Full wwPDB X-ray Structure Validation Report ⓘ

Aug 19, 2024 – 01:45 PM EDT

PDB ID	:	8TO3
Title	:	EGFR(T790M/V948R) in complex with LN5461
Authors	:	Chitnis, S.C.; Pham, C.D.; Heppner, D.E.
Deposited on	:	2023-08-02
Resolution	:	2.49 Å(reported)

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

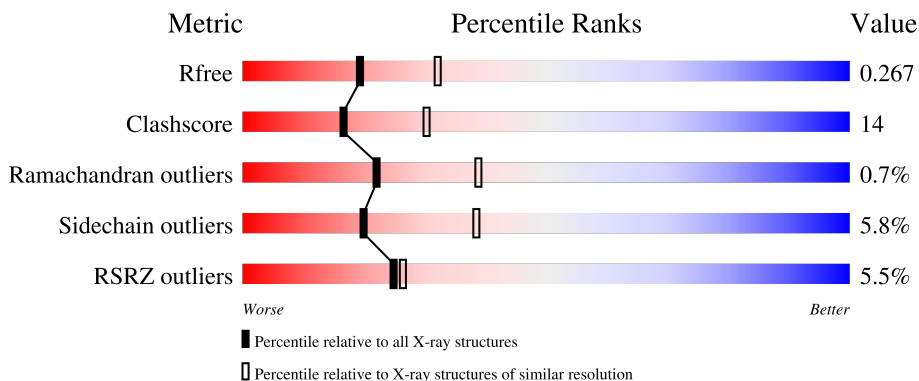|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.49 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		0.267
Clashscore		14
Ramachandran outliers		0.7%
Sidechain outliers		5.8%
RSRZ outliers		5.5%

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	328	5% / 57% / 29% / • / 11%
1	B	328	6% / 60% / 25% / • / 11%
1	C	328	6% / 58% / 30% / • / 10%
1	D	328	2% / 62% / 25% / • / 11%

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 9648 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 Epidermal growth factor receptor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	D	293	Total	C	N	O	S	0	0	0
			2355	1514	398	424	19			
1	A	291	Total	C	N	O	S	1	1	0
			2343	1504	402	418	19			
1	B	291	Total	C	N	O	S	4	1	0
			2329	1497	391	422	19			
1	C	295	Total	C	N	O	S	0	1	0
			2372	1524	404	425	19			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	790	MET	THR	engineered mutation	UNP P00533
D	948	ARG	VAL	engineered mutation	UNP P00533
A	790	MET	THR	engineered mutation	UNP P00533
A	948	ARG	VAL	engineered mutation	UNP P00533
B	790	MET	THR	engineered mutation	UNP P00533
B	948	ARG	VAL	engineered mutation	UNP P00533
C	790	MET	THR	engineered mutation	UNP P00533
C	948	ARG	VAL	engineered mutation	UNP P00533

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

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

- Molecule 3 is PHOSPHOAMINOPHOSPHONIC ACID-ADENYLATE ESTER (three-letter

code: ANP) (formula: $C_{10}H_{17}N_6O_{12}P_3$).
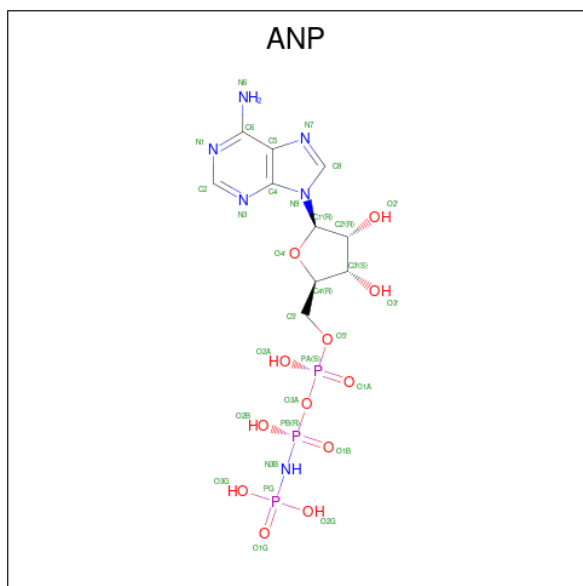
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	D	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
3	B	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
3	C	1	Total	C	N	O	P	0	0
			31	10	6	12	3		

- Molecule 4 is 3-hydroxy-N-{(3P)-3-[(4P)-2-(methylsulfanyl)-5-{2-[4-(piperazin-1-yl)anilino] pyridin-4-yl}-1H-imidazol-4-yl]phenyl}-2-[(1-oxo-1,3-dihydro-2H-isoindol-2-yl)methyl]benz amide (three-letter code: IXC) (formula: $C_{41}H_{38}N_8O_3S$) (labeled as "Ligand of Interest" by depositor).

IXC
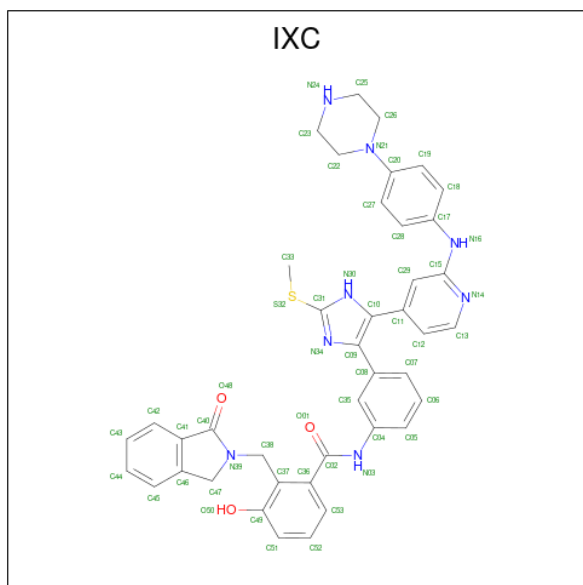
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	S	0	0
			53	41	8	3	1		

• Molecule 5 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	D	32	Total	O	0	0
			32	32		
5	A	17	Total	O	0	0
			17	17		
5	B	27	Total	O	0	0
			27	27		
5	C	24	Total	O	0	0
			24	24		

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.

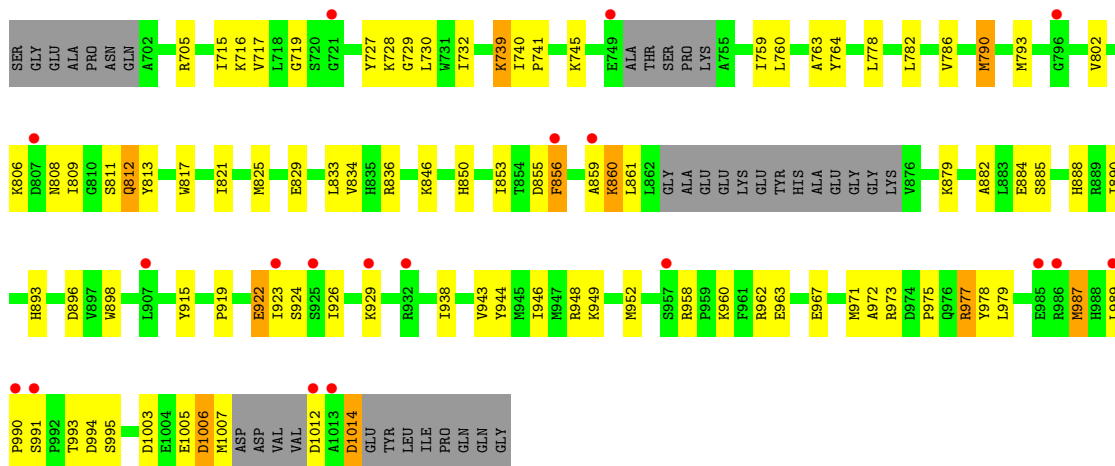• Molecule 1: Epidermal growth factor receptor
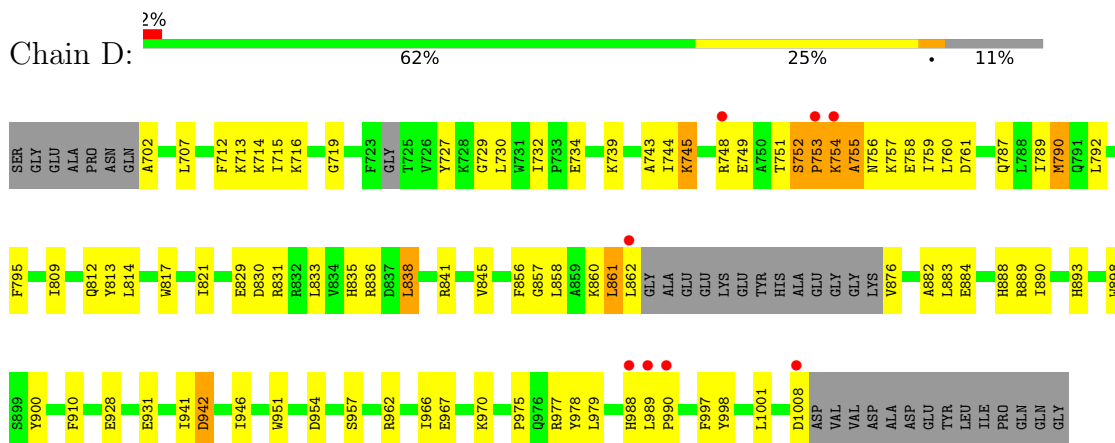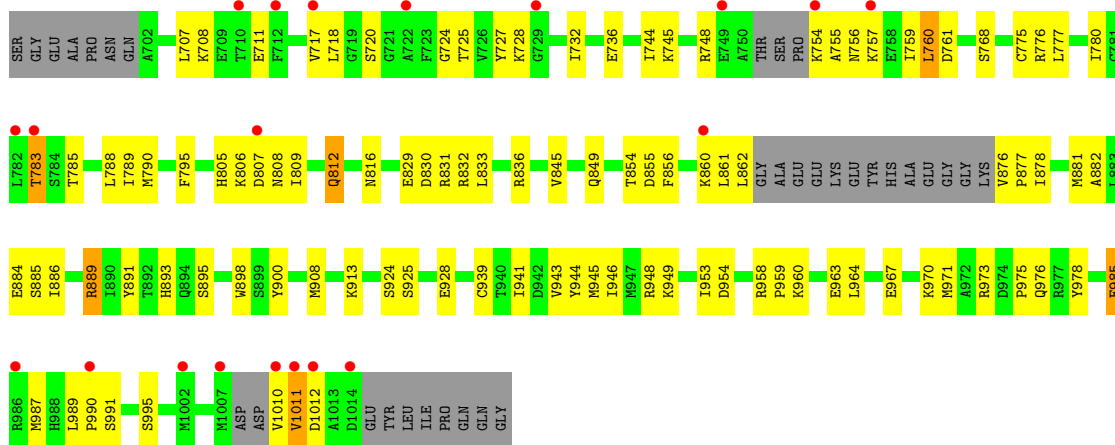

