wwPDB X-ray Structure Validation Summary Report ⓘ

Dec 9, 2023 – 02:53 pm GMT

PDB ID	:	2JEZ
Title	:	Mus musculus acetylcholinesterase in complex with tabun and HLo-7
Authors	:	Ekstrom, F.; Astot, C.; Pang, Y.P.
Deposited on	:	2007-01-25
Resolution	:	2.60 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

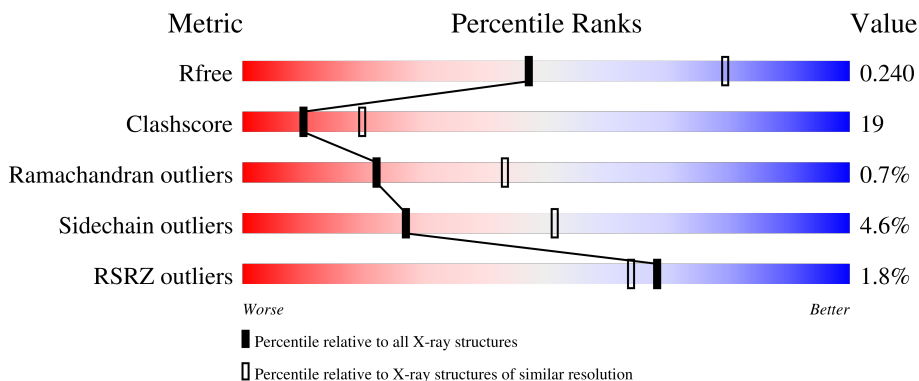|		
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

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		0.240
Clashscore		19
Ramachandran outliers		0.7%
Sidechain outliers		4.6%
RSRZ outliers		1.8%

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	548	2% 62% 32% · ·
1	B	548	2% 62% 33% · ·

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:

WORLDWIDE wwPDB PROTEIN DATA BANK

| Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	SUN	A	203	-	-	X	-
1	SUN	B	203	-	-	X	-
2	HLO	B	1545	-	-	X	-
3	P6G	B	1546	-	X	-	-

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 8713 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 ACETYLCHOLINESTERASE.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	535	Total	C	N	O	P	S	0	0	0
			4185	2683	726	761	1	14			
1	B	534	Total	C	N	O	P	S	0	0	1
			4167	2674	720	758	1	14			

- Molecule 2 is 1-[({2,4-BIS[(E)-(HYDROXYIMINO)METHYL]PYRIDINIUM-1-YL}ME THOXY)METHYL]-4-CARBAMOYLPYRIDINIUM (three-letter code: HLO) (formula: $C_{15}H_{17}N_5O_4$).
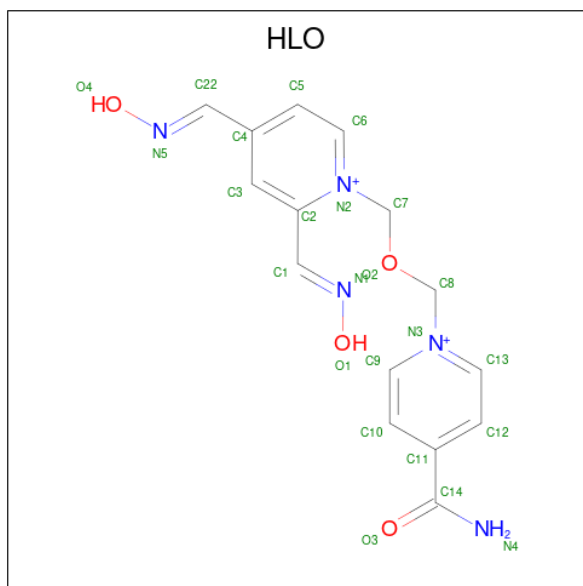
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			24	15	5	4		
2	B	1	Total	C	N	O	0	0
			24	15	5	4		

- Molecule 3 is HEXAETHYLENE GLYCOL (three-letter code: P6G) (formula: $C_{12}H_{26}O_7$).

P6G

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	C	O	0	0
			19	12	7		

• Molecule 4 is water.

