0.59	0/2926
1	D	0.41	0/2167	0.59	0/2926
2	B	0.41	0/1826	0.60	0/2458
2	E	0.41	0/1826	0.60	0/2458
All	All	0.41	0/7986	0.60	0/10768

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 (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	2129	0	2145	8	0
1	D	2129	0	2145	13	0
2	B	1792	0	1790	6	0
2	E	1792	0	1790	10	0
3	B	2	0	0	0	0
3	E	2	0	0	0	0
4	A	3	0	0	0	0
4	B	7	0	0	0	0
4	D	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	E	14	0	0	0	0
All	All	7871	0	7870	37	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 2.

All (37) 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)
2:B:530:ARG:HD3	2:B:700:GLU:O	1.94	0.67
2:E:603:MET:HG2	2:E:664:ILE:HG21	1.84	0.59
1:D:672:ARG:HG2	1:D:676:GLU:HG3	1.86	0.58
2:E:530:ARG:HD3	2:E:700:GLU:O	2.06	0.56
2:E:559:ILE:HG21	2:E:616:LYS:HB2	1.92	0.52
1:D:760:PRO:HA	1:D:763:TYR:CD2	2.46	0.51
1:D:634:GLU:HB3	1:D:650:LYS:HB3	1.93	0.51
2:E:600:LEU:HD22	2:E:604:LEU:HD23	1.93	0.50
2:B:651:TRP:HA	2:B:654:SER:HB2	1.94	0.49
1:D:633:ILE:HD11	1:D:693:ILE:HD11	1.94	0.49
2:B:658:PRO:HD2	2:B:661:PHE:HD2	1.78	0.48
1:D:544:GLU:HB3	1:D:702:VAL:HB	1.96	0.47
2:E:658:PRO:HD2	2:E:661:PHE:HD2	1.80	0.47
1:A:633:ILE:HD11	1:A:693:ILE:HD11	1.96	0.47
2:B:603:MET:HG2	2:B:664:ILE:HG21	1.96	0.47
1:A:731:LEU:HA	1:A:735:LEU:HB2	1.98	0.46
2:E:485:ILE:O	2:E:489:VAL:HG23	2.15	0.46
2:E:530:ARG:HA	2:E:530:ARG:HD2	1.71	0.46
2:E:482:ASP:HA	2:E:485:ILE:HD12	1.98	0.46
1:D:538:TYR:HA	1:D:551:ILE:HG22	1.98	0.45
1:D:597:LEU:HA	1:D:600:LEU:HD12	1.98	0.45
1:A:669:PHE:O	1:A:673:LEU:HB2	2.16	0.45
1:D:731:LEU:HA	1:D:735:LEU:HB2	1.97	0.45
1:D:616:ILE:HG23	1:D:674:GLY:HA3	1.98	0.45
2:B:530:ARG:HA	2:B:530:ARG:HD2	1.79	0.44
2:B:600:LEU:HD22	2:B:604:LEU:HD23	1.98	0.44
1:D:596:VAL:HA	1:D:648:LYS:HG2	1.98	0.44
1:A:760:PRO:HA	1:A:763:TYR:CD2	2.54	0.43
1:D:688:GLY:HA2	1:D:691:ARG:HE	1.84	0.42
1:A:616:ILE:HG23	1:A:674:GLY:HA3	2.00	0.42
1:D:569:LEU:HD13	1:D:743:PHE:HB2	2.02	0.42
1:D:614:GLU:HA	1:D:617:ILE:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:495:VAL:HA	2:E:506:ILE:HG22	2.01	0.41
1:A:659:TYR:HB2	1:A:734:VAL:HG11	2.02	0.41
2:E:489:VAL:O	2:E:493:TYR:HD1	2.03	0.41
1:A:533:PHE:O	1:A:536:LEU:HD23	2.21	0.40
1:A:634:GLU:HB3	1:A:650:LYS:HB3	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	256/265 (97%)	251 (98%)	5 (2%)	0	100	100
1	D	256/265 (97%)	249 (97%)	7 (3%)	0	100	100
2	B	212/239 (89%)	201 (95%)	11 (5%)	0	100	100
2	E	212/239 (89%)	204 (96%)	8 (4%)	0	100	100
All	All	936/1008 (93%)	905 (97%)	31 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	242/247 (98%)	235 (97%)	7 (3%)	42	69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	242/247 (98%)	235 (97%)	7 (3%)	42	69
2	B	200/222 (90%)	193 (96%)	7 (4%)	36	62
2	E	200/222 (90%)	195 (98%)	5 (2%)	47	73
All	All	884/938 (94%)	858 (97%)	26 (3%)	42	69

