W O R L D W I D E
wwPDB
P R O T E I N   D A T A   B A N K

wwPDB X-ray Structure Validation Summary Report ⓘ

Aug 8, 2023 – 01:32 PM EDT

PDB ID	:	1PL0
Title	:	Crystal structure of human ATIC in complex with folate-based inhibitor, BW2315U89UC
Authors	:	Cheong, C.G.; Greasley, S.E.; Horton, P.A.; Beardsley, G.P.; Wilson, I.A.
Deposited on	:	2003-06-06
Resolution	:	2.60 Å(reported)

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

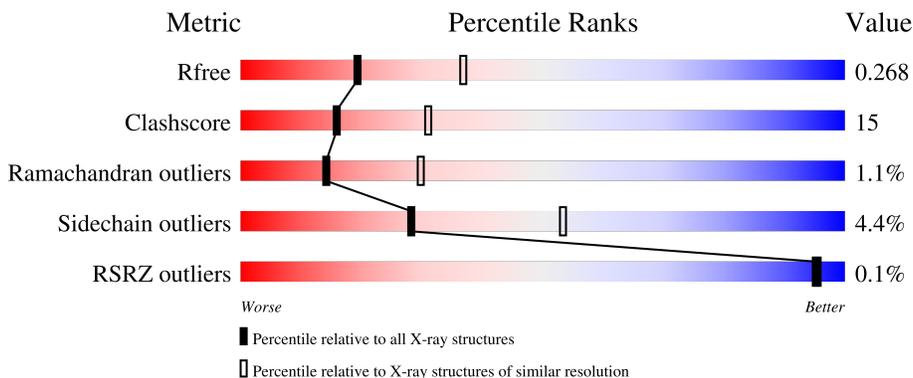|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 2.60 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		0.268
Clashscore		15
Ramachandran outliers		1.1%
Sidechain outliers		4.4%
RSRZ outliers		0.1%

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	3163 (2.60-2.60)
Clashscore	141614	3518 (2.60-2.60)
Ramachandran outliers	138981	3455 (2.60-2.60)
Sidechain outliers	138945	3455 (2.60-2.60)
RSRZ outliers	127900	3104 (2.60-2.60)

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	592	69% 29% ··
1	B	592	72% 25% ··
1	C	592	68% 29% ··
1	D	592	68% 28% ··

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 17953 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 Bifunctional purine biosynthesis protein PURH.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	589	Total	C	N	O	S	0	0	0
			4424	2801	776	829	18			
1	B	587	Total	C	N	O	S	0	0	0
			4405	2781	768	838	18			
1	C	585	Total	C	N	O	S	0	0	0
			4332	2736	763	815	18			
1	D	579	Total	C	N	O	S	0	0	0
			4236	2677	741	800	18			

- Molecule 2 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	K	0	0
			1	1		
2	B	1	Total	K	0	0
			1	1		
2	C	1	Total	K	0	0
			1	1		
2	D	1	Total	K	0	0
			1	1		

- Molecule 3 is XANTHOSINE-5'-MONOPHOSPHATE (three-letter code: XMP) (formula: $C_{10}H_{14}N_4O_9P$).

XMP
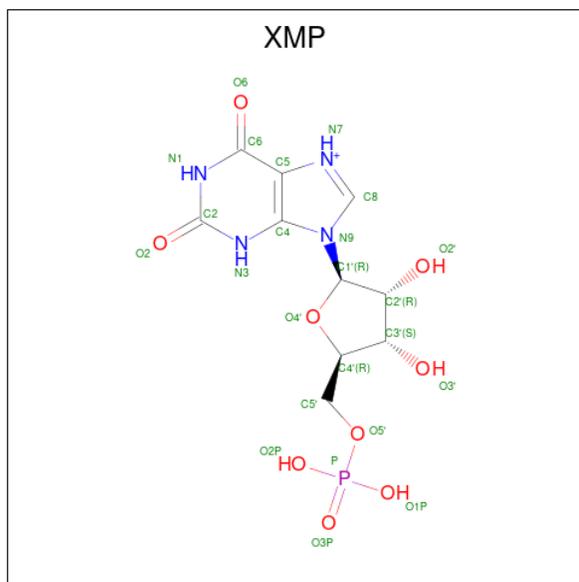
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			24	10	4	9	1		
3	C	1	Total	C	N	O	P	0	0
			24	10	4	9	1		

• Molecule 4 is AMINOIMIDAZOLE 4-CARBOXAMIDE RIBONUCLEOTIDE (three-letter code: AMZ) (formula: $C_9H_{15}N_4O_8P$).

AMZ
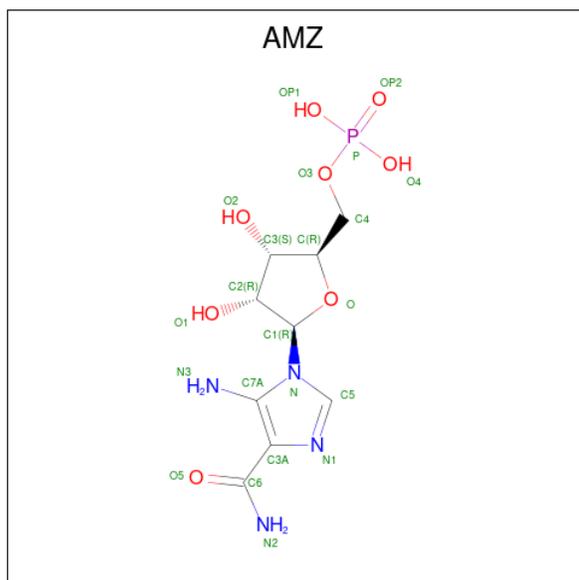
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	B	1	Total	C	N	O	P	0	0
			22	9	4	8	1		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	D	1	Total	C	N	O	P	0	0
			22	9	4	8	1		
4	D	1	Total	C	N	O	P	0	0
			22	9	4	8	1		

- Molecule 5 is N-(4-{[(2-AMINO-4-OXO-3,4-DIHYDROQUINAZOLIN-6-YL)AMINO]SULF ONYL}BENZOYL)GLUTAMIC ACID (three-letter code: BW2) (formula: $C_{20}H_{19}N_5O_8S$).
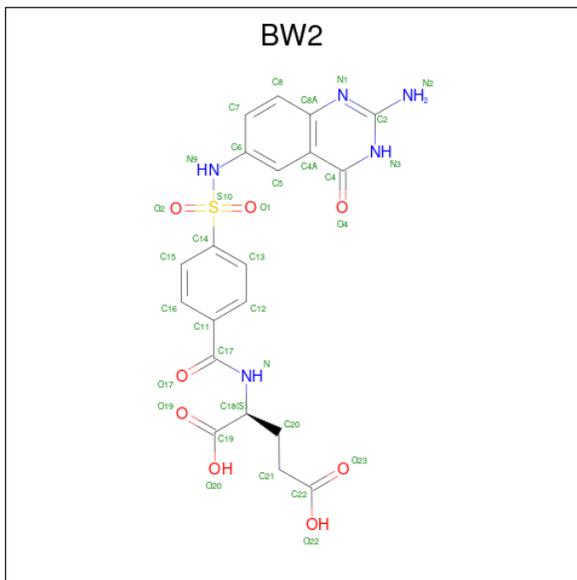
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	B	1	Total	C	N	O	S	0	0
			25	15	5	4	1		
5	D	1	Total	C	N	O	S	0	0
			25	15	5	4	1		

- Molecule 6 is water.

