



wwPDB X-ray Structure Validation Summary Report ⓘ

Apr 18, 2026 – 01:45 PM UTC

PDB ID : 3ASV / pdb_00003asv
Title : The Closed form of serine dehydrogenase complexed with NADP+
Authors : Yamazawa, R.; Nakajima, Y.; Yoshimoto, T.; Ito, K.
Deposited on : 2010-12-21
Resolution : 2.70 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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

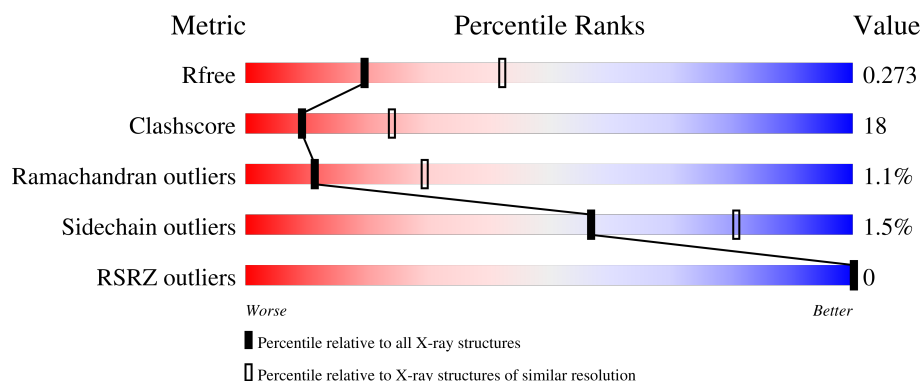
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3538 (2.70-2.70)
Clashscore	190562	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)
RSRZ outliers	180081	3538 (2.70-2.70)

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 $\leq 5\%$. 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	248	73% 26% .
1	B	248	72% 27% .
1	C	248	68% 29% .
1	D	248	62% 37% .
1	E	248	55% 43% .

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Mol	Chain	Length	Quality of chain
1	F	248	 A horizontal bar chart showing the quality of the chain. The bar is divided into two segments: a green segment on the left representing 56% and a yellow segment on the right representing 42%. A small orange square is at the far right end of the bar, and a small black dot is at the very end of the bar.

2 Entry composition [i](#)

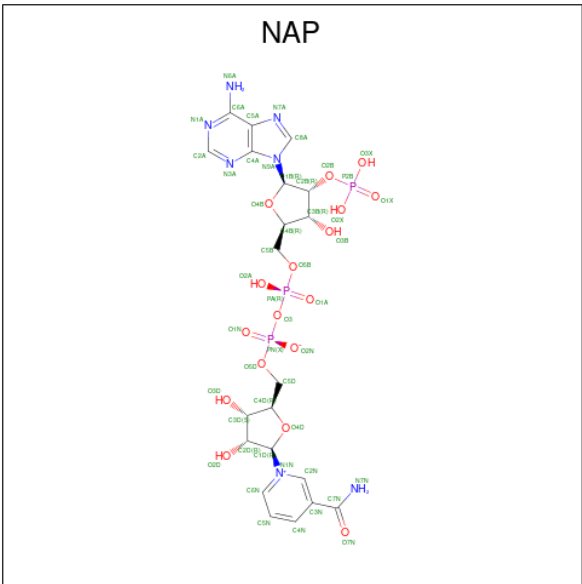
There are 4 unique types of molecules in this entry. The entry contains 12045 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Short-chain dehydrogenase/reductase SDR.