All (26) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	649	LEU
1	A	652	LEU
1	A	668	PHE
1	A	697	TYR
1	A	700	ASP
1	A	750	LEU
1	A	762	LEU
2	B	494	GLU
2	B	553	ASP
2	B	594	LEU
2	B	608	TYR
2	B	618	VAL
2	B	632	LEU
2	B	639	PHE
1	D	560	ILE
1	D	649	LEU
1	D	673	LEU
1	D	697	TYR
1	D	749	ILE
1	D	750	LEU
1	D	755	GLU
2	E	553	ASP
2	E	594	LEU
2	E	608	TYR
2	E	639	PHE
2	E	667	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	697	ASN

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 ⓘ

Of 4 ligands modelled in this entry, 4 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 ⓘ

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	260/265 (98%)	1.47	60 (23%)	0	0	42, 92, 170, 193	0
1	D	260/265 (98%)	1.90	88 (33%)	0	0	41, 104, 200, 206	0
2	B	222/239 (92%)	0.74	24 (10%)	5	5	32, 64, 155, 184	0
2	E	222/239 (92%)	0.75	26 (11%)	4	4	28, 56, 149, 191	0
All	All	964/1008 (95%)	1.25	198 (20%)	1	0	28, 80, 178, 206	0

All (198) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	595	ILE	11.5
1	D	611	ALA	9.8
1	A	638	ASP	9.7
1	A	508	ASN	9.5
1	D	508	ASN	9.3
1	D	596	VAL	9.0
2	E	485	ILE	9.0
1	D	638	ASP	8.9
1	D	509	VAL	8.8
2	E	481	THR	8.7
1	A	649	LEU	8.2
1	D	635	LEU	8.0
2	B	484	SER	8.0
1	D	579	ALA	7.8
1	D	586	LEU	7.8
1	A	620	ILE	7.7
1	A	509	VAL	7.6
1	D	595	ILE	7.5
2	B	485	ILE	7.0
1	D	644	LEU	6.9
1	D	506	ARG	6.7

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Mol	Chain	Res	Type	RSRZ
2	E	478	LYS	6.5
1	D	642	ASN	6.5
1	A	648	LYS	6.4
1	D	640	LEU	6.4
1	D	636	VAL	6.4
1	D	599	ASN	6.4
1	D	507	VAL	6.3
1	A	507	VAL	6.2
1	A	644	LEU	6.1
1	D	585	ASN	6.1
2	B	477	GLY	6.0
1	A	641	ASP	5.6
1	D	505	GLU	5.5
1	D	648	LYS	5.5
1	A	505	GLU	5.5
1	A	636	VAL	5.4
1	A	635	LEU	5.3
1	A	516	LYS	5.3
1	A	646	SER	5.3
1	D	610	ASP	5.3
1	A	524	SER	5.1
1	D	646	SER	5.1
1	D	650	LYS	5.1
1	A	598	TYR	5.1
1	D	510	ASN	4.9
1	D	630	TYR	4.8
1	D	689	ILE	4.8
1	A	603	GLU	4.6
2	B	516	CYS	4.5
1	D	643	ASP	4.5
1	A	596	VAL	4.5
1	A	523	ASP	4.5
1	D	641	ASP	4.4
1	D	594	ASP	4.4
1	A	586	LEU	4.4
1	D	575	LEU	4.4
1	A	584	ILE	4.4
2	B	486	SER	4.4
2	B	478	LYS	4.3
1	A	642	ASN	4.3
1	D	647	VAL	4.2
1	D	634	GLU	4.2