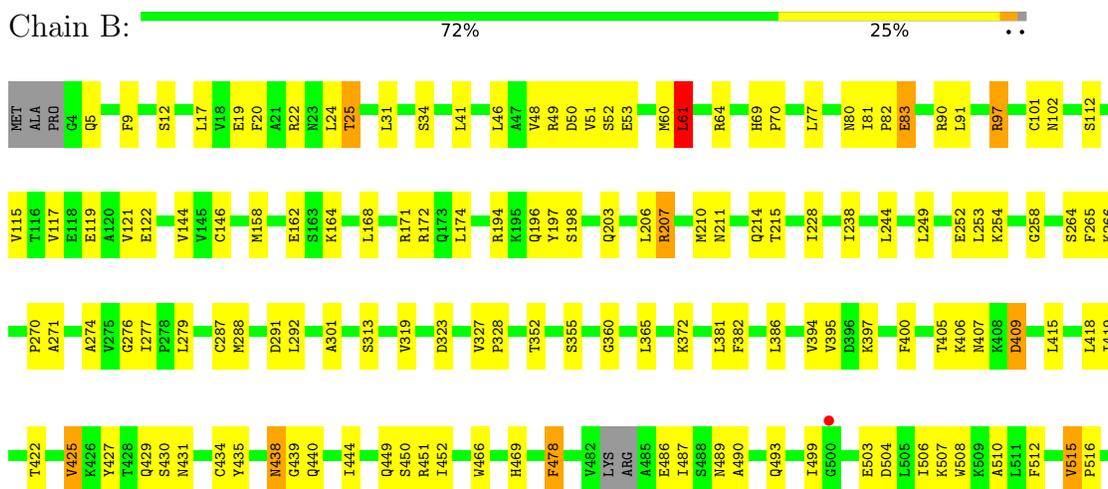| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	90	Total	O	0	0
			90	90		
6	B	124	Total	O	0	0
			124	124		
6	C	77	Total	O	0	0
			77	77		
6	D	97	Total	O	0	0
			97	97		

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.

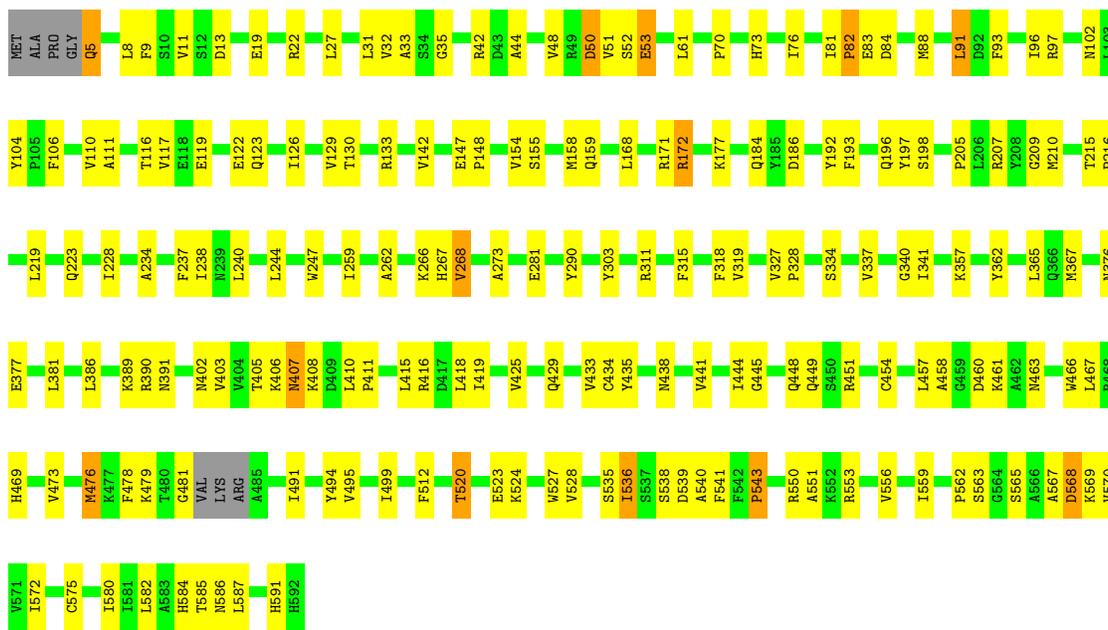- Molecule 1: Bifunctional purine biosynthesis protein PURH

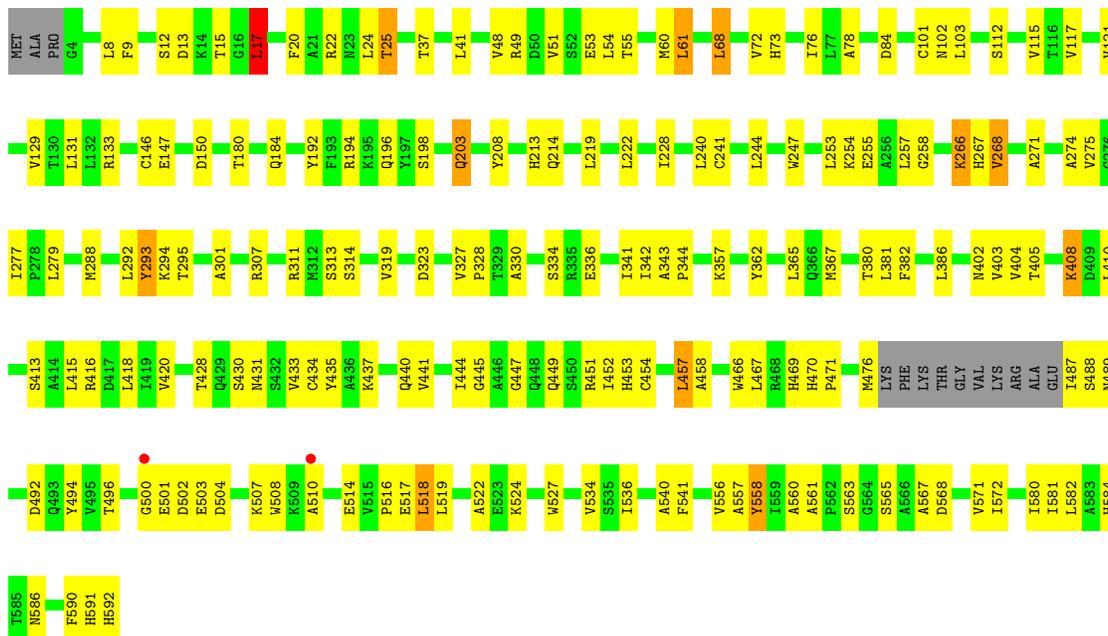- Molecule 1: Bifunctional purine biosynthesis protein PURH

T520 E523 V528 I536 A540 F541 F544 R545 D546 N547 V548 D549 R550 A551 V556 A557 S565 A566 A567 D568 V571 I572 D576 I580 I581 H592

● Molecule 1: Bifunctional purine biosynthesis protein PURH

Chain C:

68%   29%

MET ALA PRO GLY Q5 L8 F9 S10 V11 S12 D13 E19 R22 L27 L31 V32 A33 S34 G35 R42 D43 A44 V48 R49 D50 V51 S52 E53 L61 P70 H73 I76 I81 P82 E83 D84 M88 L91 D92 F93 I96 R97 N102 L103

Y104 P105 F106 V110 A111 T116 V117 E118 E119 E122 Q123 I126 V129 T130 R133 V142 E147 P148 V154 S155 M158 Q159 L168 R171 R172 K177 Q184 Y185 D186 Y192 F193 Q196 Y197 S198 P205 L206 R207 Y208 G209 M210 T215 P216

L219 Q223 I228 A234 F237 I238 N239 L240 L244 W247 I259 A262 K266 H267 V268 A273 E281 Y290 Y303 R311 F315 F318 V319 V327 P328 S334 V337 G340 I341 K357 Y362 L365 Q366 M367 N376