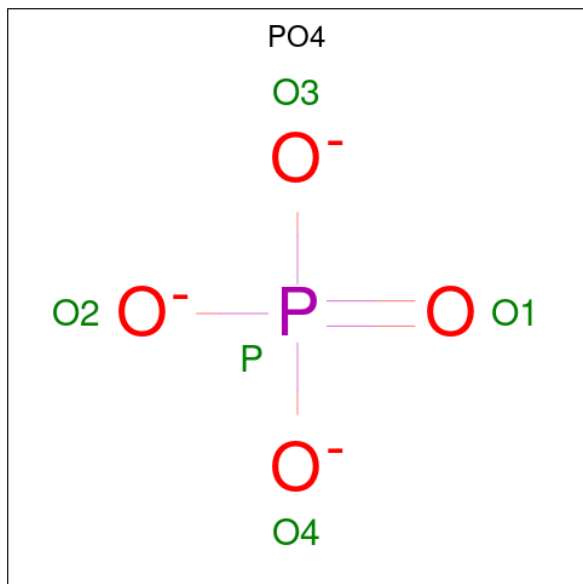
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	248	Total	C	N	O	S	0	0	0
			1891	1186	341	354	10			
1	B	248	Total	C	N	O	S	0	0	0
			1911	1196	341	364	10			
1	C	248	Total	C	N	O	S	0	0	0
			1900	1191	340	359	10			
1	D	248	Total	C	N	O	S	0	0	0
			1907	1194	341	362	10			
1	E	248	Total	C	N	O	S	0	0	0
			1891	1185	338	358	10			
1	F	248	Total	C	N	O	S	0	0	0
			1880	1177	334	359	10			

- Molecule 2 is NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE (CCD ID: NAP) (formula: C₂₁H₂₈N₇O₁₇P₃).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	B	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	C	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	D	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	E	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	F	1	Total	C	N	O	P	0	0
			48	21	7	17	3		

- Molecule 3 is PHOSPHATE ION (CCD ID: PO4) (formula: O₄P).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	O	P	0	0
			5	4	1		
3	B	1	Total	O	P	0	0
			5	4	1		
3	C	1	Total	O	P	0	0
			5	4	1		
3	D	1	Total	O	P	0	0
			5	4	1		
3	E	1	Total	O	P	0	0
			5	4	1		
3	F	1	Total	O	P	0	0
			5	4	1		

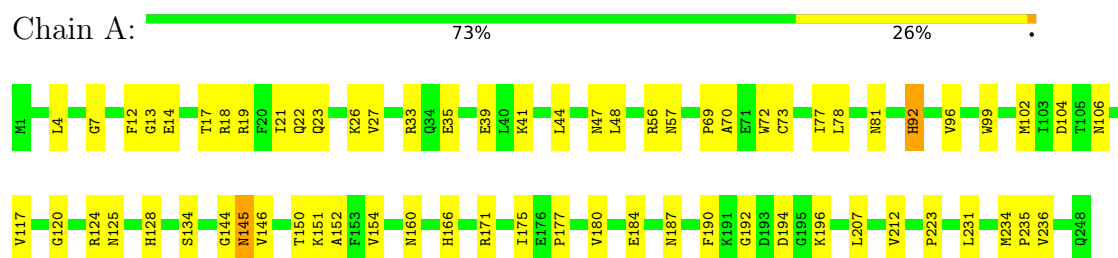
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	72	Total 72	O 72	0	0
4	B	66	Total 66	O 66	0	0
4	C	65	Total 65	O 65	0	0
4	D	52	Total 52	O 52	0	0
4	E	47	Total 47	O 47	0	0
4	F	45	Total 45	O 45	0	0

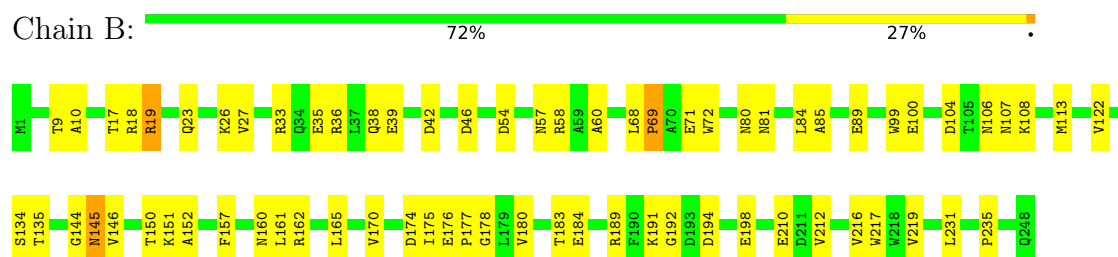
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