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Mol	Chain	Res	Type	RSRZ
1	D	649	LEU	4.1
2	B	648	LEU	4.1
1	A	506	ARG	4.1
1	D	621	TRP	4.1
1	D	651	SER	4.0
2	B	487	ARG	4.0
2	E	484	SER	3.9
1	D	762	LEU	3.9
1	D	693	ILE	3.9
1	A	630	TYR	3.9
1	D	670	ILE	3.9
2	E	479	THR	3.8
2	E	516	CYS	3.7
2	B	586	ILE	3.7
2	B	653	TYR	3.7
1	A	510	ASN	3.7
2	E	486	SER	3.7
1	A	650	LYS	3.6
1	A	768	ARG	3.6
1	D	592	SER	3.6
2	E	477	GLY	3.6
2	B	515	ASN	3.6
1	D	608	ASN	3.5
1	D	677	VAL	3.5
2	E	487	ARG	3.5
1	A	764	LYS	3.4
2	B	712	ALA	3.4
1	A	637	ASN	3.4
1	A	647	VAL	3.4
2	E	511	GLN	3.4
1	D	673	LEU	3.3
1	D	631	TYR	3.3
1	A	578	PHE	3.3
1	A	627	LEU	3.3
1	A	767	GLU	3.3
1	D	712	LEU	3.2
1	D	652	LEU	3.2
1	D	578	PHE	3.2
1	D	614	GLU	3.2
1	A	633	ILE	3.2
1	A	585	ASN	3.1
1	D	570	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
1	D	581	PHE	3.1
1	D	663	LEU	3.1
1	A	621	TRP	3.1
1	A	651	SER	3.1
1	D	558	PHE	3.1
1	D	744	LEU	3.1
2	E	647	LYS	3.1
1	D	607	LEU	3.0
1	D	674	GLY	3.0
2	E	709	VAL	3.0
1	D	749	ILE	3.0
2	E	639	PHE	3.0
1	D	668	PHE	2.9
1	A	599	ASN	2.9
1	D	600	LEU	2.9
1	D	645	LYS	2.9
1	D	598	TYR	2.9
1	D	726	HIS	2.9
1	D	606	GLU	2.9
2	B	630	LYS	2.9
2	B	480	ILE	2.9
1	A	631	TYR	2.9
2	B	709	VAL	2.8
2	E	515	ASN	2.8
2	B	481	THR	2.8
1	D	637	ASN	2.8
1	D	759	LEU	2.8
1	A	593	ASP	2.8
1	D	584	ILE	2.8
1	D	730	LEU	2.8
2	E	711	ILE	2.7
1	D	737	PRO	2.7
2	B	479	THR	2.7
1	D	514	ILE	2.7
2	B	650	TRP	2.6
1	A	581	PHE	2.6
1	A	643	ASP	2.6
1	D	767	GLU	2.6
1	D	566	CYS	2.6
1	A	610	ASP	2.6
1	A	710	ALA	2.5
1	A	612	SER	2.5

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Mol	Chain	Res	Type	RSRZ
2	E	480	ILE	2.5
1	A	712	LEU	2.5
2	E	638	HIS	2.5
1	D	620	ILE	2.5
2	E	629	PHE	2.5
2	E	630	LYS	2.5
1	A	671	TYR	2.4
1	D	639	GLY	2.4
1	A	532	ILE	2.4
2	E	513	ILE	2.4
1	D	516	LYS	2.4
1	A	762	LEU	2.4
1	D	725	GLU	2.4
1	A	528	GLU	2.4
1	D	710	ALA	2.3
2	E	594	LEU	2.3
2	B	634	MET	2.3
2	E	712	ALA	2.3
1	D	513	SER	2.3
1	A	575	LEU	2.3
2	E	482	ASP	2.3
1	A	714	GLU	2.3
1	D	603	GLU	2.3
1	A	608	ASN	2.3
1	D	766	PHE	2.3
1	D	619	LYS	2.3
2	B	592	THR	2.3
1	A	760	PRO	2.3
1	D	672	ARG	2.3
2	E	559	ILE	2.3
1	D	571	TYR	2.3
1	D	627	LEU	2.3
2	E	626	LEU	2.3
2	B	629	PHE	2.2
1	D	531	ASP	2.2
1	D	711	SER	2.2
1	A	576	THR	2.2
2	B	639	PHE	2.2
1	A	520	LYS	2.2
2	E	623	ALA	2.1
1	A	623	MET	2.1
1	D	697	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	512	THR	2.1
2	B	632	LEU	2.1
1	D	769	CYS	2.1
1	A	749	ILE	2.0
1	D	671	TYR	2.0
1	D	605	ASP	2.0
1	D	678	ASP	2.0
1	A	755	GLU	2.0
2	B	584	GLU	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 ⓘ

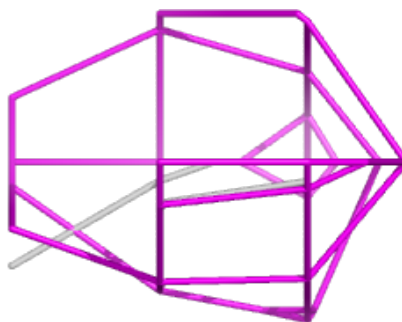There are no monosaccharides in this entry.