E377 L381 L386 K389 R390 N391 N402 V403 V404 T405 K406 N407 K408 D409 L410 P411 L415 R416 D417 L418 I419 V425 Q429 V433 C434 Y435 N438 V441 I444 G445 Q448 Q449 S450 R451 C454 L457 A458 G459 D460 K461 A462 N463 W466 L467 R468

H469 V473 M476 K477 F478 K479 T480 G481 VAL LYS ARG A485 I491 Y494 V495 I499 F512 T520 E523 K524 W527 V528 S535 I536 S537 S538 D539 A540 F541 F542 F543 R550 A551 K552 R553 V556 I559 P562 S563 G564 S565 A566 A567 D568 K569 V570

V571 I572 C575 I580 I581 L582 A583 H584 T585 N586 L587 H591 H592

● Molecule 1: Bifunctional purine biosynthesis protein PURH

Chain D:

68%   28%

MET ALA PRO G4 L8 F9 S12 D13 K14 T15 G16 I17 F20 A21 R22 N23 L24 T25 T37 L41 V48 R49 D50 V51 S52 E53 L54 T55 M60 L61 L68 V72 H73 I76 L77 A78 D84 C101 N102 L103 S112 V115 T116 V117 V121

V129 T130 L131 L132 R133 C146 E147 D150 T180 Q184 Y192 F193 R194 K195 Q196 Y197 S198 Q203 Y208 H213 Q214 L219 L222 I228 L240 C241 L244 W247 L253 K254 E255 A256 L257 G258 K266 H267 V268 A271 A274 V275 G276

I277 P278 L279 M288 L292 Y293 K294 T295 A301 R307 R311 M312 S313 S314 V319 D323 V327 P328 T329 A330 S334 R335 E336 I341 I342 A343 P344 K357 Y362 L365 Q366 M367 T380 L381 F382 L386 N402 V403 V404 T405 K408 D409 L410

S413 A414 L415 R416 D417 L418 I419 V420 T428 Q429 S430 N431 S432 V433 C434 Y435 A436 K437 Q440 V441 I444 G445 A446 G447 Q448 Q449 S450 R451 I452 H453 C454 L457 A458 W466 L467 R468 H469 H470 P471 M476 LYS PHE LYS THR GLY VAL LYS ARG ALA GLU I487 S488 N489

D492 Q493 Y494 V495 T496 G500 E501 D502 E503 D504 K507 W508 K509 A510 E514 V515 P516 E517 L518 L519 A522 E523 K524 W527 V534 S535 I536 A540 F541 V556 A557 Y558 I559 A560 A561 P562 S563 G564 S565 A566 A567 D568 V571 I572 I580 I581 L582 A583 H584

T585 N586 F590 H591 H592

![Worldwide PDB Protein Data Bank logo]

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	77.12Å 92.97Å 178.49Å 90.00° 91.19° 90.00°	Depositor
Resolution (Å)	20.00 – 2.60 19.96 – 2.59	Depositor EDS
% Data completeness (in resolution range)	(Not available) (20.00-2.60) 86.5 (19.96-2.59)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.12	Depositor
$< I/\sigma(I) >$ [1]	4.80 (at 2.59Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.213 , 0.275 0.206 , 0.268	Depositor DCC
R_{free} test set	3594 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å^2)	25.5	Xtriage
Anisotropy	0.029	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 9.3	EDS
L-test for twinning[2]	$< |L| > = 0.46, < L^2 > = 0.29$	Xtriage
Estimated twinning fraction	0.157 for h,-k,-l	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	17953	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.99% of the height of the origin peak. No significant pseudotranslation is detected.*

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: BW2, XMP, AMZ, K

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	0.42	0/4507	0.65	0/6131
1	B	0.45	0/4487	0.66	0/6104
1	C	0.43	0/4411	0.64	0/6002
1	D	0.46	0/4314	0.66	0/5882
All	All	0.44	0/17719	0.65	0/24119

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
All	All	0	2

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	303	TYR	Sidechain
1	C	303	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4424	0	4391	137	0
1	B	4405	0	4320	130	0
1	C	4332	0	4227	144	0
1	D	4236	0	4090	136	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	24	0	12	3	0
3	C	24	0	12	0	0
4	B	22	0	13	1	0
4	D	44	0	26	1	0
5	B	25	0	11	2	0
5	D	25	0	11	6	0
6	A	90	0	0	6	0
6	B	124	0	0	9	0
6	C	77	0	0	3	0
6	D	97	0	0	2	0
All	All	17953	0	17113	507	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 15.

The worst 5 of 507 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:C:281:GLU:HG2	1:C:290:TYR:HE1	1.30	0.94
1:C:435:TYR:CZ	1:C:536:ILE:HD11	2.06	0.91
1:A:13:ASP:H	1:A:102:ASN:HD22	1.19	0.86
1:A:552:LYS:HG2	1:A:578:LEU:HD22	1.59	0.84
1:C:244:LEU:HD12	1:D:381:LEU:HD23	1.60	0.84

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	587/592 (99%)	541 (92%)	39 (7%)	7 (1%)	13	27
1	B	583/592 (98%)	543 (93%)	36 (6%)	4 (1%)	22	43
1	C	581/592 (98%)	540 (93%)	36 (6%)	5 (1%)	17	35
1	D	575/592 (97%)	514 (89%)	52 (9%)	9 (2%)	9	19
All	All	2326/2368 (98%)	2138 (92%)	163 (7%)	25 (1%)	14	30

5 of 25 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	82	PRO
1	C	407	ASN
1	A	35	GLY
1	B	61	LEU
1	B	276	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	460/488 (94%)	439 (95%)	21 (5%)	27	51
1	B	456/488 (93%)	438 (96%)	18 (4%)	32	58
1	C	436/488 (89%)	419 (96%)	17 (4%)	32	58
1	D	423/488 (87%)	401 (95%)	22 (5%)	23	46
All	All	1775/1952 (91%)	1697 (96%)	78 (4%)	28	53

5 of 78 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	25	THR
1	D	449	GLN
1	D	61	LEU
1	D	266	LYS
1	D	517	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 32 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	184	GLN
1	D	203	GLN
1	B	239	ASN
1	B	85	ASN
1	D	449	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 ⓘ

Of 11 ligands modelled in this entry, 4 are monoatomic - leaving 7 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#$\|Z\|$ > 2	Counts	RMSZ	#$\|Z\|$ > 2
3	XMP	A	901	-	20,26,26	2.25	5 (25%)	27,40,40	2.77	10 (37%)
4	AMZ	D	704	-	18,23,23	2.59	5 (27%)	22,35,35	1.77	8 (36%)
4	AMZ	B	702	-	18,23,23	2.62	5 (27%)	22,35,35	1.79	7 (31%)
5	BW2	B	802	-	26,27,36	4.67	15 (57%)	36,40,52	2.88	11 (30%)
5	BW2	D	804	-	26,27,36	4.64	15 (57%)	36,40,52	2.77	12 (33%)
4	AMZ	D	703	-	18,23,23	2.88	5 (27%)	22,35,35	1.87	6 (27%)
3	XMP	C	903	-	20,26,26	2.20	5 (25%)	27,40,40	2.84	10 (37%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	XMP	A	901	-	-	5/6/26/26	0/3/3/3
4	AMZ	D	704	-	-	0/6/30/30	0/2/2/2
4	AMZ	B	702	-	-	0/6/30/30	0/2/2/2
5	BW2	B	802	-	-	0/15/15/28	0/3/3/3
5	BW2	D	804	-	-	0/15/15/28	0/3/3/3
4	AMZ	D	703	-	-	0/6/30/30	0/2/2/2
3	XMP	C	903	-	-	5/6/26/26	0/3/3/3

The worst 5 of 55 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	D	804	BW2	O1-S10	14.27	1.59	1.43
5	B	802	BW2	O2-S10	13.79	1.59	1.43
5	B	802	BW2	O1-S10	13.46	1.58	1.43
5	D	804	BW2	O2-S10	12.40	1.57	1.43
4	D	703	AMZ	C6-N2	8.73	1.49	1.33