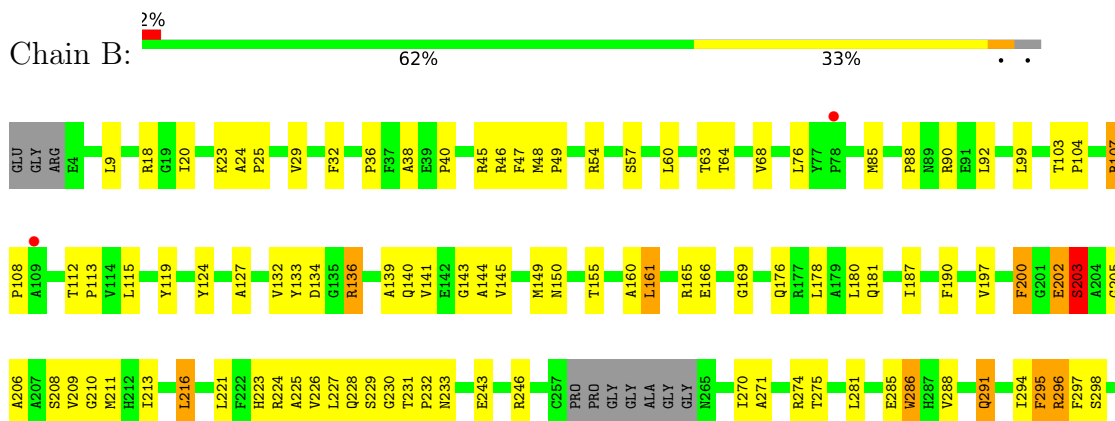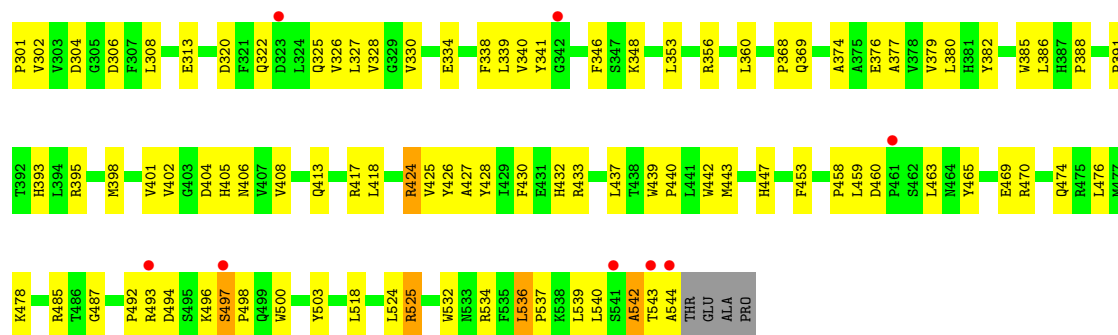| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	159	Total	O	0	0
			159	159		
4	B	135	Total	O	0	0
			135	135		

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: ACETYLCHOLINESTERASE

Chain A:

- Molecule 1: ACETYLCHOLINESTERASE

Chain B:

P301 V302 V303 D304 G305 D306 F307 L308 E313 D320 F321 Q322 D323 L324 Q325 V326 L327 V328 G329 V330 E334 F338 L339 V340 Y341 G342 F346 S347 K348 L353 R356 L360 P368 Q369 A374 A375 E376 A377 V378 V379 L380 H381 Y382 W385 L386 H387 P388 P391

T392 H393 L394 R395 M398 V401 V402 G403 D404 H405 N406 V407 V408 Q413 R417 L418 R424 V425 Y426 A427 Y428 I429 F430 E431 H432 R433 L437 T438 W439 P440 L441 W442 M443 H447 F453 P458 L459 D460 P461 S462 L463 N464 Y465 E469 R470 Q474 R475 L476 M477

K478 R485 T486 G487 P492 R493 D494 S495 K496 S497 P498 Q499 W500 Y503 L518 L524 R525 W532 N533 R534 F535 L536 P537 K538 L539 L540 S541 A542 T543 A544 THR GLU ALA PRO