• Molecule 1: Epidermal growth factor receptor
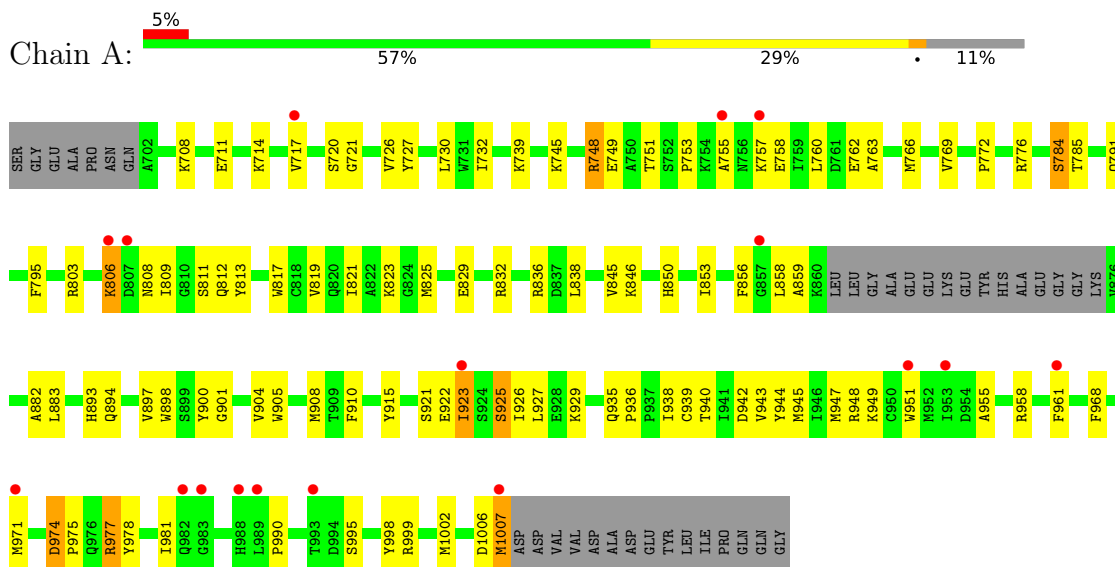
• Molecule 1: Epidermal growth factor receptor

• Molecule 1: Epidermal growth factor receptor

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	57.00Å 73.37Å 150.59Å 90.00° 99.60° 90.00°	Depositor
Resolution (Å)	56.20 – 2.49 56.20 – 2.49	Depositor EDS
% Data completeness (in resolution range)	98.8 (56.20-2.49) 90.8 (56.20-2.49)	Depositor EDS
R_{merge}	0.19	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.37 (at 2.48Å)	Xtriage
Refinement program	PHENIX 1.19_4092	Depositor
R, R_{free}	0.229 , 0.269 0.229 , 0.267	Depositor DCC
R_{free} test set	1979 reflections (4.60%)	wwPDB-VP
Wilson B-factor (Å^2)	35.8	Xtriage
Anisotropy	0.521	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 45.9	EDS
L-test for twinning[2]	$< |L| > = 0.50, < L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.000 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	9648	wwPDB-VP
Average B, all atoms (Å^2)	49.0	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 23.61 % 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 4.5024e-03. 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 ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ANP, IXC

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$ >5	RMSZ	#$|Z|$ >5
1	A	0.50	0/2397	0.70	0/3240
1	B	0.49	0/2381	0.71	0/3218
1	C	0.49	0/2424	0.70	0/3274
1	D	0.51	0/2405	0.70	0/3252
All	All	0.50	0/9607	0.70	0/12984

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	2343	0	2391	81	0
1	B	2329	0	2354	63	0
1	C	2372	0	2417	74	0
1	D	2355	0	2400	61	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	B	31	0	13	2	0
3	C	31	0	13	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	D	31	0	13	3	0
4	A	53	0	0	5	0
5	A	17	0	0	1	0
5	B	27	0	0	3	0
5	C	24	0	0	2	0
5	D	32	0	0	3	0
All	All	9648	0	9601	271	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 14.