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, 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.
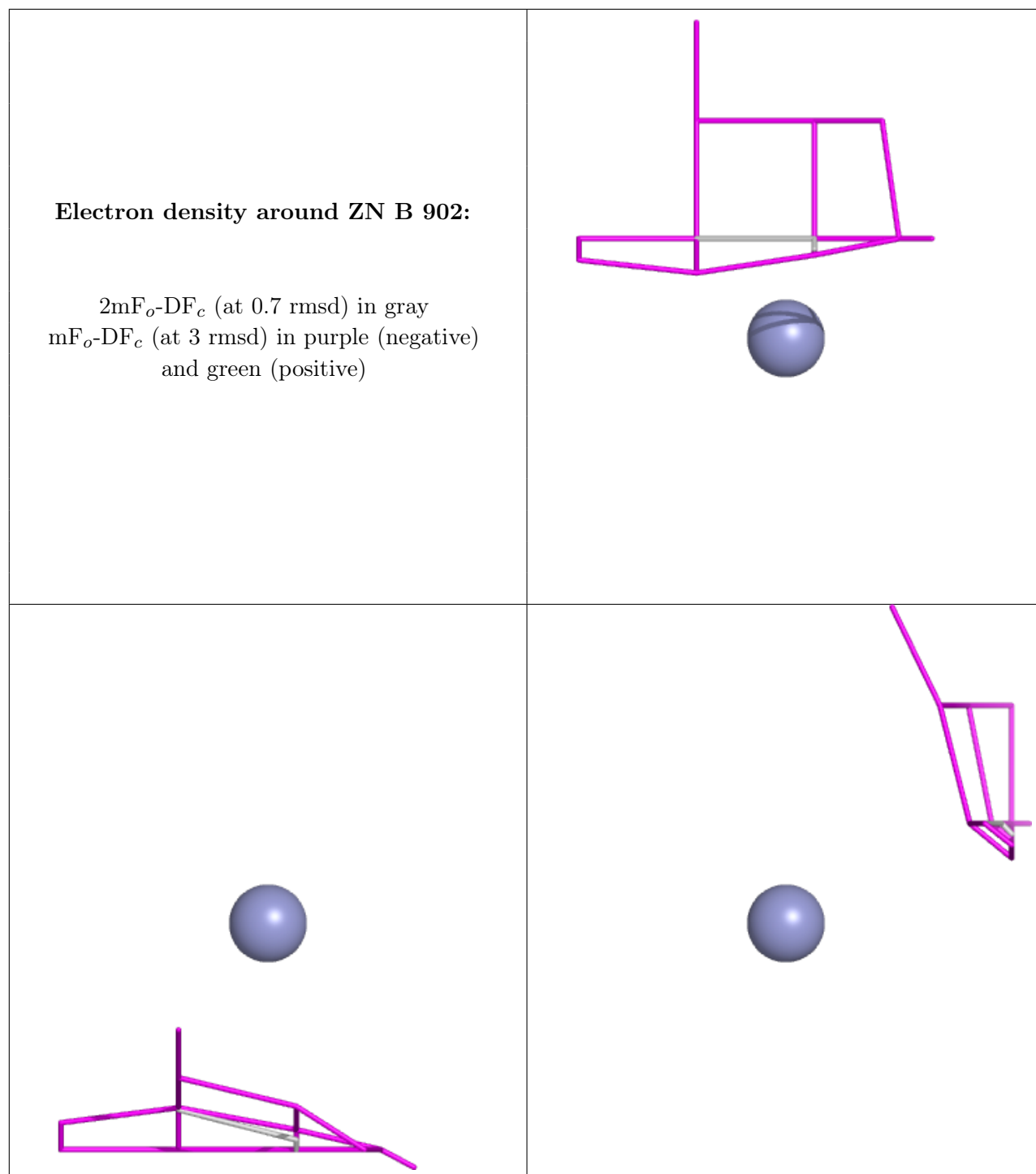
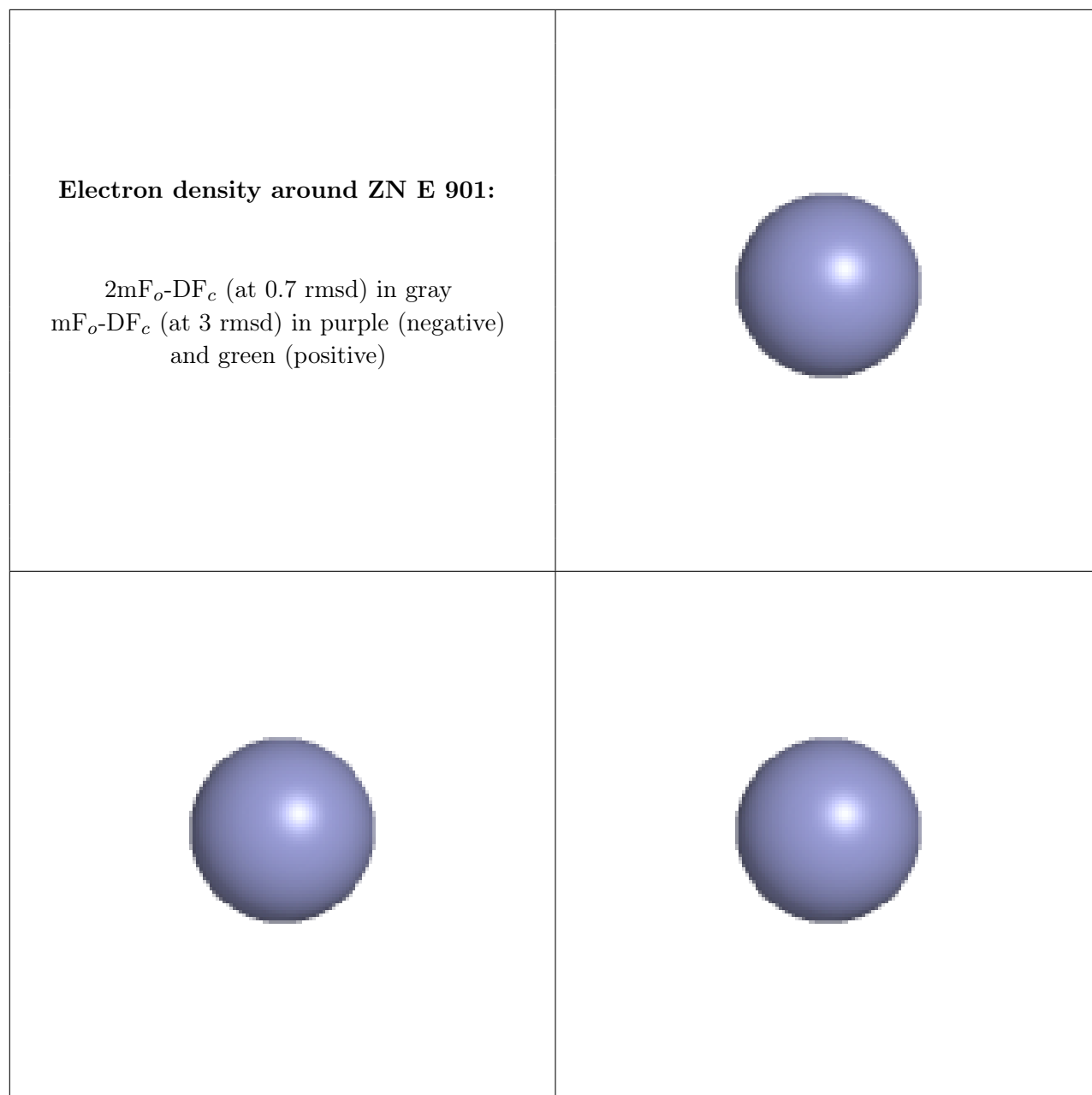| Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	ZN	B	901	1/1	0.99	0.12	55,55,55,55	0
3	ZN	B	902	1/1	0.99	0.11	84,84,84,84	0
3	ZN	E	901	1/1	0.99	0.15	54,54,54,54	0
3	ZN	E	902	1/1	0.99	0.07	76,76,76,76	0