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	76.92Å 108.94Å 220.32Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.14 – 2.60 29.13 – 2.60	Depositor EDS
% Data completeness (in resolution range)	100.0 (29.14-2.60) 100.0 (29.13-2.60)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	5.16 (at 2.61Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.192 , 0.243 0.191 , 0.240	Depositor DCC
R_{free} test set	1144 reflections (1.98%)	wwPDB-VP
Wilson B-factor (Å^2)	41.7	Xtriage
Anisotropy	0.050	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 25.2	EDS
L-test for twinning[2]	$< |L| > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	8713	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.06% 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: SUN, P6G, HLO

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	0.64	0/4293	0.69	1/5864 (0.0%)
1	B	0.62	0/4275	0.71	3/5842 (0.1%)
All	All	0.63	0/8568	0.70	4/11706 (0.0%)

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	2
1	B	0	2
All	All	0	4

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	161	LEU	CA-CB-CG	-5.28	103.15	115.30
1	B	216	LEU	CA-CB-CG	-5.23	103.28	115.30
1	B	161	LEU	CA-CB-CG	-5.04	103.71	115.30
1	B	296	ARG	NE-CZ-NH1	5.00	122.80	120.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	202	GLU	Mainchain
1	A	203	SUN	Mainchain

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Mol	Chain	Res	Type	Group
1	B	202	GLU	Mainchain
1	B	203	SUN	Mainchain

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	4185	0	4074	160	1
1	B	4167	0	4056	157	1
2	A	24	0	17	7	0
2	B	24	0	17	9	0
3	B	19	0	24	6	0
4	A	159	0	0	20	0
4	B	135	0	0	9	0
All	All	8713	0	8188	315	1

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 19.

The worst 5 of 315 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:B:369:GLN:HB2	4:B:2089:HOH:O	1.53	1.07
1:B:424:ARG:HG3	1:B:424:ARG:HH11	1.25	1.01
1:B:197:VAL:H	1:B:223:HIS:CD2	1.80	0.98
1:A:197:VAL:H	1:A:223:HIS:HD2	1.05	0.92
1:B:112:THR:HG21	1:B:143:GLY:O	1.70	0.91

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:13:ARG:NH1	1:B:57:SER:O[2_555]	2.10	0.10

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	530/548 (97%)	503 (95%)	24 (4%)	3 (1%)	25	47
1	B	529/548 (96%)	501 (95%)	24 (4%)	4 (1%)	19	39
All	All	1059/1096 (97%)	1004 (95%)	48 (4%)	7 (1%)	22	43

5 of 7 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	542	ALA
1	B	543	THR
1	A	494	ASP
1	A	342	GLY
1	B	493	ARG

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	438/445 (98%)	420 (96%)	18 (4%)	30	56
1	B	437/445 (98%)	415 (95%)	22 (5%)	24	47
All	All	875/890 (98%)	835 (95%)	40 (5%)	27	51

5 of 40 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	216	LEU

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Mol	Chain	Res	Type
1	B	424	ARG
1	B	246	ARG
1	B	291	GLN
1	B	524	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 9 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	291	GLN
1	B	413	GLN
1	A	421	GLN
1	A	499	GLN
1	A	509	GLN

5.3.3　RNA ⓘ

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues 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	#$|Z| > 2$
1	SUN	A	203	1	11,13,14	2.39	1 (9%)	11,17,19	1.82	3 (27%)
1	SUN	B	203	1	11,13,14	2.67	1 (9%)	11,17,19	1.04	1 (9%)

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
1	SUN	A	203	1	-	3/15/18/20	-
1	SUN	B	203	1	-	6/15/18/20	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	203	SUN	P1-O1	8.47	1.59	1.46
1	A	203	SUN	P1-O1	7.47	1.58	1.46

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	203	SUN	C1-N1-C2	3.15	125.03	113.60
1	B	203	SUN	C1-N1-C2	3.01	124.51	113.60
1	A	203	SUN	O1-P1-N1	-2.67	109.10	113.28
1	A	203	SUN	O2-P1-OG	2.62	109.21	100.53

There are no chirality outliers.

5 of 9 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B	203	SUN	C1-N1-P1-OG
1	B	203	SUN	C3-O2-P1-N1
1	A	203	SUN	C2-N1-P1-O1
1	B	203	SUN	C1-N1-P1-O1
1	A	203	SUN	N-CA-CB-OG

There are no ring outliers.