All (271) 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:946:ILE:HD11	1:C:967:GLU:HG2	1.44	0.98
1:C:759:ILE:HD12	1:C:759:ILE:H	1.38	0.88
1:B:808:ASN:O	1:B:987:MET:SD	2.33	0.87
1:B:730:LEU:HD22	1:B:739:LYS:HB3	1.55	0.86
1:B:1006:ASP:OD1	1:B:1006:ASP:N	2.12	0.83
1:A:812:GLN:HG3	1:A:975:PRO:HG3	1.62	0.81
1:D:861:LEU:HG	1:D:862:LEU:HD22	1.63	0.81
1:A:806:LYS:HE3	1:C:970:LYS:HG3	1.60	0.81
1:D:707:LEU:HD13	1:D:789:ILE:HD13	1.65	0.79
1:C:756:ASN:HA	1:C:759:ILE:HD13	1.62	0.79
1:C:849:GLN:HG2	1:C:990:PRO:HG2	1.65	0.78
1:A:971:MET:HG2	1:A:978:TYR:CD2	2.19	0.77
1:B:879:LYS:HG2	1:B:915:TYR:HD2	1.51	0.74
1:D:889:ARG:HG2	1:D:889:ARG:HH11	1.55	0.72
1:D:941:ILE:HD12	1:D:942:ASP:N	2.05	0.72
1:D:730:LEU:HD22	1:D:739:LYS:HB3	1.71	0.71
1:B:960:LYS:H	1:B:963:GLU:HG3	1.55	0.71
1:A:971:MET:HA	1:A:978:TYR:HE2	1.56	0.70
1:B:943:VAL:HG22	1:B:971:MET:HE1	1.74	0.69
1:A:905:TRP:HD1	1:A:947:MET:HE1	1.57	0.69
1:B:813:TYR:CE2	1:B:990:PRO:HD3	2.28	0.69
1:D:732:ILE:HG13	1:D:739:LYS:HG3	1.74	0.68
1:B:884:GLU:OE2	1:B:958:ARG:NH2	2.26	0.67
1:D:942:ASP:O	1:D:946:ILE:HG13	1.95	0.67
1:D:715:ILE:HG22	1:D:716:LYS:HG2	1.76	0.66
1:A:971:MET:HA	1:A:978:TYR:CE2	2.30	0.66
1:C:759:ILE:HG23	1:C:861:LEU:HD11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:809:ILE:HB	1:A:910:PHE:HE1	1.61	0.66
1:A:945:MET:O	1:A:949:LYS:HG3	1.95	0.65
1:A:806:LYS:CE	1:C:970:LYS:HG3	2.27	0.65
1:C:718:LEU:HD21	1:C:728:LYS:HB2	1.78	0.65
1:C:727:TYR:HB2	1:C:744:ILE:HG23	1.78	0.65
1:C:908:MET:HG3	1:C:939:CYS:SG	2.36	0.65
1:C:941:ILE:O	1:C:945:MET:HG3	1.97	0.64
1:C:829:GLU:HG3	1:C:893:HIS:CG	2.32	0.64
1:D:829:GLU:HG3	1:D:893:HIS:CG	2.32	0.64
1:A:968:PHE:HA	1:A:971:MET:HB2	1.78	0.64
1:C:884:GLU:OE1	1:C:958:ARG:NH2	2.28	0.64
1:B:829:GLU:HG3	1:B:893:HIS:CG	2.33	0.63
1:D:702:ALA:N	5:D:1201:HOH:O	2.31	0.62
1:D:754:LYS:O	1:D:756:ASN:N	2.33	0.62
1:D:755:ALA:HA	1:D:758:GLU:HG2	1.81	0.62
1:D:739:LYS:NZ	5:D:1202:HOH:O	2.31	0.61
1:A:935:GLN:NE2	1:A:939:CYS:O	2.32	0.61
1:A:898:TRP:HE3	1:A:958:ARG:NH1	1.99	0.60
1:C:707:LEU:HD12	1:C:789:ILE:HD13	1.82	0.60
3:C:1102:ANP:H5'2	3:C:1102:ANP:H8	1.81	0.60
1:A:769:VAL:HG11	1:A:856:PHE:CZ	2.37	0.60
1:B:836:ARG:HH11	1:B:859:ALA:HB1	1.66	0.60
1:B:879:LYS:HG2	1:B:915:TYR:CD2	2.35	0.60
1:C:768:SER:OG	1:C:831:ARG:NH2	2.27	0.59
1:A:748:ARG:HG3	1:A:749:GLU:H	1.68	0.59
1:A:995:SER:O	1:A:999:ARG:HG3	2.03	0.58
1:A:940:THR:HG22	1:A:942:ASP:H	1.69	0.58
1:C:973:ARG:NH2	5:C:1203:HOH:O	2.36	0.58
1:C:924:SER:O	1:C:928:GLU:HG3	2.04	0.58
1:A:922:GLU:O	1:A:926:ILE:HG23	2.02	0.58
1:A:717:VAL:HG21	1:C:830:ASP:HB3	1.86	0.57
1:B:943:VAL:HG22	1:B:971:MET:CE	2.33	0.57
1:A:813:TYR:OH	1:A:990:PRO:HD3	2.05	0.57
1:A:971:MET:HG2	1:A:978:TYR:CE2	2.40	0.57
1:B:745:LYS:NZ	1:B:855:ASP:OD2	2.37	0.57
1:B:926:ILE:HA	1:B:929:LYS:HD3	1.86	0.57
1:D:833:LEU:HB3	1:D:856:PHE:CZ	2.40	0.57
1:C:783:THR:HB	1:C:785:THR:H	1.70	0.56
1:D:830:ASP:HB3	1:B:717:VAL:HG21	1.86	0.56
1:D:883:LEU:HD21	1:D:928:GLU:HG3	1.86	0.56
1:D:941:ILE:HD12	1:D:942:ASP:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:825:MET:HG2	1:A:961:PHE:CZ	2.41	0.56
1:D:888:HIS:HB2	1:D:890:ILE:HG13	1.87	0.56
1:A:730:LEU:HD22	1:A:739:LYS:HB3	1.88	0.55
1:C:943:VAL:HG22	1:C:971:MET:HE1	1.88	0.55
1:D:809:ILE:HB	1:D:910:PHE:HE1	1.72	0.55
1:C:812:GLN:HG2	1:C:975:PRO:HG3	1.87	0.55
1:A:898:TRP:O	1:A:901:GLY:N	2.40	0.55
1:A:915:TYR:CG	1:A:923:ILE:HD11	2.43	0.54
1:B:719:GLY:HA3	3:B:1102:ANP:H4'	1.88	0.54
1:D:841:ARG:HD2	3:D:1102:ANP:HNB1	1.72	0.54
1:A:938:ILE:HD12	1:A:981:ILE:HD11	1.89	0.54
1:C:708:LYS:O	1:C:711:GLU:HG2	2.08	0.54
1:D:831:ARG:O	1:D:833:LEU:HD22	2.08	0.54
1:A:811:SER:OG	1:A:975:PRO:HB2	2.07	0.54
1:A:819:VAL:HG12	1:A:823:LYS:HE2	1.89	0.54
1:D:759:ILE:HD13	1:D:861:LEU:HD13	1.90	0.53
1:B:993:THR:HG23	5:B:1218:HOH:O	2.08	0.53
1:D:795:PHE:HB2	1:D:845:VAL:O	2.09	0.53
1:B:846:LYS:NZ	1:B:1005:GLU:OE2	2.40	0.53
1:C:836:ARG:HG2	1:C:891:TYR:CD1	2.43	0.53
1:C:816:ASN:ND2	1:C:1010:VAL:O	2.42	0.53
1:C:946:ILE:CD1	1:C:967:GLU:HG2	2.29	0.53
1:A:898:TRP:CE3	1:A:951:TRP:HA	2.44	0.53
1:B:971:MET:HE3	1:B:978:TYR:CD2	2.44	0.53
1:B:759:ILE:HD12	1:B:786:VAL:HG21	1.91	0.52
1:D:719:GLY:HA3	3:D:1102:ANP:H4'	1.90	0.52
1:C:990:PRO:O	1:C:991:SER:HB2	2.09	0.52
1:A:748:ARG:HH21	1:C:832:ARG:HD2	1.74	0.52
1:B:778:LEU:HG	1:B:790:MET:HA	1.91	0.52
1:B:885:SER:HB3	1:B:890:ILE:O	2.09	0.52
1:B:850:HIS:ND1	1:B:1003:ASP:OD2	2.43	0.52
1:C:757:LYS:HA	1:C:760:LEU:HB2	1.91	0.52
1:C:944:TYR:CZ	1:C:948:ARG:HD3	2.44	0.52
1:A:821:ILE:HG23	1:A:853:ILE:HD11	1.92	0.52
1:A:974:ASP:O	1:A:977:ARG:HB3	2.09	0.52
1:C:971:MET:HG2	1:C:978:TYR:CG	2.44	0.52
1:B:829:GLU:HG3	1:B:893:HIS:CD2	2.45	0.52
1:D:962:ARG:CZ	1:D:962:ARG:HB3	2.39	0.52
1:A:900:TYR:O	1:A:904:VAL:HG23	2.10	0.52
1:D:889:ARG:HG2	1:D:889:ARG:NH1	2.25	0.51
1:A:858:LEU:HD23	4:A:1101:IXC:C42	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:748:ARG:HG3	1:A:749:GLU:N	2.25	0.51
1:A:905:TRP:CD1	1:A:947:MET:HE1	2.41	0.51
1:B:960:LYS:N	1:B:963:GLU:HG3	2.24	0.51
1:C:744:ILE:HD12	1:C:788:LEU:O	2.11	0.51
1:C:759:ILE:H	1:C:759:ILE:CD1	2.18	0.51
1:D:817:TRP:O	1:D:821:ILE:HG13	2.10	0.51
1:A:943:VAL:HG22	1:A:971:MET:CE	2.41	0.51
1:C:882:ALA:HA	1:C:898:TRP:CD2	2.45	0.51
1:D:841:ARG:HD2	3:D:1102:ANP:N3B	2.26	0.50
1:A:925:SER:O	1:A:929:LYS:HD3	2.11	0.50
1:A:856:PHE:O	4:A:1101:IXC:O50	2.29	0.50
1:A:977:ARG:O	1:A:977:ARG:HG3	2.12	0.50
1:A:955:ALA:HA	1:A:958:ARG:HE	1.77	0.50
1:C:878:ILE:HD12	1:C:886:ILE:HG23	1.93	0.50
1:D:714:LYS:HD3	1:D:727:TYR:CD1	2.47	0.50
1:D:813:TYR:OH	1:D:990:PRO:HD3	2.11	0.50
1:A:748:ARG:NH2	1:C:832:ARG:HD2	2.26	0.50
1:D:753:PRO:HB2	1:C:953:ILE:HG21	1.93	0.49
1:D:946:ILE:CD1	1:D:967:GLU:HG2	2.42	0.49
1:A:998:TYR:HD1	1:A:1002:MET:HE2	1.77	0.49
1:A:751:THR:OG1	1:A:755:ALA:HB3	2.11	0.49
1:B:882:ALA:HA	1:B:898:TRP:CD2	2.47	0.49
1:B:929:LYS:HE2	5:B:1202:HOH:O	2.12	0.49
1:C:760:LEU:HD11	1:C:780:ILE:HG21	1.95	0.49
1:C:885:SER:O	1:C:889:ARG:NH1	2.45	0.49
1:B:812:GLN:OE1	1:B:1012:ASP:HB3	2.13	0.49
1:B:802:VAL:HA	1:B:809:ILE:HD11	1.94	0.49
1:C:754:LYS:CB	1:C:759:ILE:HD11	2.43	0.49
1:B:825:MET:SD	1:B:853:ILE:HD13	2.53	0.49