The worst 5 of 64 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	D	804	BW2	C4A-C4-N3	-8.61	118.40	124.40
3	A	901	XMP	C6-N1-C2	-8.20	120.41	126.88
3	C	903	XMP	C6-N1-C2	-8.16	120.44	126.88
5	B	802	BW2	C4A-C4-N3	-7.84	118.94	124.40
5	B	802	BW2	O1-S10-O2	-7.66	110.14	119.55

There are no chirality outliers.
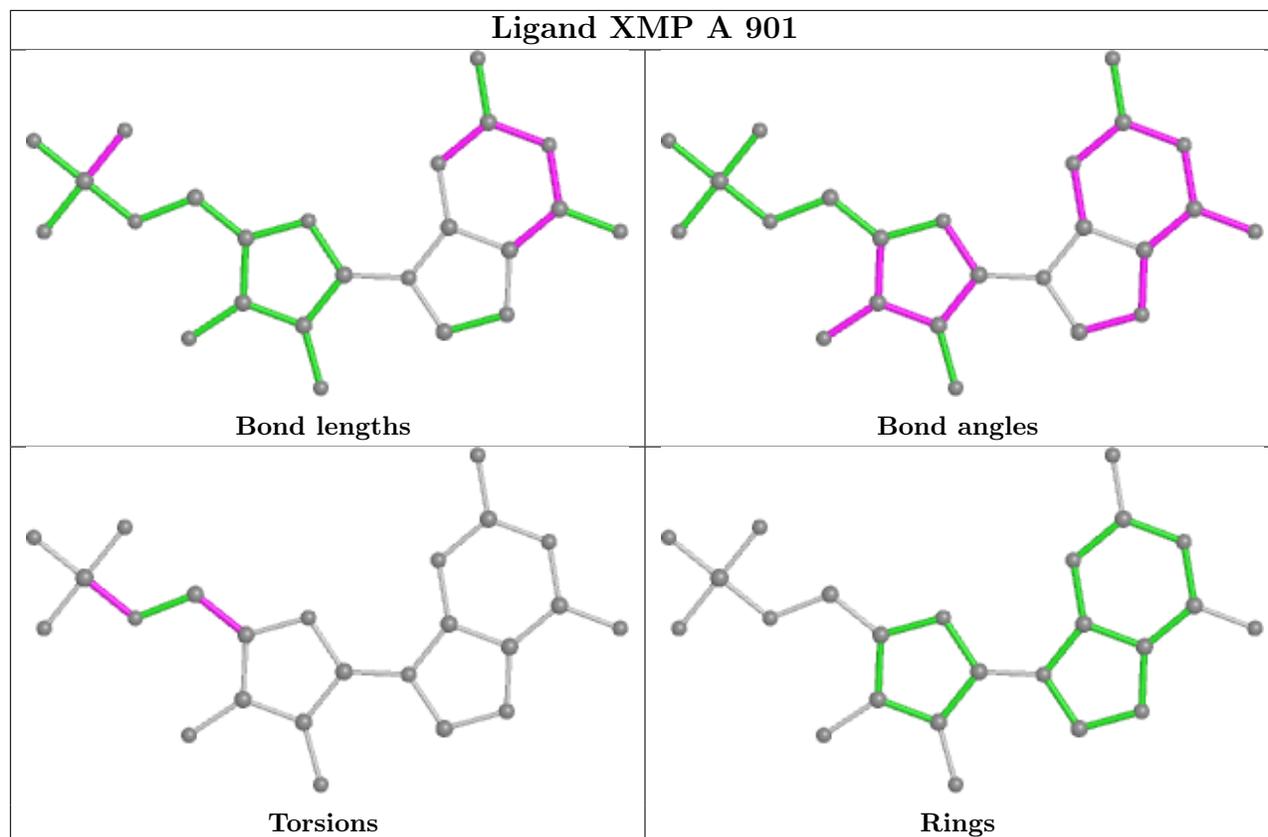
5 of 10 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	901	XMP	C5'-O5'-P-O1P
3	A	901	XMP	C5'-O5'-P-O2P
3	A	901	XMP	C5'-O5'-P-O3P
3	A	901	XMP	O4'-C4'-C5'-O5'
3	A	901	XMP	C3'-C4'-C5'-O5'

There are no ring outliers.

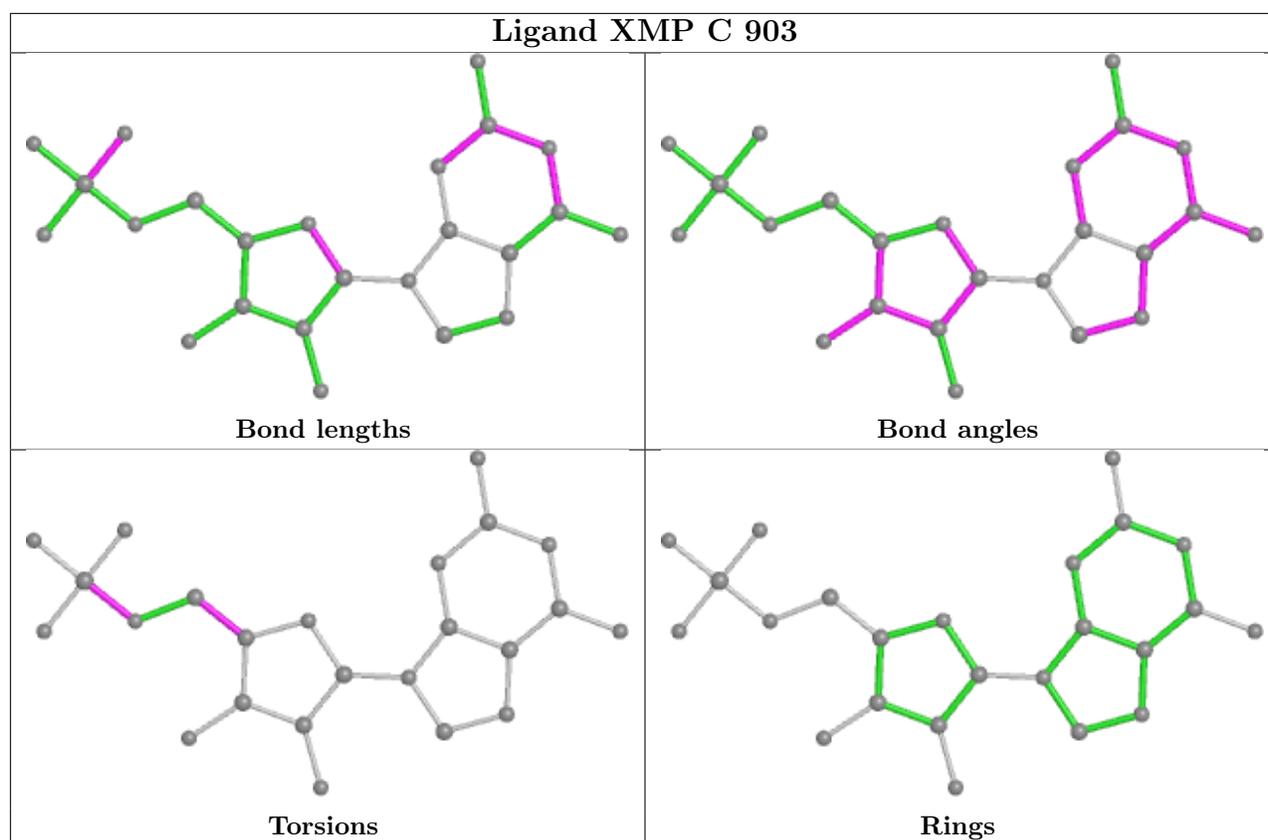5 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	901	XMP	3	0
4	B	702	AMZ	1	0
5	B	802	BW2	2	0
5	D	804	BW2	6	0
4	D	703	AMZ	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 XMP A 901