2 monomers are involved in 14 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	203	SUN	7	0
1	B	203	SUN	7	0

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

3 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	HLO	A	1543	-	21,25,25	0.75	0	22,32,32	2.04	3 (13%)
2	HLO	B	1545	-	21,25,25	0.67	0	22,32,32	1.82	3 (13%)
3	P6G	B	1546	-	18,18,18	1.76	5 (27%)	17,17,17	2.04	10 (58%)

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	HLO	A	1543	-	-	4/15/16/16	0/2/2/2
2	HLO	B	1545	-	-	4/15/16/16	0/2/2/2
3	P6G	B	1546	-	-	7/16/16/16	-

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	1546	P6G	C9-C8	-2.91	1.34	1.49
3	B	1546	P6G	C3-C2	-2.89	1.34	1.49
3	B	1546	P6G	C17-C18	-2.89	1.34	1.49
3	B	1546	P6G	C6-C5	-2.86	1.34	1.49
3	B	1546	P6G	C15-C14	-2.83	1.34	1.49

The worst 5 of 16 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1543	HLO	O4-N5-C22	6.40	123.16	111.86
2	B	1545	HLO	O4-N5-C22	5.83	122.16	111.86
2	A	1543	HLO	O1-N1-C1	5.43	121.46	111.86
2	B	1545	HLO	O1-N1-C1	4.62	120.02	111.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1545	HLO	C2-C1-N1	3.05	123.64	117.75

There are no chirality outliers.

5 of 15 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1543	HLO	N1-C1-C2-N2
2	A	1543	HLO	N1-C1-C2-C3
2	B	1545	HLO	N5-C22-C4-C3
2	B	1545	HLO	N5-C22-C4-C5
2	B	1545	HLO	N3-C8-O2-C7

There are no ring outliers.

3 monomers are involved in 22 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1543	HLO	7	0
2	B	1545	HLO	9	0
3	B	1546	P6G	6	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 HLO A 1543