1:B:919:PRO:HG2	1:B:922[B]:GLU:HB2	1.95	0.49
1:C:854:THR:OG1	1:C:855:ASP:N	2.47	0.48
1:D:946:ILE:HD13	1:D:967:GLU:HG2	1.94	0.48
1:A:836:ARG:HD3	1:A:859:ALA:HB3	1.94	0.48
1:D:714:LYS:HE3	1:D:787:GLN:OE1	2.12	0.48
1:A:766:MET:HE1	4:A:1101:IXC:C47	2.43	0.48
1:A:766:MET:HG2	1:A:856:PHE:CE2	2.48	0.48
1:A:829:GLU:HG3	1:A:893:HIS:CD2	2.48	0.48
1:A:955:ALA:HA	1:A:958:ARG:NE	2.28	0.48
1:C:836:ARG:HG2	1:C:891:TYR:CG	2.48	0.48
1:D:836:ARG:CZ	1:D:860:LYS:HG2	2.43	0.48
1:C:971:MET:HG2	1:C:978:TYR:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:812:GLN:CD	1:B:1012:ASP:HB3	2.34	0.48
1:B:972:ALA:O	1:B:975:PRO:HD3	2.13	0.48
1:A:726:VAL:HG21	4:A:1101:IXC:N34	2.29	0.48
1:C:755:ALA:O	1:C:756:ASN:C	2.53	0.48
1:D:732:ILE:CG1	1:D:739:LYS:HG3	2.44	0.47
1:D:757:LYS:O	1:D:761:ASP:N	2.30	0.47
1:D:790:MET:HE3	5:D:1206:HOH:O	2.13	0.47
1:B:782:LEU:HD22	1:B:786:VAL:HG22	1.95	0.47
1:B:938:ILE:HG12	5:B:1208:HOH:O	2.14	0.47
1:A:791:GLN:OE1	1:A:846:LYS:NZ	2.46	0.47
1:B:922[B]:GLU:O	1:B:926:ILE:HG12	2.13	0.47
1:D:752:SER:C	1:D:754:LYS:H	2.17	0.47
1:B:715:ILE:HG12	1:B:729:GLY:HA2	1.95	0.47
1:D:729:GLY:HA3	1:D:744:ILE:HD12	1.97	0.47
1:A:714:LYS:HD2	1:A:727:TYR:CD1	2.49	0.47
1:B:923:ILE:HD13	1:B:926:ILE:HD11	1.97	0.46
1:A:944:TYR:OH	1:A:948:ARG:NH1	2.42	0.46
1:A:753:PRO:O	1:A:757:LYS:HG3	2.16	0.46
1:C:717:VAL:HG22	1:C:727:TYR:CE2	2.50	0.46
1:B:949:LYS:O	1:B:952:MET:HG3	2.15	0.46
1:D:712:PHE:O	1:D:713:LYS:HD3	2.16	0.46
1:A:829:GLU:HG3	1:A:893:HIS:CG	2.51	0.46
1:B:813:TYR:HE2	1:B:989:LEU:HB2	1.80	0.46
1:C:808:ASN:OD1	1:C:808:ASN:N	2.49	0.46
1:A:908:MET:HG3	1:A:939:CYS:SG	2.56	0.46
1:B:991:SER:HB2	1:B:994:ASP:OD2	2.15	0.46
1:D:989:LEU:HB3	1:D:990:PRO:HD2	1.97	0.46
1:C:861:LEU:HD23	1:C:862:LEU:HG	1.98	0.46
1:B:745:LYS:NZ	3:B:1102:ANP:O1A	2.47	0.46
1:D:752:SER:O	1:D:754:LYS:N	2.50	0.45
1:B:836:ARG:HD2	1:B:860:LYS:HE3	1.98	0.45
1:B:946:ILE:HD11	1:B:967:GLU:HG2	1.98	0.45
1:D:835:HIS:O	1:D:836:ARG:HB2	2.15	0.45
1:A:784:SER:OG	1:A:785:THR:N	2.49	0.45
1:A:883:LEU:HD13	1:A:927:LEU:HB2	1.98	0.45
1:C:833:LEU:HB3	1:C:856:PHE:CZ	2.51	0.45
1:D:809:ILE:HG22	1:D:814:LEU:HG	1.97	0.45
1:A:817:TRP:O	1:A:821:ILE:HG13	2.16	0.45
1:A:803:ARG:NH1	5:A:1202:HOH:O	2.30	0.45
1:B:811:SER:OG	1:B:975:PRO:HB2	2.17	0.45
1:C:724:GLY:HA2	1:C:748:ARG:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:754:LYS:HB2	1:C:759:ILE:HD11	1.99	0.45
1:C:806:LYS:NZ	1:C:807:ASP:OD1	2.45	0.45
1:A:940:THR:HG22	1:A:942:ASP:N	2.31	0.45
1:C:877:PRO:O	1:C:881:MET:HG3	2.15	0.45
1:A:809:ILE:HB	1:A:910:PHE:CE1	2.46	0.45
1:A:948:ARG:HA	1:A:948:ARG:HD2	1.63	0.45
1:A:708:LYS:O	1:A:711:GLU:HG2	2.17	0.45
1:B:944:TYR:CZ	1:B:948:ARG:HD3	2.52	0.45
1:C:985:GLU:H	1:C:985:GLU:HG2	1.53	0.44
1:B:760:LEU:HD13	1:B:764:TYR:HE2	1.82	0.44
1:B:760:LEU:HA	1:B:763:ALA:HB3	1.99	0.44
1:C:732:ILE:HD11	1:C:736:GLU:O	2.17	0.44
1:A:894:GLN:O	1:A:897:VAL:HG12	2.17	0.44
1:A:971:MET:HG2	1:A:978:TYR:HD2	1.79	0.44
1:C:900:TYR:CE1	1:C:964:LEU:HD13	2.53	0.44
1:B:888:HIS:HB2	1:B:890:ILE:HG13	2.00	0.44
1:B:977:ARG:HD2	1:B:978:TYR:CE1	2.53	0.44
1:D:888:HIS:HB2	1:D:890:ILE:CG1	2.46	0.44
1:B:717:VAL:HG22	1:B:727:TYR:CE2	2.53	0.44
1:B:732:ILE:HD11	1:B:739:LYS:HG3	2.00	0.44
1:B:817:TRP:O	1:B:821:ILE:HG13	2.18	0.44
1:D:754:LYS:HE3	1:C:954:ASP:HA	2.00	0.43
1:D:884:GLU:HB2	1:D:890:ILE:HD12	1.99	0.43
1:A:732:ILE:HG12	1:A:739:LYS:NZ	2.33	0.43
1:D:857:GLY:O	1:D:861:LEU:HD23	2.19	0.43
1:A:898:TRP:CE3	1:A:958:ARG:NH1	2.84	0.43
1:D:997:PHE:CZ	1:D:1001:LEU:HD11	2.53	0.43
1:A:745:LYS:HB2	4:A:1101:IXC:C06	2.49	0.43
1:B:833:LEU:HD13	1:B:856:PHE:CE2	2.54	0.43
1:D:812:GLN:HG3	1:D:975:PRO:HG2	2.01	0.43
1:A:819:VAL:CG1	1:A:823:LYS:HE2	2.47	0.43
1:C:795:PHE:HB2	1:C:845:VAL:O	2.19	0.43
1:C:876:VAL:HG12	1:C:881:MET:CE	2.49	0.43
1:A:821:ILE:HA	1:A:853:ILE:HD11	2.00	0.42
1:B:879:LYS:HE2	1:B:915:TYR:HB2	2.01	0.42
1:D:743:ALA:HB2	1:D:792:LEU:HA	2.01	0.42
1:A:772:PRO:O	1:A:850:HIS:NE2	2.52	0.42
1:C:720:SER:HA	1:C:725:THR:HA	2.01	0.42
1:C:776:ARG:HB2	5:C:1207:HOH:O	2.19	0.42
1:C:948:ARG:HD2	1:C:948:ARG:HA	1.86	0.42
1:A:720:SER:HB3	1:A:721:GLY:H	1.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:946:ILE:HD11	1:B:967:GLU:CG	2.50	0.42
1:C:745:LYS:NZ	1:C:855:ASP:OD2	2.52	0.42
1:C:971:MET:CE	1:C:978:TYR:HB3	2.49	0.42
1:D:978:TYR:C	1:D:979:LEU:HD22	2.40	0.42
1:A:758:GLU:H	1:A:758:GLU:HG2	1.53	0.42
1:B:973:ARG:HB3	1:B:1014:ASP:HB3	2.01	0.42
1:C:805:HIS:HB2	1:C:809:ILE:HD11	2.01	0.42
1:D:838:LEU:HD13	1:D:900:TYR:HA	2.01	0.42
1:A:748:ARG:HH21	1:C:832:ARG:CD	2.31	0.42
1:A:795:PHE:HB2	1:A:845:VAL:O	2.19	0.42
1:C:777:LEU:HD11	1:C:788:LEU:HB3	2.01	0.42
1:D:966:ILE:O	1:D:970:LYS:HG3	2.19	0.42
1:B:716:LYS:HE2	1:B:728:LYS:HD3	2.02	0.42
1:B:834:VAL:HG13	1:B:896:ASP:OD2	2.20	0.42
1:D:745:LYS:HD3	1:D:858:LEU:HD21	2.01	0.42
1:C:973:ARG:HA	1:C:1012:ASP:O	2.20	0.42
1:A:772:PRO:HG3	1:A:1007:MET:HA	2.01	0.41
1:A:760:LEU:HA	1:A:763:ALA:HB3	2.02	0.41
1:D:898:TRP:CE3	1:D:951:TRP:HA	2.55	0.41
1:A:751:THR:OG1	1:A:755:ALA:CB	2.68	0.41
1:D:954:ASP:OD2	1:D:957:SER:OG	2.39	0.41
1:D:977:ARG:O	1:D:977:ARG:HG2	2.20	0.41
1:C:775:CYS:SG	1:C:854:THR:HB	2.60	0.41
1:C:949:LYS:HB3	1:C:959:PRO:HD3	2.02	0.41
1:D:882:ALA:HA	1:D:898:TRP:CD2	2.55	0.41
1:A:882:ALA:HA	1:A:898:TRP:CD2	2.56	0.41
1:A:944:TYR:CZ	1:A:948:ARG:HD3	2.55	0.41
1:B:836:ARG:HD3	1:B:859:ALA:HB3	2.02	0.41
1:B:978:TYR:O	1:B:979:LEU:HD23	2.21	0.41
1:C:756:ASN:CA	1:C:759:ILE:HD13	2.43	0.41
1:B:960:LYS:HE3	1:B:960:LYS:HB3	1.71	0.40
1:B:740:ILE:HA	1:B:741:PRO:HD3	1.94	0.40
1:C:759:ILE:HD12	1:C:759:ILE:N	2.19	0.40
1:C:889:ARG:HA	1:C:889:ARG:HD3	1.93	0.40
1:C:895:SER:O	1:C:898:TRP:HB3	2.20	0.40
1:D:831:ARG:HB3	1:D:833:LEU:HD23	2.03	0.40
1:A:936:PRO:O	1:A:939:CYS:HB2	2.21	0.40
1:C:876:VAL:HG12	1:C:881:MET:HE3	2.02	0.40
1:C:960:LYS:HB2	1:C:963:GLU:HG3	2.03	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	288/328 (88%)	270 (94%)	16 (6%)	2 (1%)	22	39
1	B	284/328 (87%)	263 (93%)	20 (7%)	1 (0%)	34	54
1	C	288/328 (88%)	275 (96%)	12 (4%)	1 (0%)	41	61
1	D	287/328 (88%)	269 (94%)	14 (5%)	4 (1%)	11	20
All	All	1147/1312 (87%)	1077 (94%)	62 (5%)	8 (1%)	22	39