Bond lengths

Bond angles

Torsions

Rings

Ligand AMZ D 704

Bond lengths

Bond angles

Torsions

Rings

Ligand AMZ B 702

Bond lengths

Bond angles

Torsions

Rings

Ligand BW2 B 802

Bond lengths

Bond angles

Torsions

Rings

Ligand BW2 D 804

Bond lengths

Bond angles

Torsions

Rings

Ligand AMZ D 703

Bond lengths

Bond angles

Torsions

Rings

Ligand XMP C 903

Bond lengths

Bond angles

Torsions

Rings
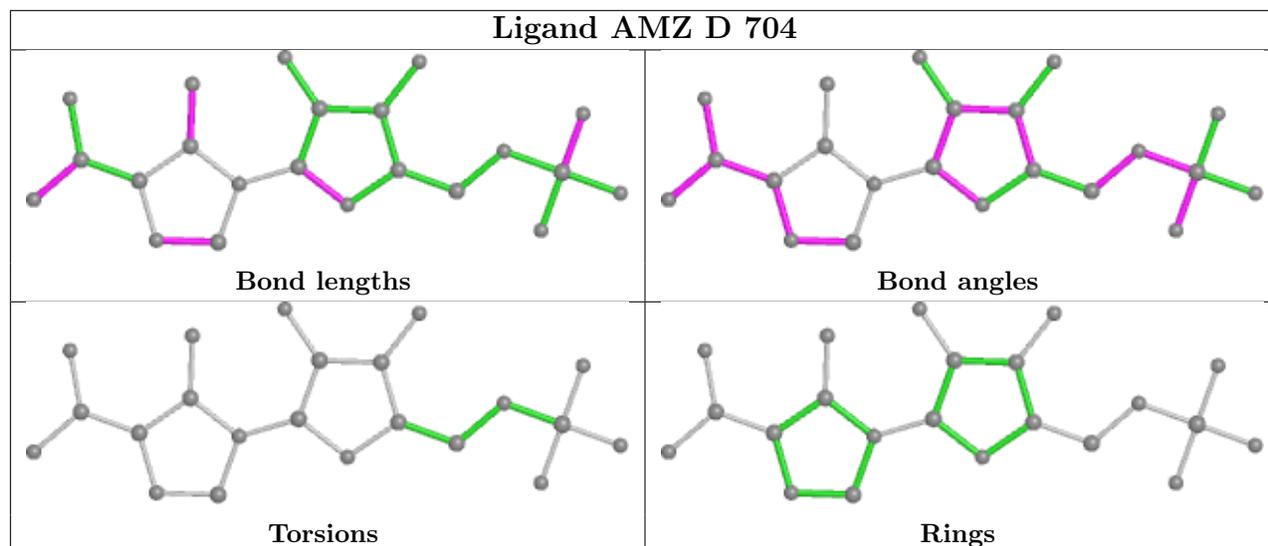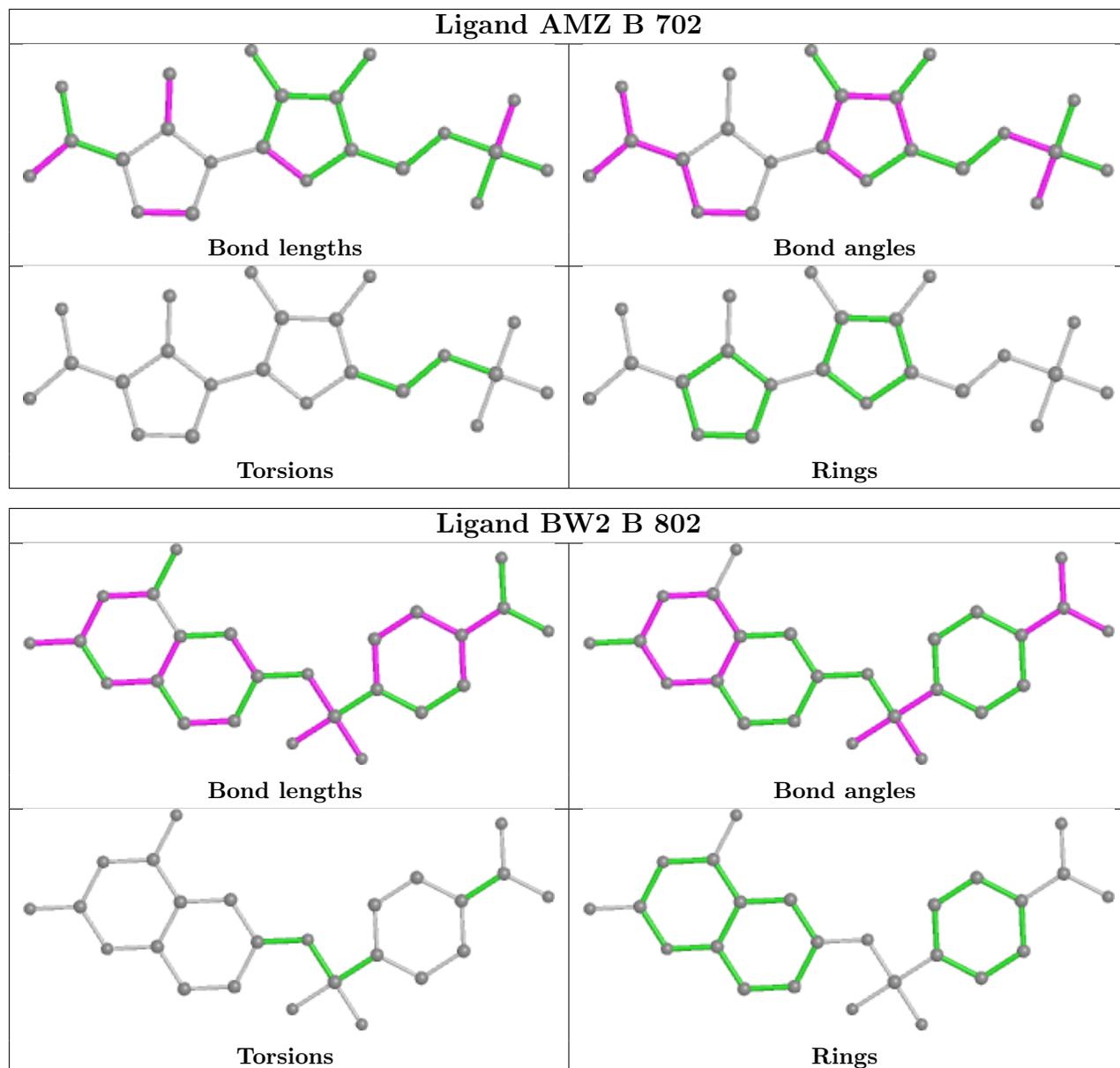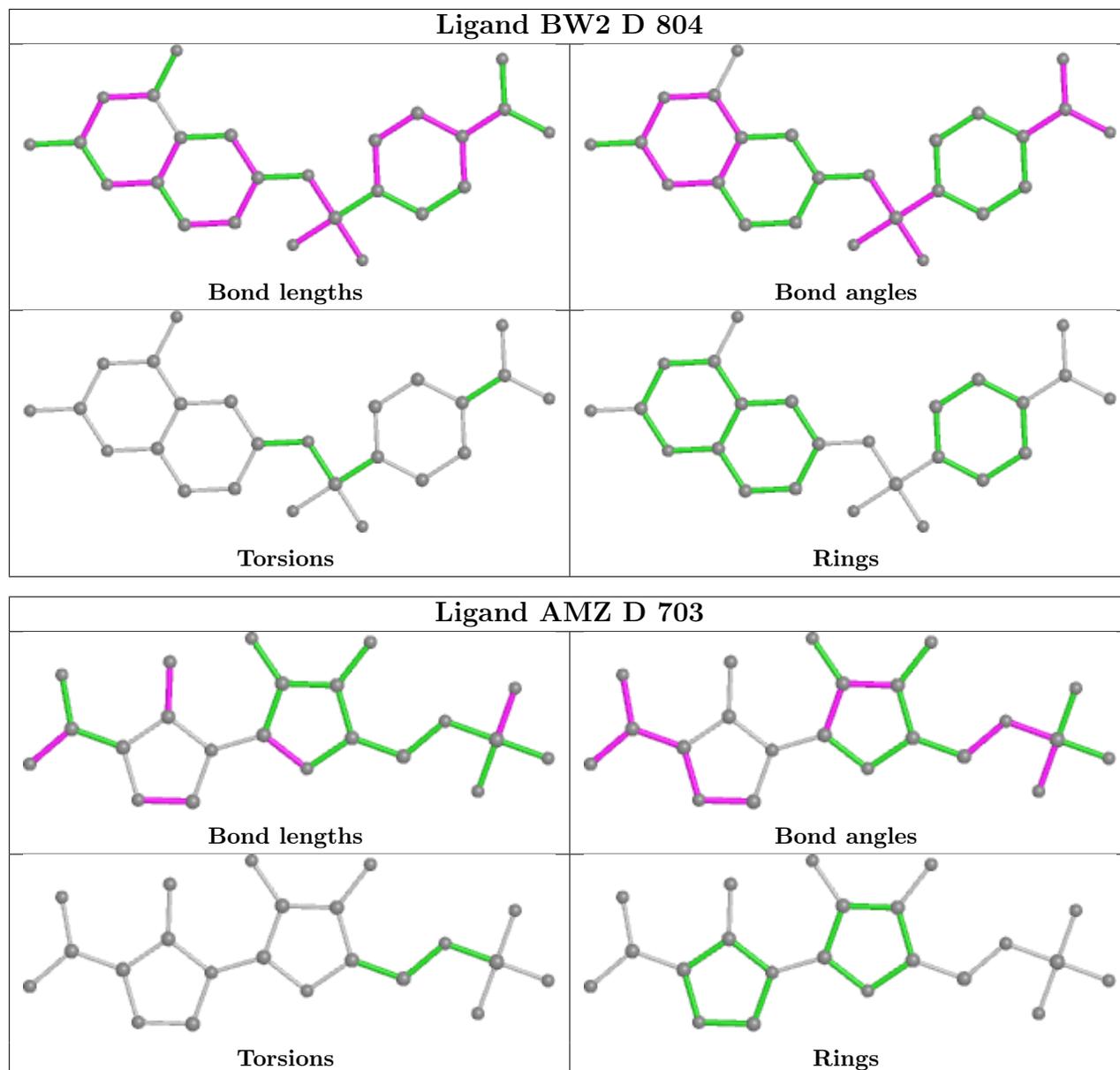
5.7 Other polymers ⓘ