Bond lengths

Bond angles

Torsions

Rings

Ligand HLO B 1545

Bond lengths

Bond angles

Torsions

Rings

Ligand P6G B 1546

Bond lengths

Bond angles

Torsions

Rings
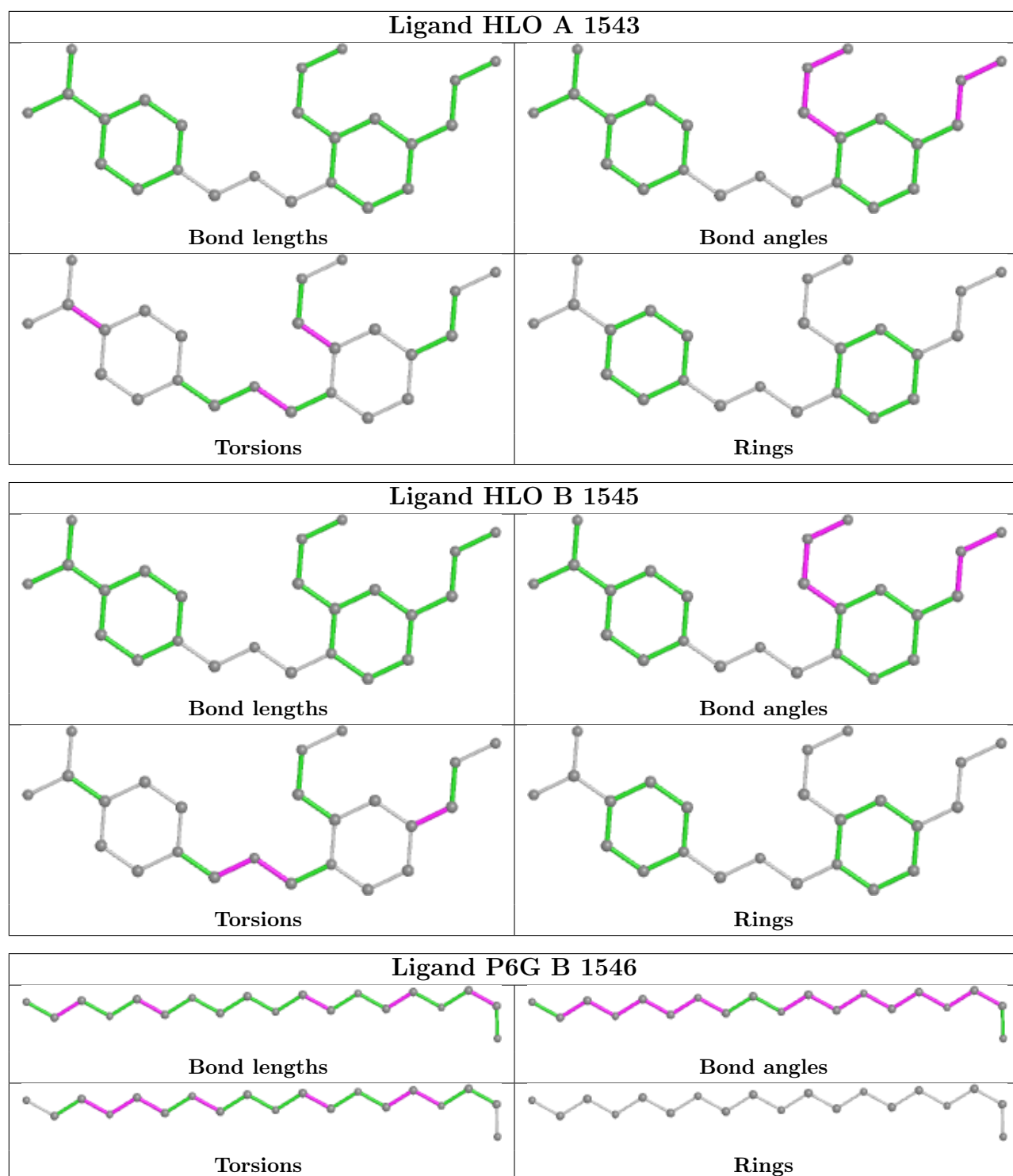
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å²)	Q<0.9
1	A	534/548 (97%)	-0.25	9 (1%)	70	66	24, 36, 58, 77	0
1	B	533/548 (97%)	-0.16	10 (1%)	66	62	26, 40, 58, 73	0
All	All	1067/1096 (97%)	-0.20	19 (1%)	68	64	24, 38, 58, 77	0

The worst 5 of 19 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	493	ARG	4.2
1	A	493	ARG	4.1
1	A	496	LYS	3.7
1	B	544	ALA	3.6
1	B	497	SER	3.5

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

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.