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	755	ALA
1	B	806	LYS
1	C	1011	VAL
1	A	806	LYS
1	D	748	ARG
1	A	784	SER
1	D	754	LYS
1	D	753	PRO

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	258/288 (90%)	245 (95%)	13 (5%)	24	46
1	B	256/288 (89%)	238 (93%)	18 (7%)	15	29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	261/288 (91%)	246 (94%)	15 (6%)	20	39
1	D	261/288 (91%)	246 (94%)	15 (6%)	20	39
All	All	1036/1152 (90%)	975 (94%)	61 (6%)	20	37

All (61) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	734	GLU
1	D	745	LYS
1	D	749	GLU
1	D	751	THR
1	D	752	SER
1	D	760	LEU
1	D	790	MET
1	D	838	LEU
1	D	861	LEU
1	D	876	VAL
1	D	931	GLU
1	D	942	ASP
1	D	988	HIS
1	D	998	TYR
1	D	1008	ASP
1	A	748	ARG
1	A	762	GLU
1	A	776	ARG
1	A	808	ASN
1	A	832	ARG
1	A	838	LEU
1	A	921	SER
1	A	923	ILE
1	A	925	SER
1	A	974	ASP
1	A	977	ARG
1	A	1006	ASP
1	A	1007	MET
1	B	705	ARG
1	B	739	LYS
1	B	790	MET
1	B	793	MET
1	B	812	GLN
1	B	856	PHE

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Mol	Chain	Res	Type
1	B	860	LYS
1	B	861	LEU
1	B	922[A]	GLU
1	B	922[B]	GLU
1	B	924	SER
1	B	962	ARG
1	B	977	ARG
1	B	987	MET
1	B	995	SER
1	B	1006	ASP
1	B	1007	MET
1	B	1014	ASP
1	C	760	LEU
1	C	761	ASP
1	C	783	THR
1	C	790	MET
1	C	812	GLN
1	C	860	LYS
1	C	889	ARG
1	C	913	LYS
1	C	925	SER
1	C	976	GLN
1	C	985	GLU
1	C	987	MET
1	C	989	LEU
1	C	995	SER
1	C	1011	VAL

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

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 (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 7 ligands modelled in this entry, 3 are monoatomic - leaving 4 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	ANP	B	1102	2	29,33,33	0.94	3 (10%)	31,52,52	1.36	5 (16%)
3	ANP	C	1102	2	29,33,33	1.09	3 (10%)	31,52,52	1.20	4 (12%)
4	IXC	A	1101	-	58,60,60	2.95	19 (32%)	75,85,85	2.10	14 (18%)
3	ANP	D	1102	2	29,33,33	1.01	3 (10%)	31,52,52	1.32	5 (16%)

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	ANP	B	1102	2	-	7/14/38/38	0/3/3/3
3	ANP	C	1102	2	-	5/14/38/38	0/3/3/3
4	IXC	A	1101	-	-	7/28/50/50	0/8/8/8
3	ANP	D	1102	2	-	3/14/38/38	0/3/3/3

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1101	IXC	C08-C09	11.37	1.62	1.49
4	A	1101	IXC	C11-C10	10.09	1.60	1.49
4	A	1101	IXC	C31-S32	8.68	1.83	1.75
4	A	1101	IXC	C40-N39	5.06	1.43	1.36
4	A	1101	IXC	C15-N16	4.35	1.46	1.38
4	A	1101	IXC	C41-C40	4.21	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1101	IXC	C02-N03	3.91	1.46	1.35
4	A	1101	IXC	C20-N21	3.56	1.48	1.38
4	A	1101	IXC	C47-C46	2.98	1.54	1.50
3	C	1102	ANP	PG-O1G	2.98	1.50	1.46
4	A	1101	IXC	C38-C37	2.93	1.56	1.51
3	D	1102	ANP	PG-O1G	2.92	1.50	1.46
4	A	1101	IXC	C17-N16	2.89	1.47	1.40
4	A	1101	IXC	C04-N03	2.69	1.47	1.41
4	A	1101	IXC	C22-N21	2.67	1.50	1.46
3	C	1102	ANP	PG-N3B	2.66	1.70	1.63
4	A	1101	IXC	C26-N21	2.61	1.50	1.46
3	C	1102	ANP	PB-N3B	2.31	1.69	1.63
3	B	1102	ANP	PG-N3B	2.31	1.69	1.63
3	B	1102	ANP	PB-N3B	2.22	1.69	1.63
3	D	1102	ANP	PG-N3B	2.18	1.69	1.63
3	B	1102	ANP	PG-O1G	2.17	1.49	1.46
4	A	1101	IXC	C19-C18	2.16	1.42	1.38
4	A	1101	IXC	C53-C36	-2.10	1.36	1.39
4	A	1101	IXC	C09-N34	-2.09	1.32	1.37
3	D	1102	ANP	PB-O1B	2.08	1.49	1.46
4	A	1101	IXC	C35-C04	-2.07	1.36	1.39
4	A	1101	IXC	C51-C49	-2.04	1.35	1.39

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	1101	IXC	C46-C47-N39	11.94	108.11	102.46
4	A	1101	IXC	C38-N39-C47	5.58	128.22	122.36
3	B	1102	ANP	O1G-PG-N3B	-3.83	106.14	111.77
4	A	1101	IXC	C13-N14-C15	3.62	122.36	117.22
3	C	1102	ANP	O2B-PB-O1B	-3.55	102.47	109.92
4	A	1101	IXC	C47-C46-C41	-3.44	107.60	109.75
3	D	1102	ANP	O1B-PB-N3B	-3.44	106.70	111.77
4	A	1101	IXC	C53-C36-C37	3.39	123.79	119.78
4	A	1101	IXC	C12-C13-N14	-3.19	120.00	123.96
3	B	1102	ANP	O2B-PB-O1B	-3.03	103.58	109.92
3	C	1102	ANP	O1B-PB-N3B	-2.99	107.36	111.77
3	D	1102	ANP	O2B-PB-O1B	-2.94	103.76	109.92
4	A	1101	IXC	C23-C22-N21	2.64	116.19	110.48
4	A	1101	IXC	C07-C08-C09	2.59	124.72	120.61
3	B	1102	ANP	O3A-PB-N3B	2.52	113.59	106.59
4	A	1101	IXC	C10-C09-N34	-2.42	107.22	113.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	1101	IXC	C47-N39-C40	-2.42	108.42	113.08
3	B	1102	ANP	O3G-PG-O1G	-2.36	107.51	113.45
3	D	1102	ANP	PB-O3A-PA	-2.35	124.33	132.62
4	A	1101	IXC	C33-S32-C31	-2.29	100.56	102.27
3	C	1102	ANP	PB-O3A-PA	-2.28	124.59	132.62
4	A	1101	IXC	C09-C10-N30	-2.27	107.64	113.76
3	D	1102	ANP	C4-C5-N7	2.26	111.76	109.40
3	B	1102	ANP	PB-O3A-PA	-2.13	125.11	132.62
3	D	1102	ANP	O3G-PG-O1G	-2.13	108.10	113.45
4	A	1101	IXC	C25-N24-C23	2.10	116.37	110.34
4	A	1101	IXC	C29-C15-N14	-2.06	119.88	122.75
3	C	1102	ANP	C5-C6-N6	2.02	123.42	120.35