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(Å²)	Q<0.9
1	A	589/592 (99%)	-0.75	0	100	100	6, 26, 51, 64	0
1	B	587/592 (99%)	-0.78	1 (0%)	95	95	3, 22, 51, 74	0
1	C	585/592 (98%)	-0.71	0	100	100	8, 29, 54, 66	0
1	D	579/592 (97%)	-0.75	2 (0%)	94	93	4, 25, 54, 75	0
All	All	2340/2368 (98%)	-0.75	3 (0%)	95	95	3, 25, 53, 75	0

All (3) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	510	ALA	2.4
1	B	500	GLY	2.3
1	D	500	GLY	2.2

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
4	AMZ	D	703	22/22	0.95	0.15	34,39,40,41	0
5	BW2	D	804	25/34	0.96	0.13	27,31,33,34	0
3	XMP	A	901	24/24	0.97	0.11	19,21,26,31	0
4	AMZ	D	704	22/22	0.97	0.12	20,22,25,27	0
5	BW2	B	802	25/34	0.97	0.12	21,25,32,33	0
4	AMZ	B	702	22/22	0.97	0.13	27,30,32,33	0
3	XMP	C	903	24/24	0.98	0.09	17,21,28,30	0
2	K	D	1004	1/1	0.99	0.07	17,17,17,17	0
2	K	A	1001	1/1	0.99	0.06	16,16,16,16	0
2	K	B	1002	1/1	0.99	0.07	12,12,12,12	0