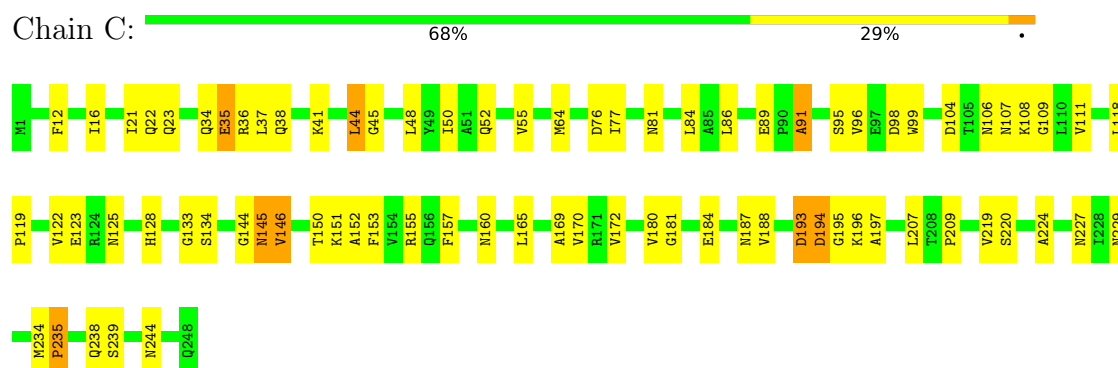
- Molecule 1: Short-chain dehydrogenase/reductase SDR



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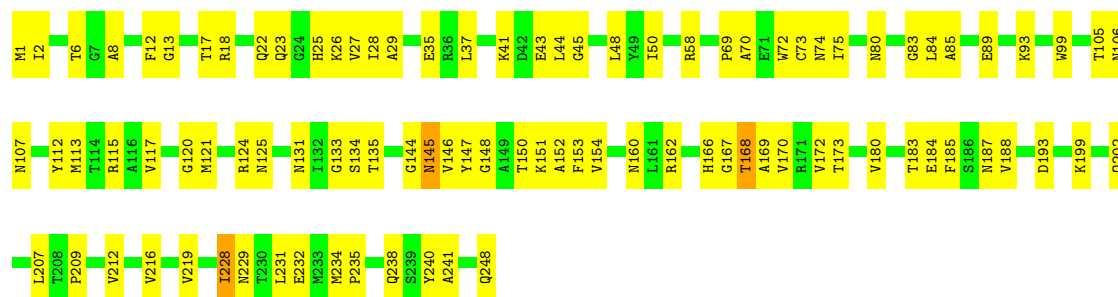