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	D	1102	ANP	PG-N3B-PB-O1B
3	D	1102	ANP	PA-O3A-PB-O1B
3	B	1102	ANP	PB-N3B-PG-O1G
3	B	1102	ANP	PG-N3B-PB-O1B
3	B	1102	ANP	PA-O3A-PB-O1B
3	B	1102	ANP	PA-O3A-PB-O2B
3	C	1102	ANP	PG-N3B-PB-O1B
3	C	1102	ANP	PA-O3A-PB-O1B
3	C	1102	ANP	PA-O3A-PB-O2B
3	C	1102	ANP	C3'-C4'-C5'-O5'
4	A	1101	IXC	C07-C08-C09-N34
4	A	1101	IXC	C35-C08-C09-N34
4	A	1101	IXC	C19-C20-N21-C22
4	A	1101	IXC	C27-C20-N21-C22
3	C	1102	ANP	O4'-C4'-C5'-O5'
4	A	1101	IXC	C37-C38-N39-C47
3	B	1102	ANP	O4'-C4'-C5'-O5'
3	B	1102	ANP	C5'-O5'-PA-O3A
3	B	1102	ANP	C3'-C4'-C5'-O5'
3	D	1102	ANP	PA-O3A-PB-O2B
4	A	1101	IXC	O01-C02-C36-C53
4	A	1101	IXC	N03-C02-C36-C53

There are no ring outliers.
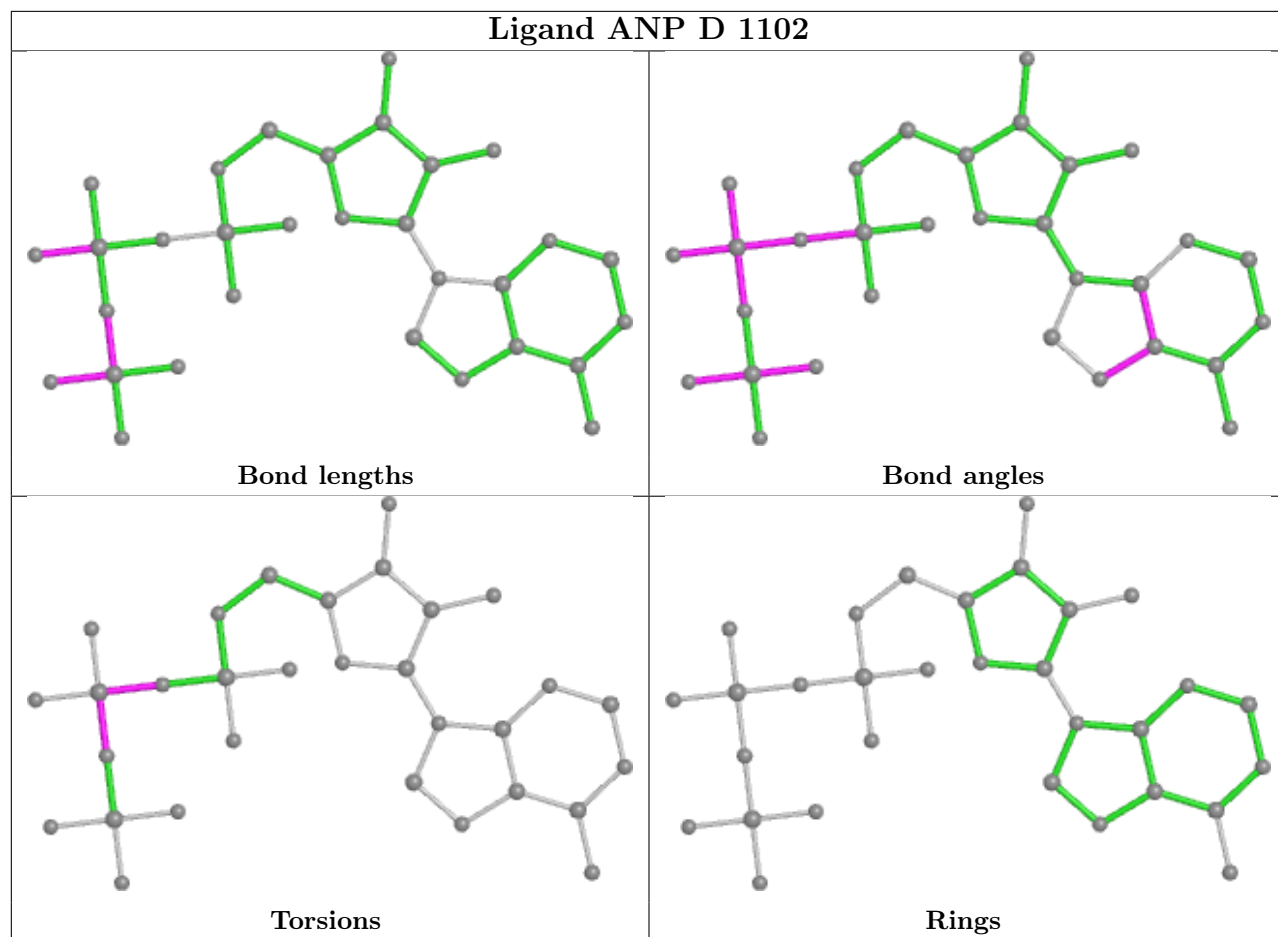
4 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	1102	ANP	2	0
3	C	1102	ANP	1	0
4	A	1101	IXC	5	0
3	D	1102	ANP	3	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 ANP B 1102