2	K	C	1003	1/1	0.99	0.06	17,17,17,17	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 AMZ D 703:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
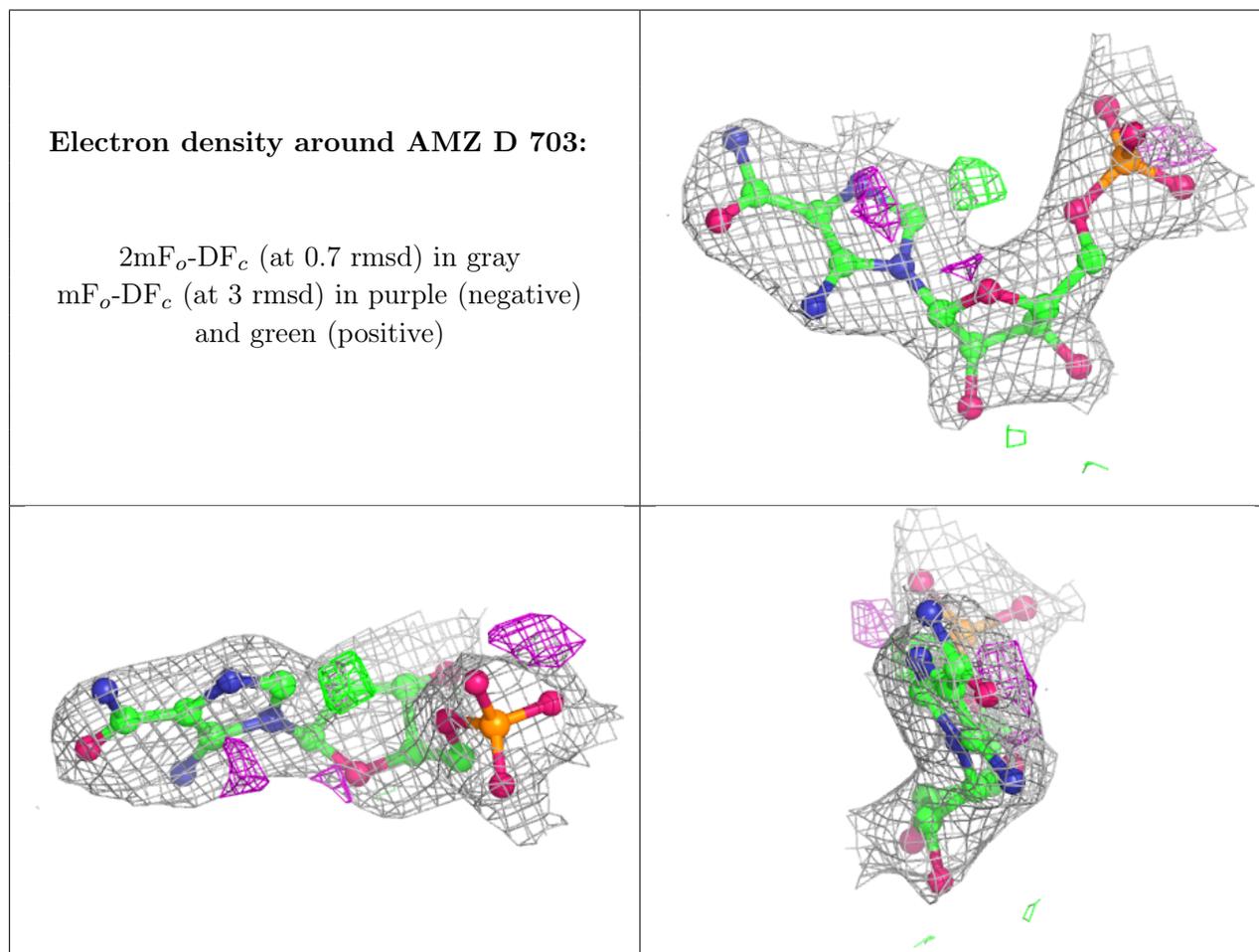
Electron density around BW2 D 804:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
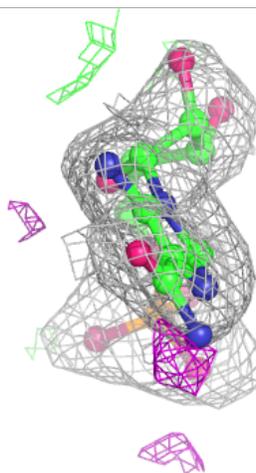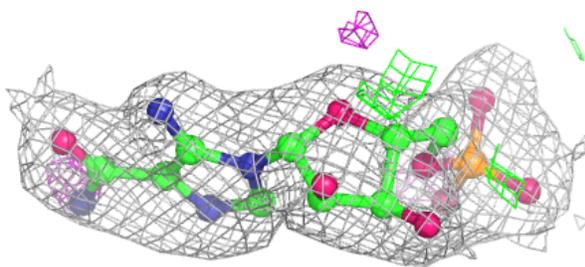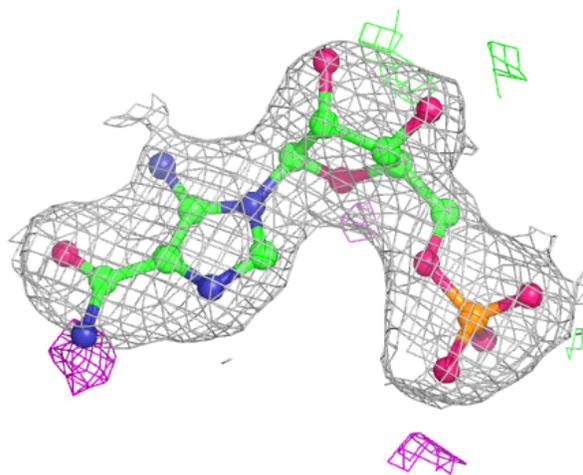mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
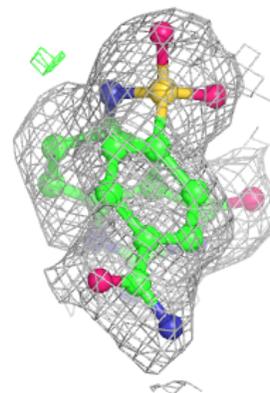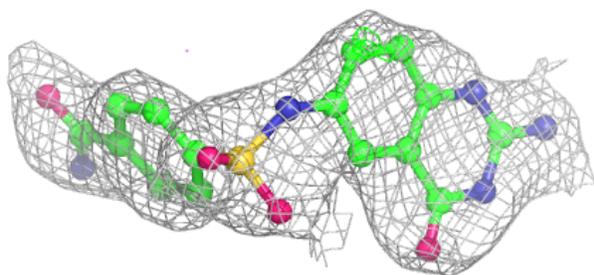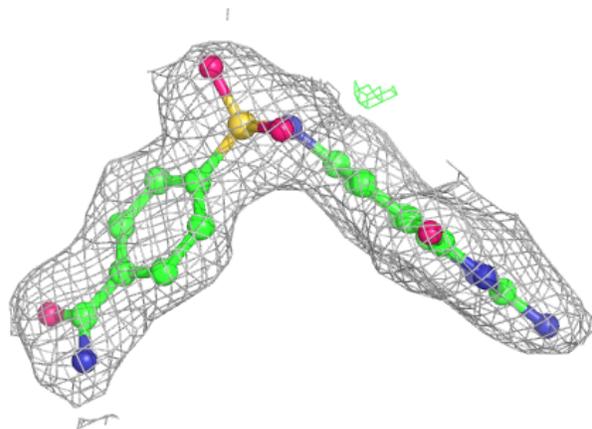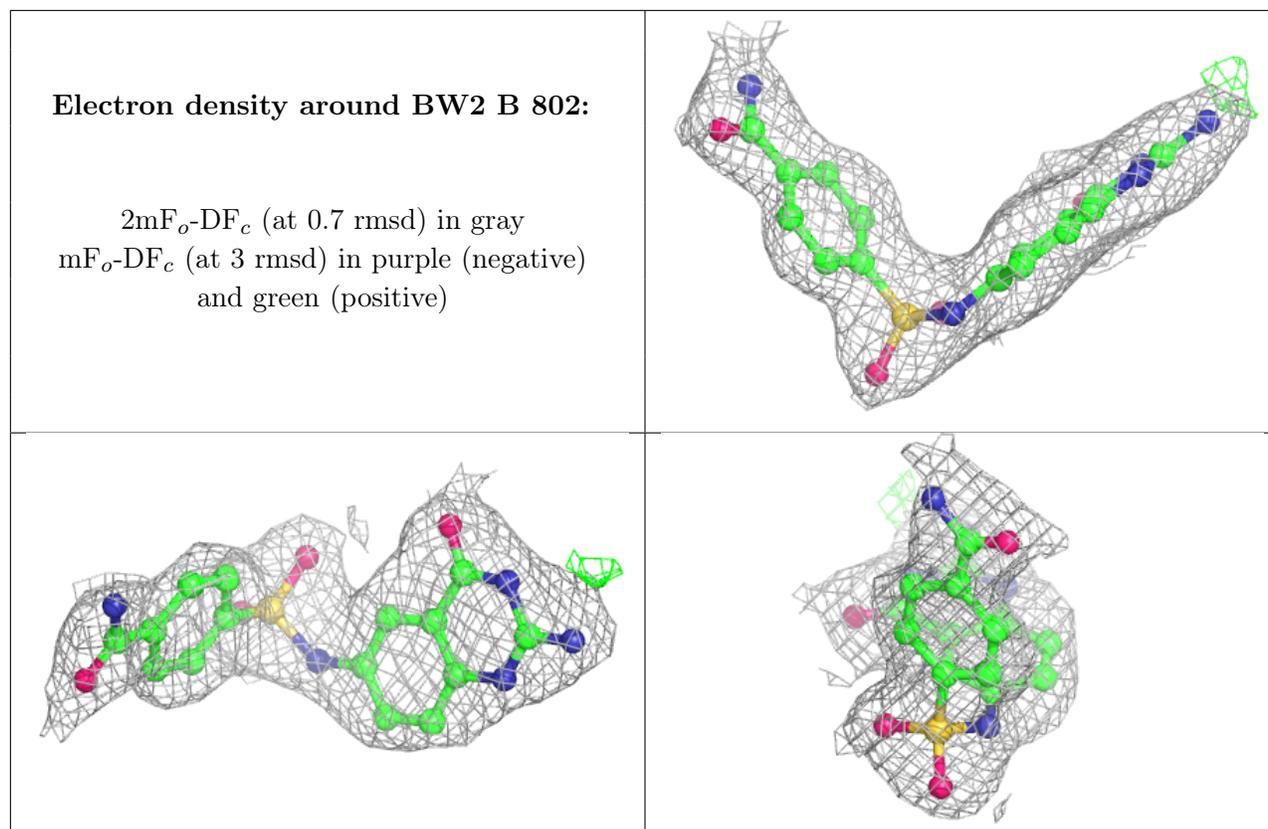
Electron density around XMP A 901:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
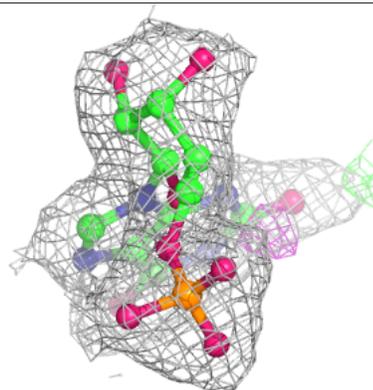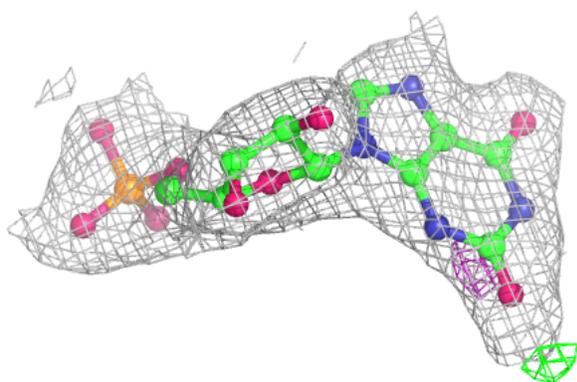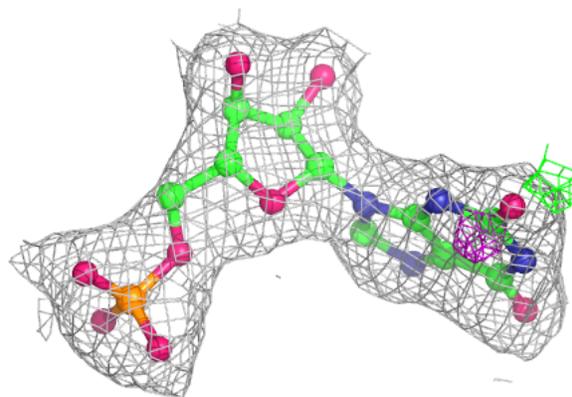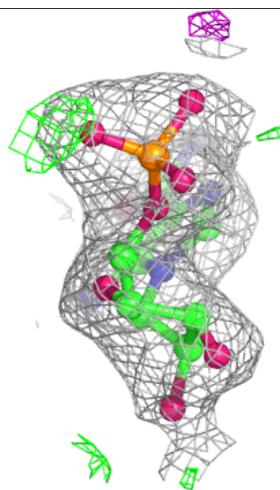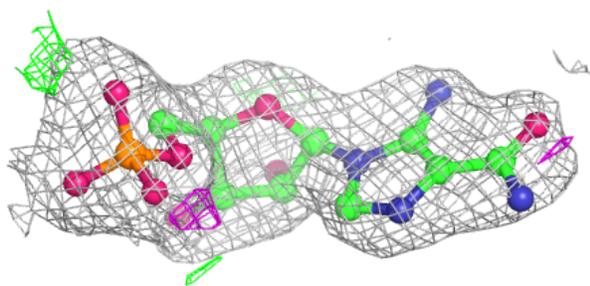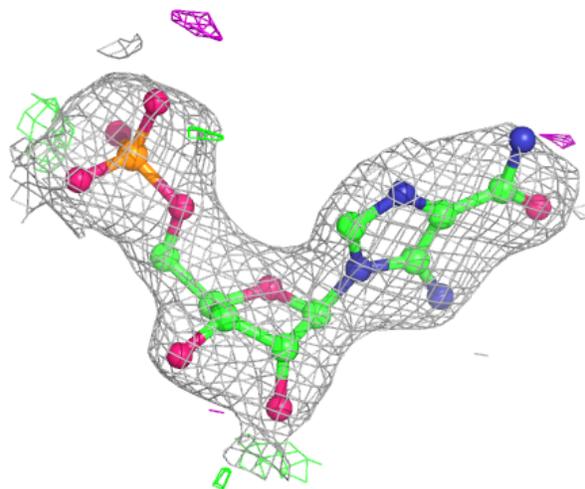
Electron density around AMZ D 704:

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 BW2 B 802:

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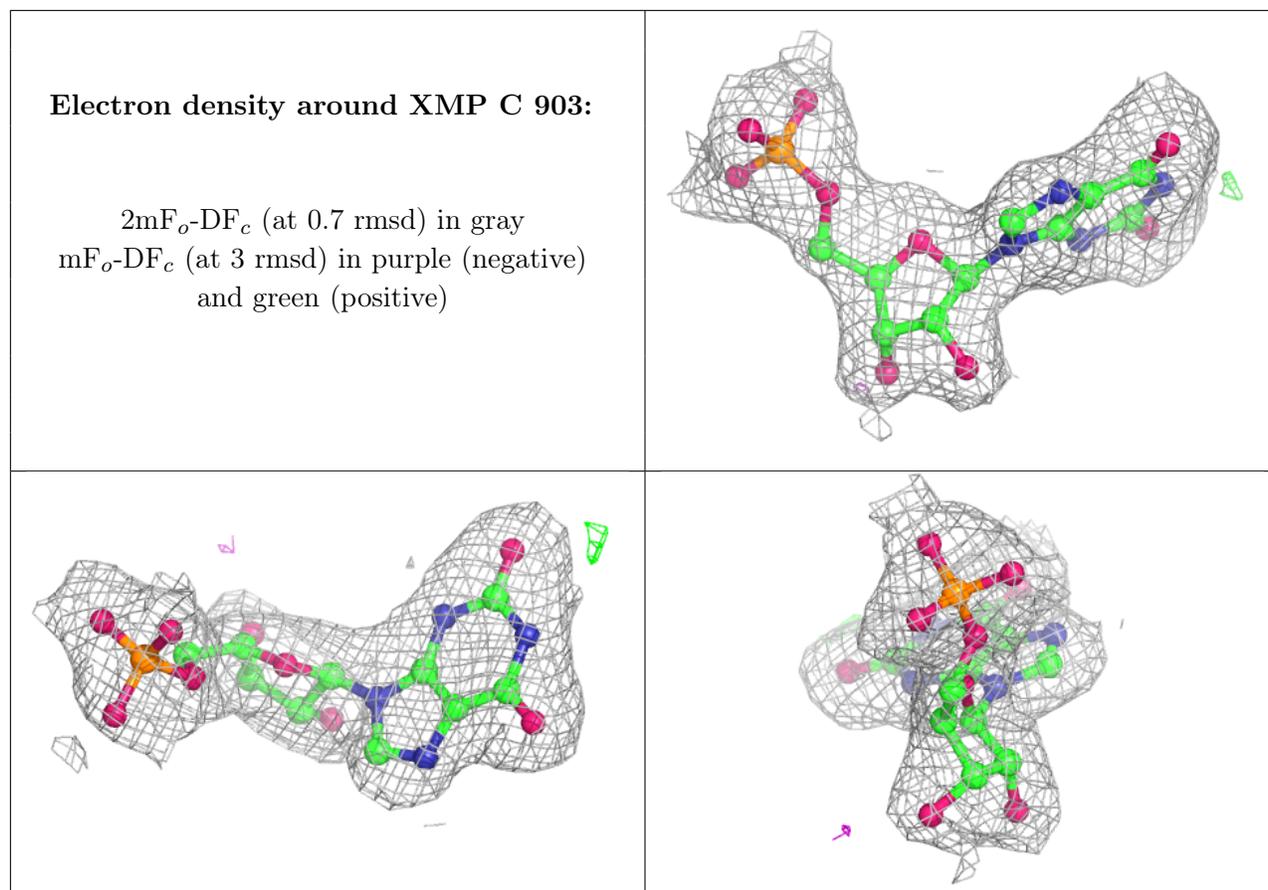$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around AMZ B 702:

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

Electron density around XMP C 903:

$2mF_o\text{-}DF_c$ (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.