- Molecule 1: Short-chain dehydrogenase/reductase SDR

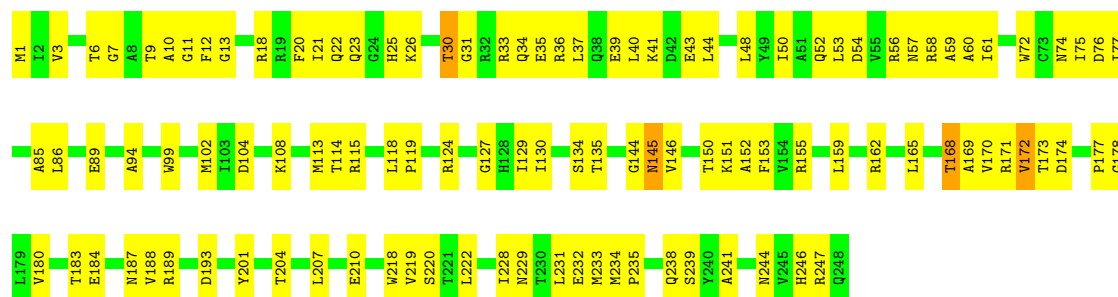


- Molecule 1: Short-chain dehydrogenase/reductase SDR

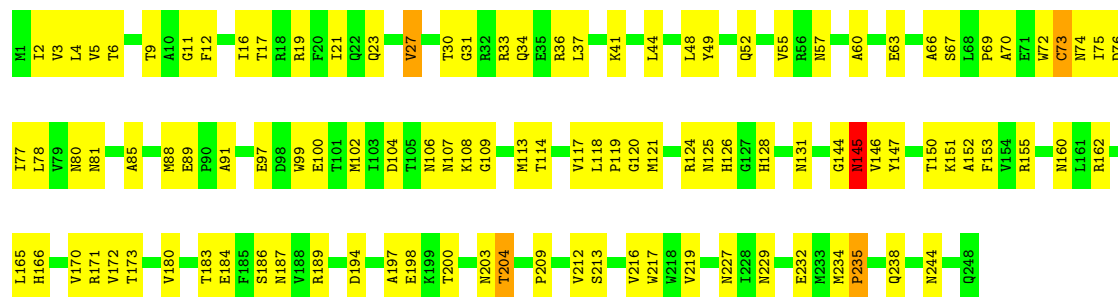




- Molecule 1: Short-chain dehydrogenase/reductase SDR



- Molecule 1: Short-chain dehydrogenase/reductase SDR



4 Data and refinement statistics

Property	Value	Source
Space group	P 64	Depositor
Cell constants a, b, c, α , β , γ	113.86Å 113.86Å 197.54Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	20.00 – 2.70 20.00 – 2.70	Depositor EDS
% Data completeness (in resolution range)	99.8 (20.00-2.70) 100.0 (20.00-2.70)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.96 (at 2.71Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.192 , 0.273 0.192 , 0.273	Depositor DCC
R_{free} test set	1991 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	33.5	Xtriage
Anisotropy	0.180	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 14.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.326 for h,-h-k,-l	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	12045	wwPDB-VP
Average B, all atoms (Å ²)	34.0	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 27.47 % 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 2.1867e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: PO4, NAP

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	0.44	0/1927	0.93	3/2620 (0.1%)
1	B	0.45	0/1947	0.93	5/2645 (0.2%)
1	C	0.45	0/1936	0.97	8/2631 (0.3%)
1	D	0.45	0/1943	0.93	4/2640 (0.2%)
1	E	0.44	0/1927	0.93	4/2621 (0.2%)
1	F	0.44	0/1916	0.96	8/2609 (0.3%)
All	All	0.44	0/11596	0.94	32/15766 (0.2%)

There are no bond length outliers.

The worst 5 of 32 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	152	ALA	N-CA-C	-7.79	102.87	111.36
1	C	91	ALA	N-CA-C	7.47	120.36	111.33
1	F	152	ALA	N-CA-C	-6.79	103.68	112.23
1	D	45	GLY	N-CA-C	6.67	121.66	112.52
1	D	152	ALA	N-CA-C	-6.55	103.63	111.69

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1891	0	1861	57	0
1	B	1911	0	1881	46	0
1	C	1900	0	1869	66	0
1	D	1907	0	1877	92	0
1	E	1891	0	1850	105	0
1	F	1880	0	1818	87	0
2	A	48	0	25	2	0
2	B	48	0	25	2	0
2	C	48	0	25	3	0
2	D	48	0	25	2	0
2	E	48	0	25	3	0
2	F	48	0	25	2	0
3	A	5	0	0	0	0
3	B	5	0	0	0	0
3	C	5	0	0	0	0
3	D	5	0	0	0	0
3	E	5	0	0	0	0
3	F	5	0	0	0	0
4	A	72	0	0	5	0
4	B	66	0	0	3	0
4	C	65	0	0	6	0
4	D	52	0	0	0	0
4	E	47	0	0	2	0
4	F	45	0	0	4	0
All	All	12045	0	11306	416	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 18.