Bond lengths

Bond angles

Torsions

Rings

Ligand ANP C 1102

Bond lengths

Bond angles

Torsions

Rings

Ligand IXC A 1101

Bond lengths

Bond angles

Torsions

Rings

Ligand ANP D 1102
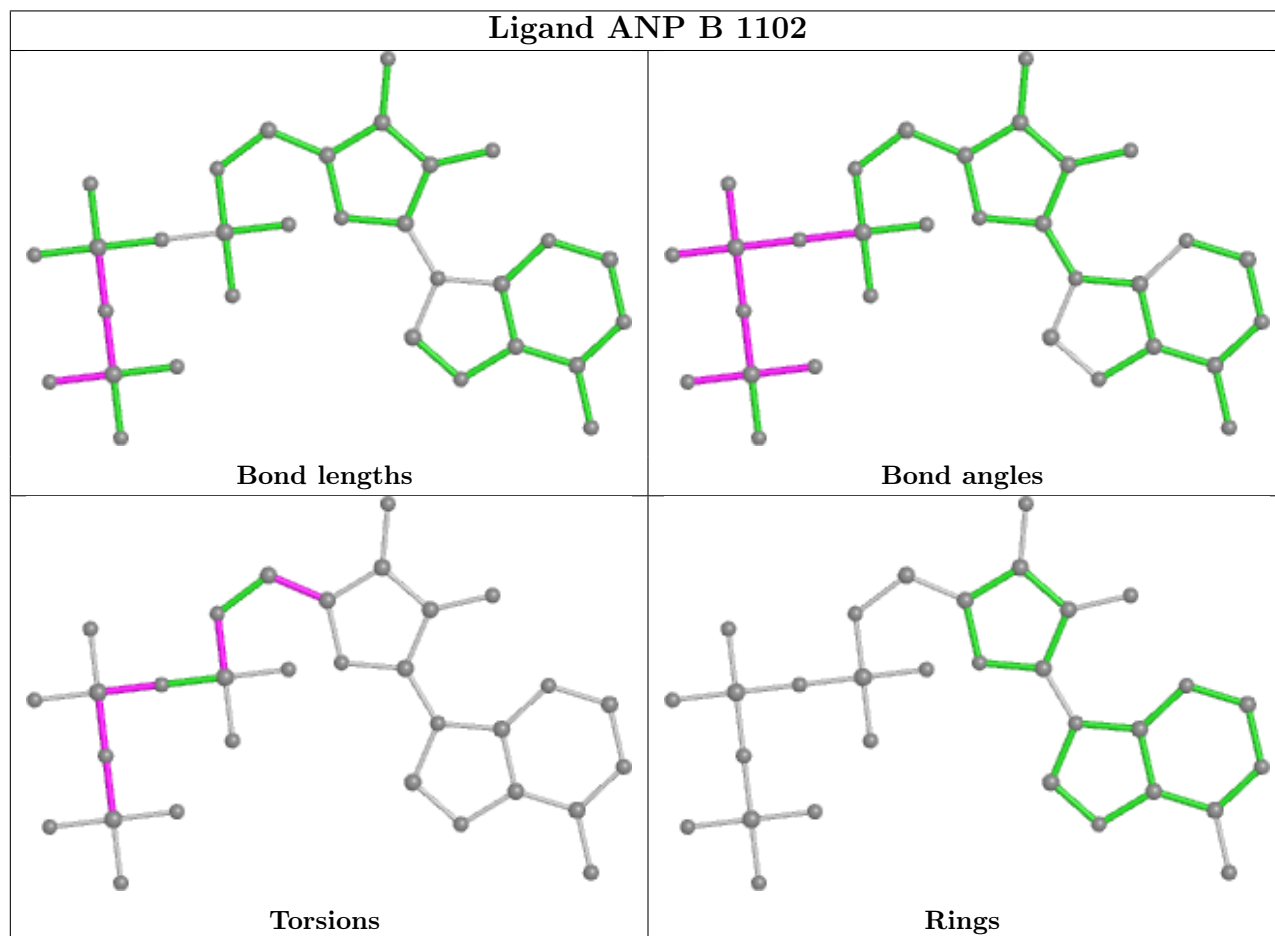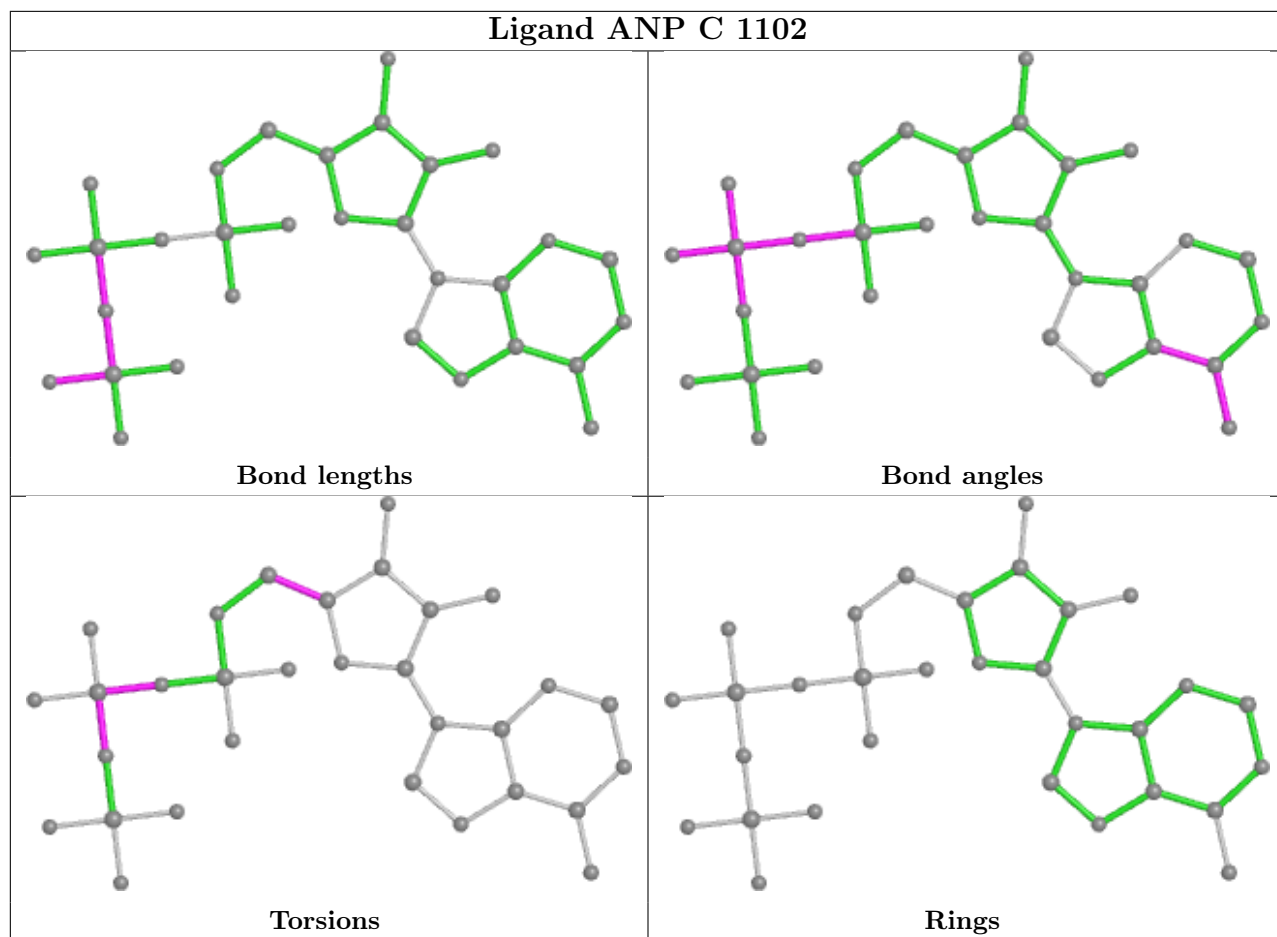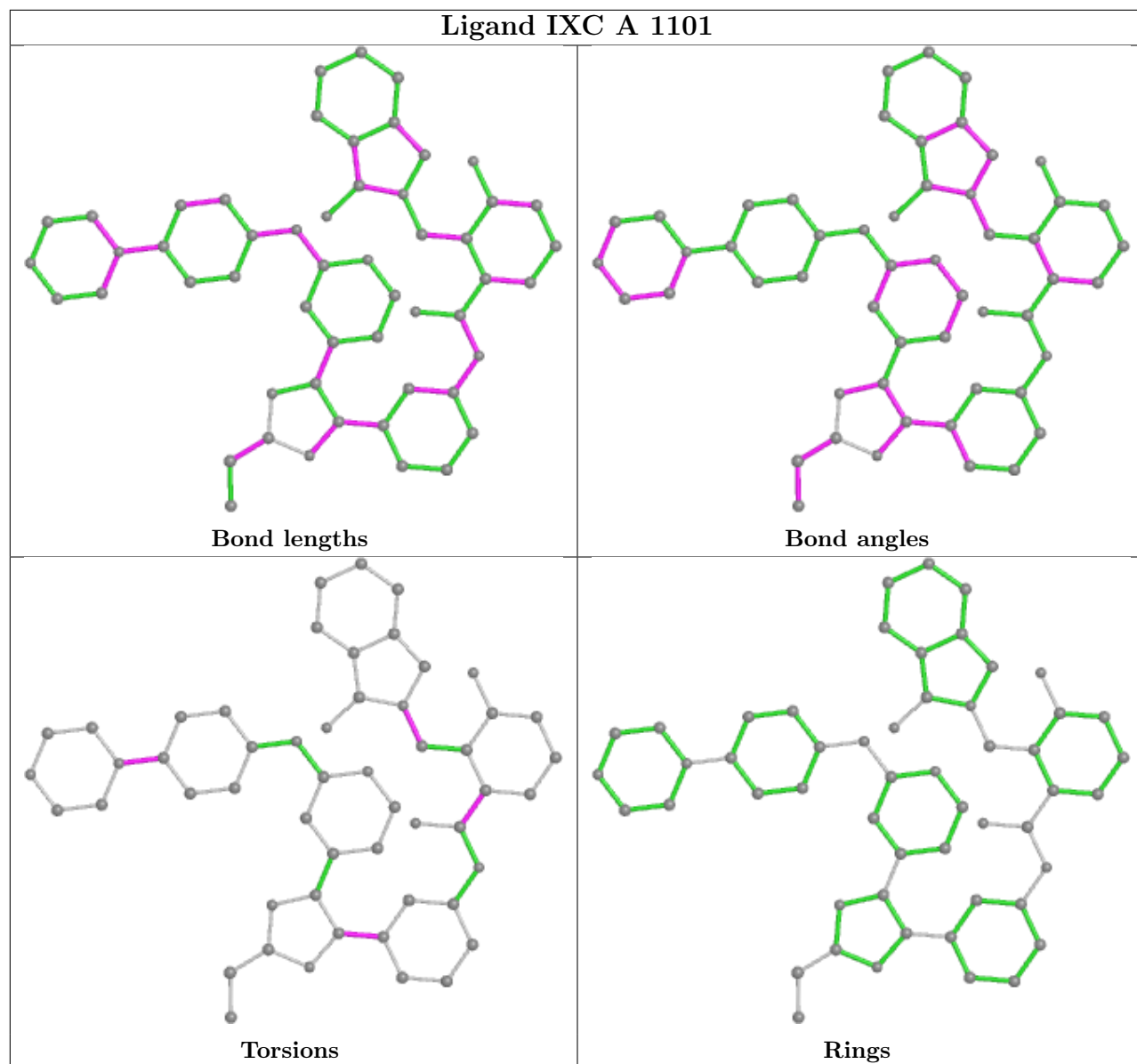
5.7 Other polymers ⓘ

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	291/328 (88%)	0.64	17 (5%)	23	24	37, 53, 78, 97	1 (0%)
1	B	291/328 (88%)	0.51	19 (6%)	18	19	29, 46, 73, 90	0
1	C	295/328 (89%)	0.55	20 (6%)	17	17	31, 46, 78, 89	0
1	D	293/328 (89%)	0.39	8 (2%)	54	58	30, 43, 71, 84	0
All	All	1170/1312 (89%)	0.53	64 (5%)	25	26	29, 47, 76, 97	1 (0%)