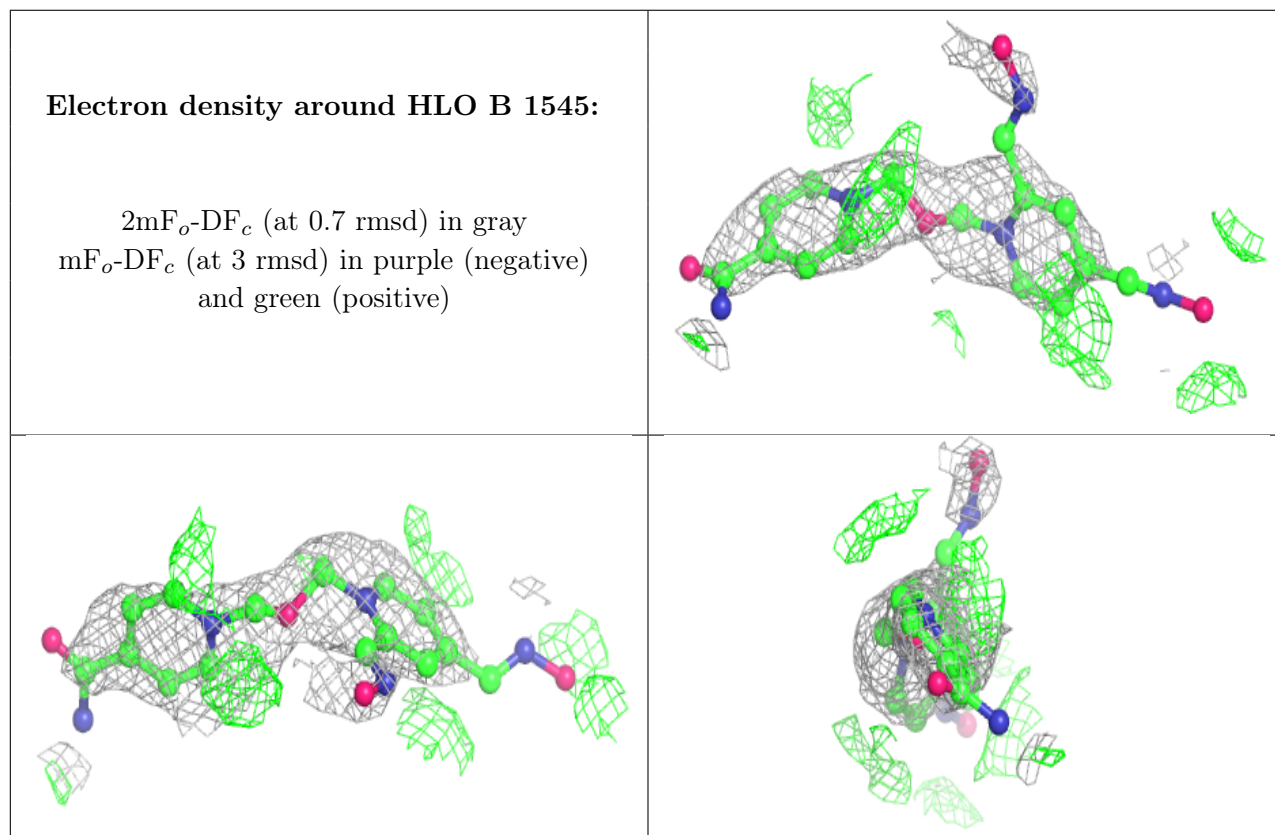| Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
1	SUN	A	203	14/15	0.95	0.28	29,40,44,44	0
1	SUN	B	203	14/15	0.96	0.18	29,43,47,48	0

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

| Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	HLO	B	1545	24/24	0.81	0.32	82,86,88,91	0
2	HLO	A	1543	24/24	0.85	0.29	67,70,74,76	0
3	P6G	B	1546	19/19	0.91	0.20	44,50,59,59	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 HLO B 1545:

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

Electron density around HLO A 1543:

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

Electron density around P6G B 1546:

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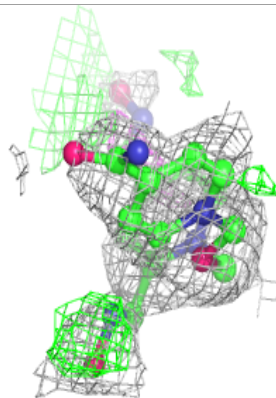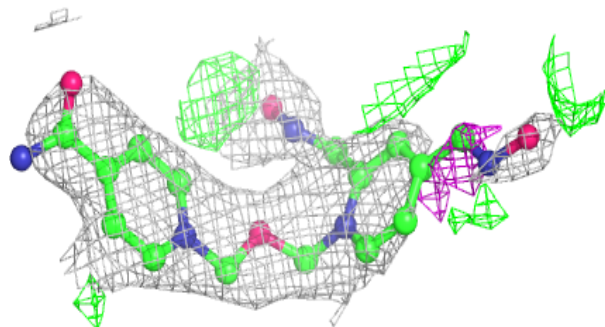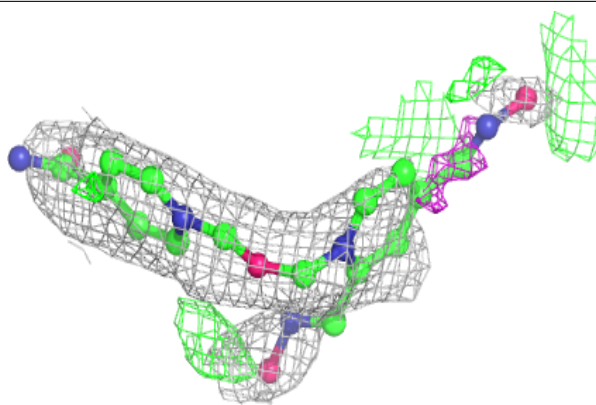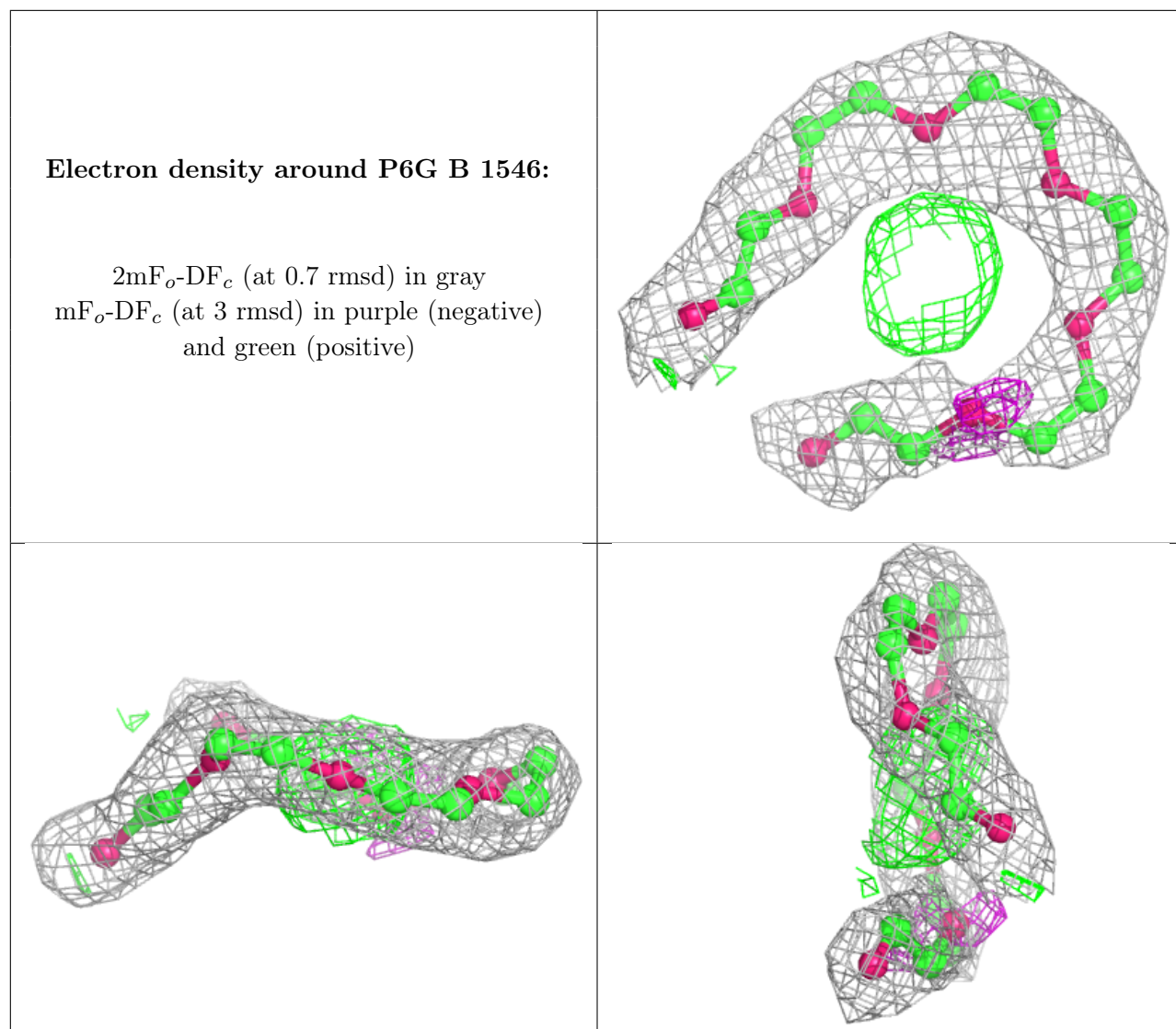
6.5   Other polymers (i)

There are no such residues in this entry.