The worst 5 of 416 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:E:168:THR:HG23	1:E:170:VAL:H	1.12	1.08
1:D:168:THR:HG23	1:D:170:VAL:H	1.30	0.96
1:E:184:GLU:HA	1:E:187:ASN:HD22	1.31	0.93
1:F:41:LYS:HA	1:F:48:LEU:HD23	1.60	0.84
1:F:17:THR:HG23	1:F:27:VAL:HG11	1.59	0.83

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	246/248 (99%)	222 (90%)	21 (8%)	3 (1%)	10	27
1	B	246/248 (99%)	230 (94%)	13 (5%)	3 (1%)	10	27
1	C	246/248 (99%)	229 (93%)	15 (6%)	2 (1%)	16	37
1	D	246/248 (99%)	226 (92%)	18 (7%)	2 (1%)	16	37
1	E	246/248 (99%)	229 (93%)	15 (6%)	2 (1%)	16	37
1	F	246/248 (99%)	222 (90%)	20 (8%)	4 (2%)	7	20
All	All	1476/1488 (99%)	1358 (92%)	102 (7%)	16 (1%)	11	29

5 of 16 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	145	ASN
1	B	145	ASN
1	C	145	ASN
1	C	193	ASP
1	D	145	ASN

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	196/202 (97%)	192 (98%)	4 (2%)	48	76
1	B	201/202 (100%)	198 (98%)	3 (2%)	57	81
1	C	198/202 (98%)	194 (98%)	4 (2%)	48	76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	200/202 (99%)	198 (99%)	2 (1%)	68	86
1	E	196/202 (97%)	192 (98%)	4 (2%)	48	76
1	F	193/202 (96%)	192 (100%)	1 (0%)	81	92
All	All	1184/1212 (98%)	1166 (98%)	18 (2%)	57	81

5 of 18 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	E	168	THR
1	F	145	ASN
1	E	210	GLU
1	C	84	LEU
1	E	30	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 41 such sidechains are listed below:

Mol	Chain	Res	Type
1	E	107	ASN
1	F	131	ASN
1	E	166	HIS
1	F	80	ASN
1	F	187	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

12 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	NAP	C	303	-	50,52,52	2.26	11 (22%)	71,80,80	1.60	8 (11%)
2	NAP	B	302	-	50,52,52	2.27	11 (22%)	71,80,80	1.57	9 (12%)
3	PO4	F	316	-	4,4,4	1.65	0	6,6,6	0.47	0
2	NAP	D	304	-	50,52,52	2.14	12 (24%)	71,80,80	1.62	10 (14%)
3	PO4	A	311	-	4,4,4	1.63	0	6,6,6	0.47	0
3	PO4	B	312	-	4,4,4	1.65	1 (25%)	6,6,6	0.48	0
3	PO4	C	313	-	4,4,4	1.62	0	6,6,6	0.46	0
2	NAP	E	305	-	50,52,52	2.15	11 (22%)	71,80,80	1.56	8 (11%)
3	PO4	E	315	-	4,4,4	1.69	0	6,6,6	0.47	0
3	PO4	D	314	-	4,4,4	1.65	0	6,6,6	0.46	0
2	NAP	A	301	-	50,52,52	2.20	13 (26%)	71,80,80	1.57	8 (11%)
2	NAP	F	306	-	50,52,52	2.22	11 (22%)	71,80,80	1.64	11 (15%)

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	NAP	C	303	-	-	12/35/67/67	0/5/5/5
2	NAP	B	302	-	-	14/35/67/67	0/5/5/5
2	NAP	D	304	-	-	11/35/67/67	0/5/5/5
2	NAP	E	305	-	-	12/35/67/67	0/5/5/5
2	NAP	A	301	-	-	10/35/67/67	0/5/5/5
2	NAP	F	306	-	-	12/35/67/67	0/5/5/5

The worst 5 of 70 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	301	NAP	O7N-C7N	9.26	1.41	1.24
2	F	306	NAP	O7N-C7N	9.05	1.41	1.24
2	E	305	NAP	O7N-C7N	8.98	1.40	1.24
2	B	302	NAP	O7N-C7N	8.95	1.40	1.24
2	D	304	NAP	O7N-C7N	8.84	1.40	1.24

The worst 5 of 54 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	304	NAP	N3A-C2A-N1A	-6.94	118.08	128.58
2	A	301	NAP	N3A-C2A-N1A	-6.81	118.28	128.58
2	E	305	NAP	N3A-C2A-N1A	-6.77	118.34	128.58
2	C	303	NAP	N3A-C2A-N1A	-6.72	118.41	128.58
2	F	306	NAP	N3A-C2A-N1A	-6.69	118.45	128.58

There are no chirality outliers.