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.
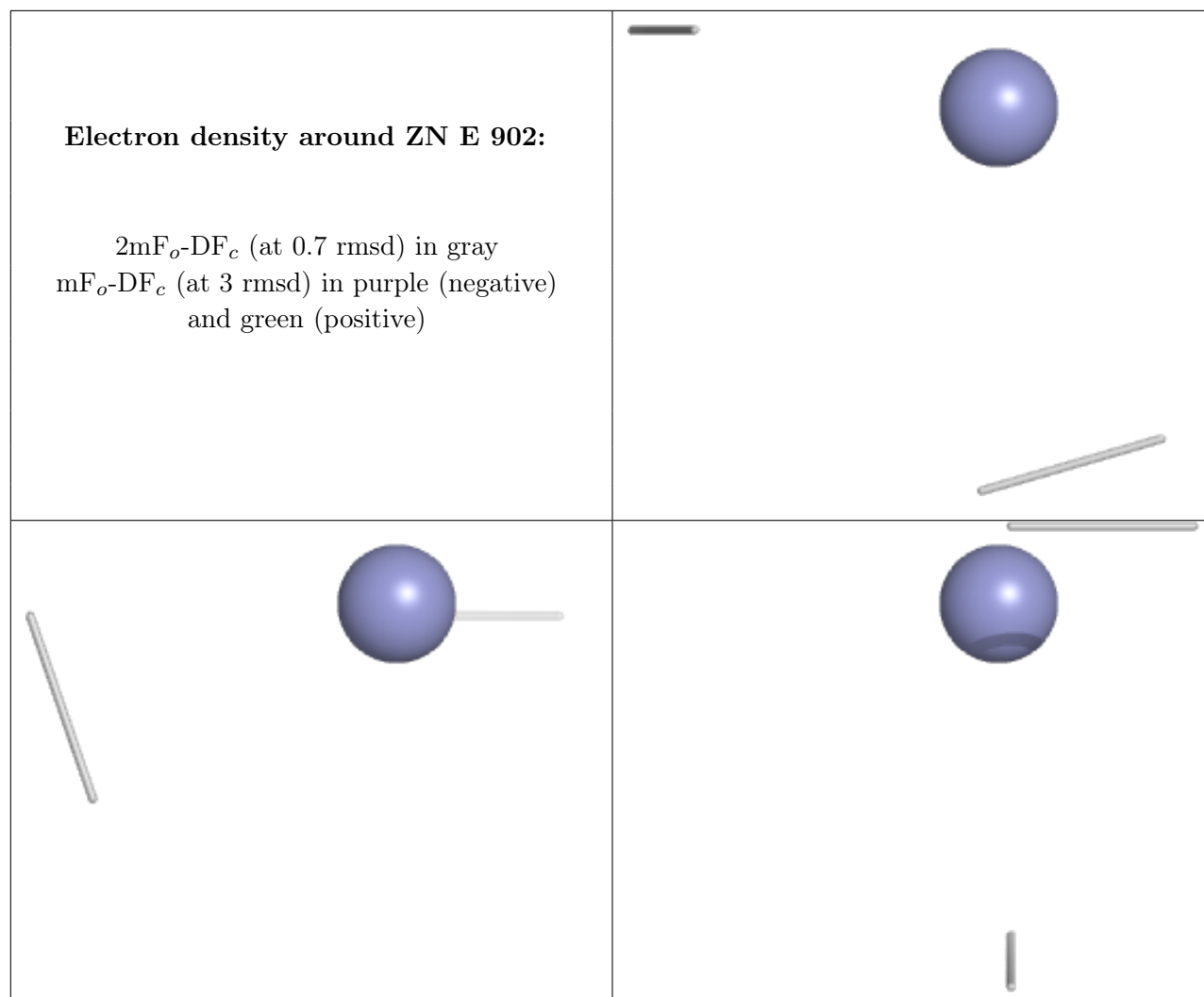
Electron density around ZN B 901:

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

Electron density around ZN B 902:

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

Electron density around ZN E 901:

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

Electron density around ZN E 902:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.