All (64) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	990	PRO	4.9
1	C	1010	VAL	4.3
1	C	807	ASP	4.1
1	C	782	LEU	4.1
1	D	753	PRO	4.0
1	B	1012	ASP	4.0
1	A	982	GLN	3.9
1	B	986	ARG	3.8
1	B	807	ASP	3.7
1	B	749	GLU	3.7
1	B	1013	ALA	3.7
1	C	754	LYS	3.4
1	D	862	LEU	3.4
1	D	989	LEU	3.3
1	A	989	LEU	3.3
1	D	1008	ASP	3.2
1	B	721	GLY	3.2
1	A	951	TRP	3.2
1	D	754	LYS	3.1
1	A	953	ILE	3.1
1	B	859	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	C	1011	VAL	2.9
1	B	929	LYS	2.9
1	D	990	PRO	2.9
1	A	923	ILE	2.9
1	A	755	ALA	2.9
1	B	989	LEU	2.9
1	C	722	ALA	2.8
1	A	993	THR	2.8
1	D	988	HIS	2.8
1	A	806	LYS	2.7
1	C	757	LYS	2.7
1	B	796	GLY	2.7
1	B	991	SER	2.7
1	C	712	PHE	2.6
1	A	807	ASP	2.6
1	C	1007	MET	2.6
1	C	729	GLY	2.6
1	A	961	PHE	2.5
1	B	923	ILE	2.5
1	B	925	SER	2.5
1	D	748	ARG	2.5
1	C	717	VAL	2.5
1	A	857	GLY	2.5
1	C	860	LYS	2.4
1	C	783	THR	2.4
1	A	988	HIS	2.3
1	B	907	LEU	2.3
1	C	986	ARG	2.3
1	C	990	PRO	2.3
1	A	1007	MET	2.3
1	C	1002	MET	2.2
1	A	983	GLY	2.2
1	A	717	VAL	2.1
1	A	971	MET	2.1
1	C	749	GLU	2.1
1	C	710	THR	2.1
1	B	932	ARG	2.1
1	B	957	SER	2.1
1	A	757	LYS	2.1
1	B	856	PHE	2.0
1	C	1012	ASP	2.0
1	B	985	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	C	1014	ASP	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
2	MG	D	1101	1/1	0.58	0.14	45,45,45,45	0
2	MG	B	1101	1/1	0.65	0.17	55,55,55,55	0
2	MG	C	1101	1/1	0.85	0.14	53,53,53,53	0
4	IXC	A	1101	53/53	0.85	0.27	43,50,65,68	53
3	ANP	C	1102	31/31	0.88	0.26	46,56,66,70	0
3	ANP	D	1102	31/31	0.90	0.19	37,46,51,55	0
3	ANP	B	1102	31/31	0.90	0.21	43,55,63,64	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 IXC A 1101:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
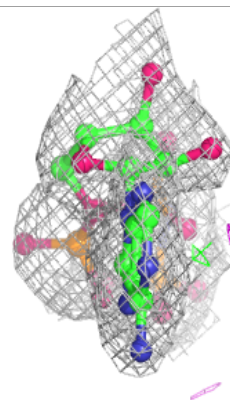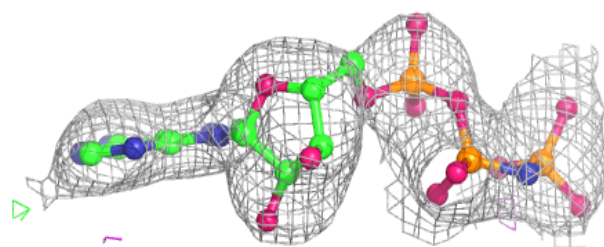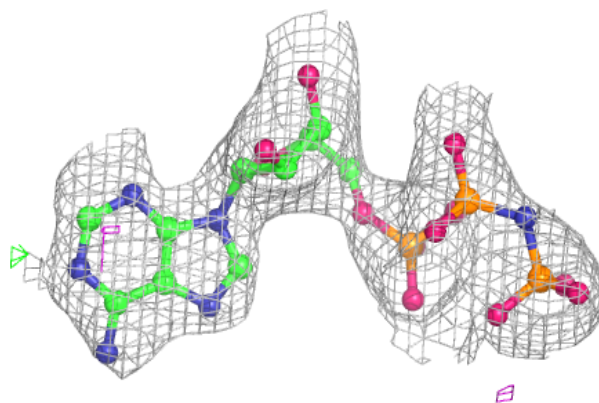and green (positive)
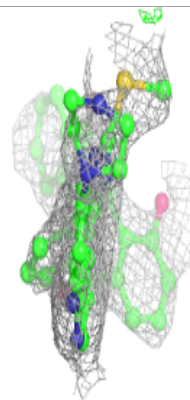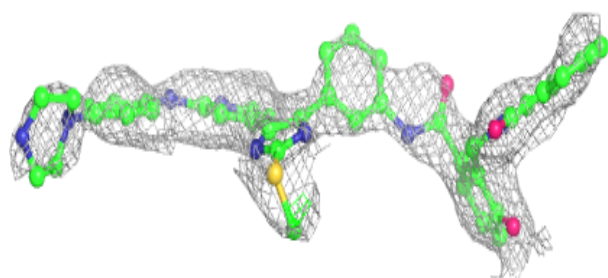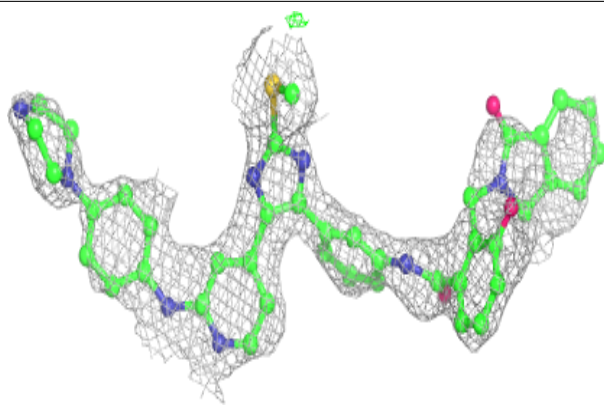
Electron density around ANP C 1102:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
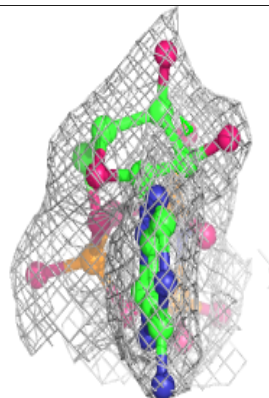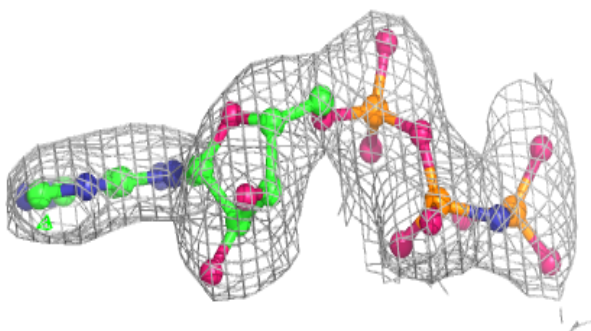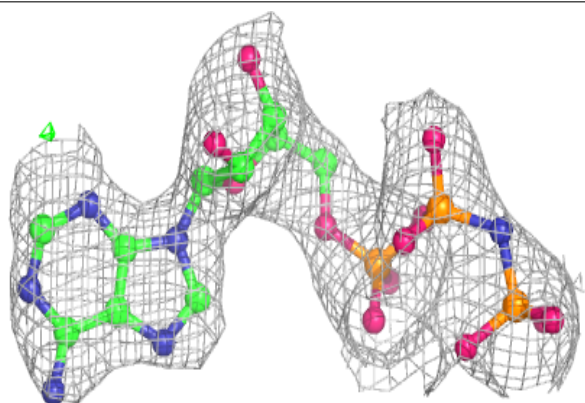$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
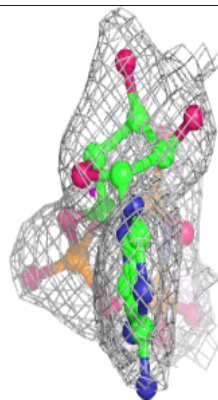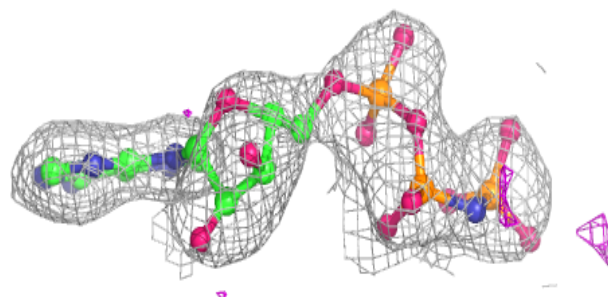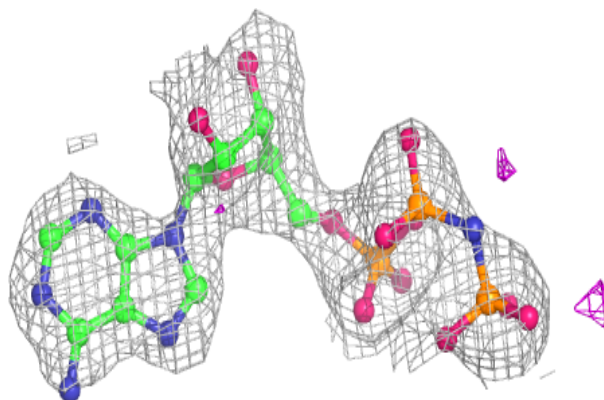
Electron density around ANP D 1102:

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

Electron density around ANP B 1102:

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