5 of 71 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	301	NAP	C5B-O5B-PA-O1A
2	A	301	NAP	C5B-O5B-PA-O2A
2	A	301	NAP	C5B-O5B-PA-O3
2	A	301	NAP	O4B-C4B-C5B-O5B
2	B	302	NAP	C5B-O5B-PA-O1A

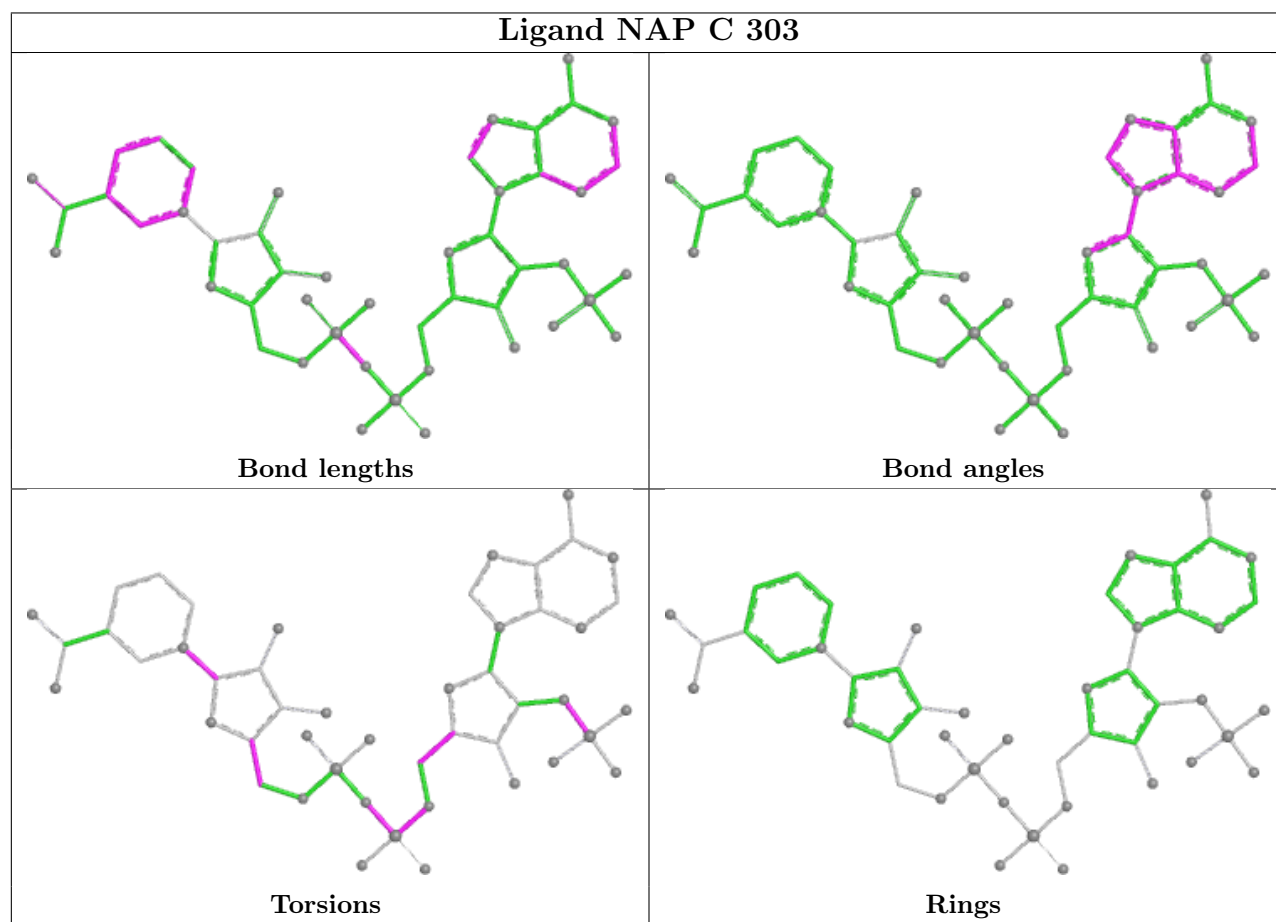
There are no ring outliers.

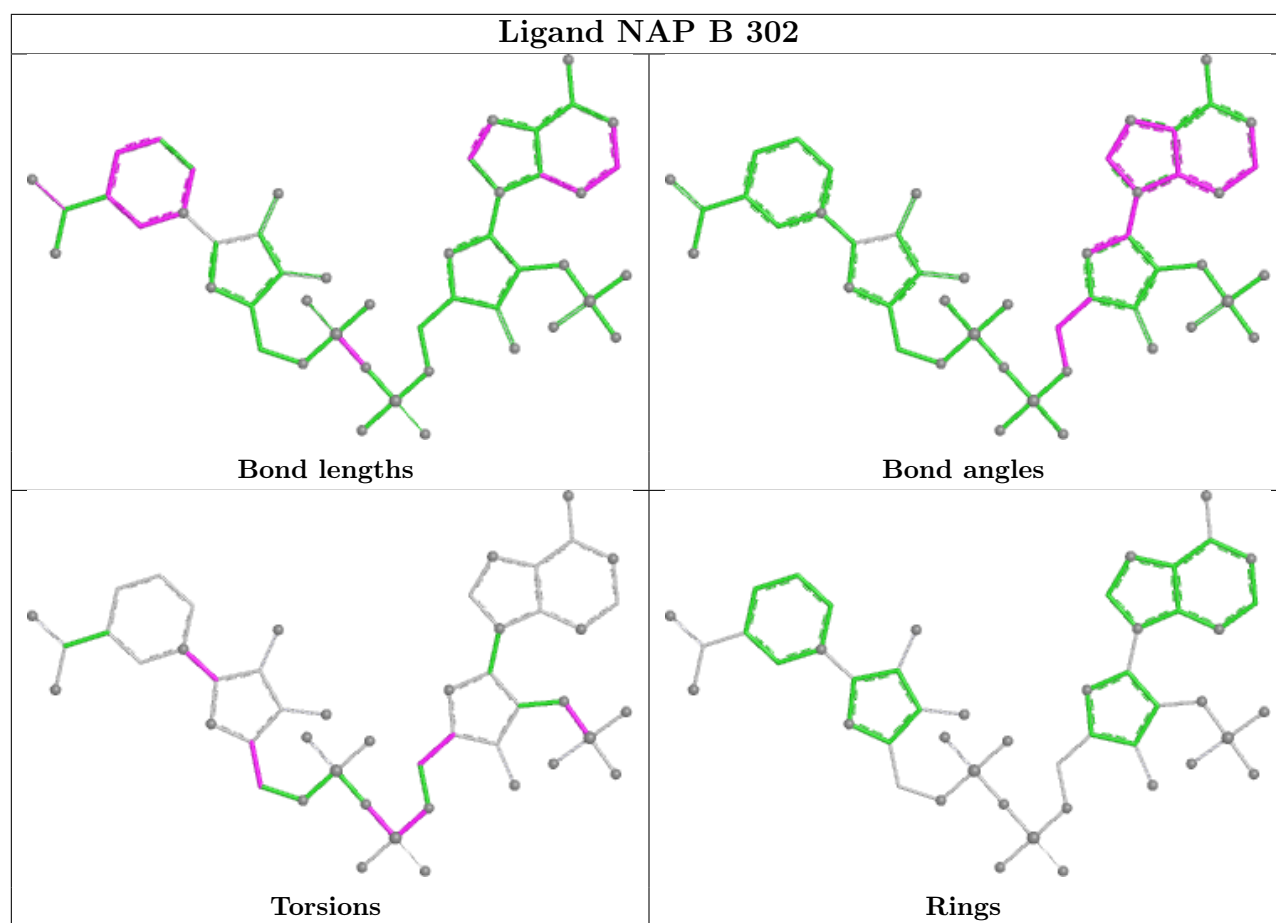
6 monomers are involved in 14 short contacts:

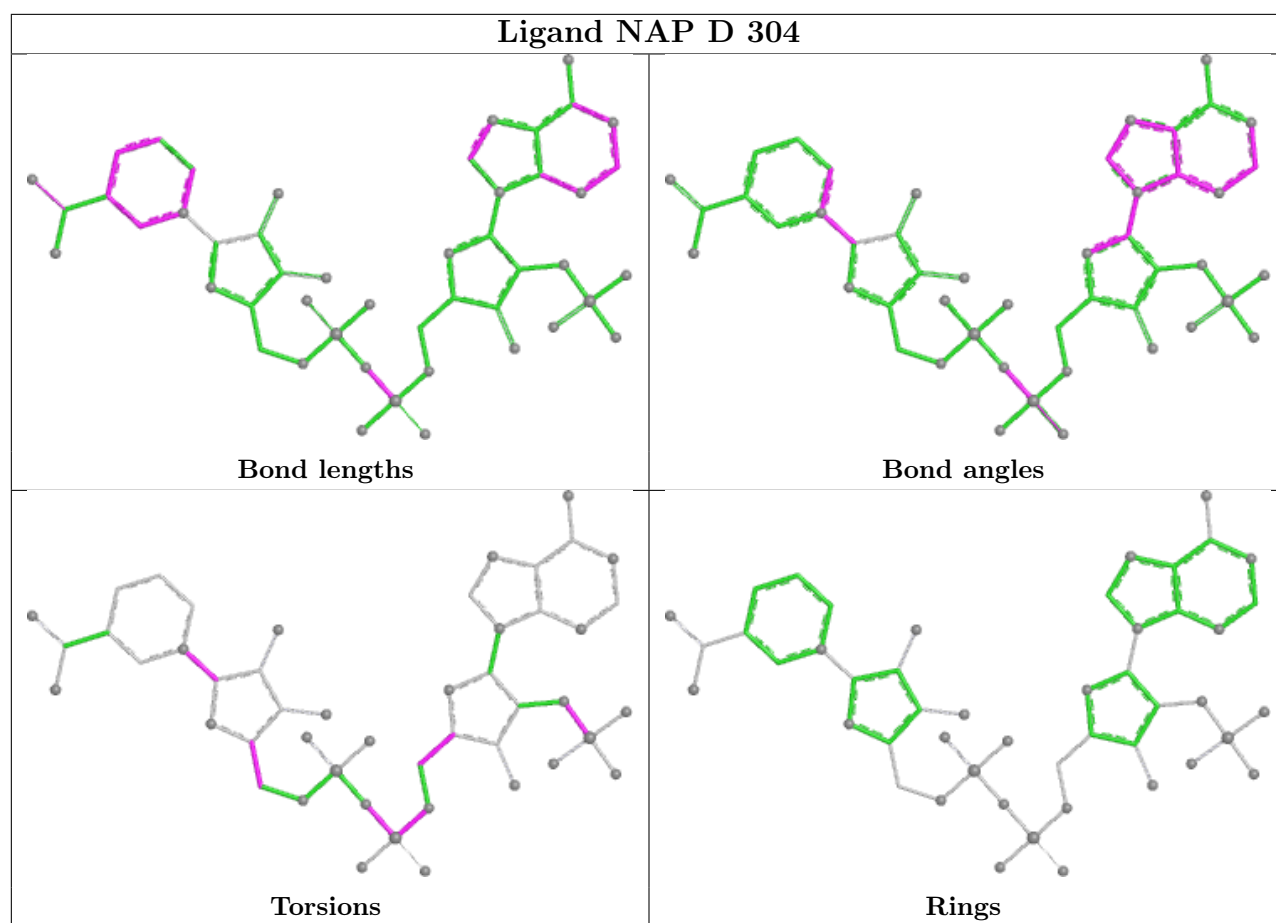
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	303	NAP	3	0
2	B	302	NAP	2	0
2	D	304	NAP	2	0
2	E	305	NAP	3	0
2	A	301	NAP	2	0
2	F	306	NAP	2	0

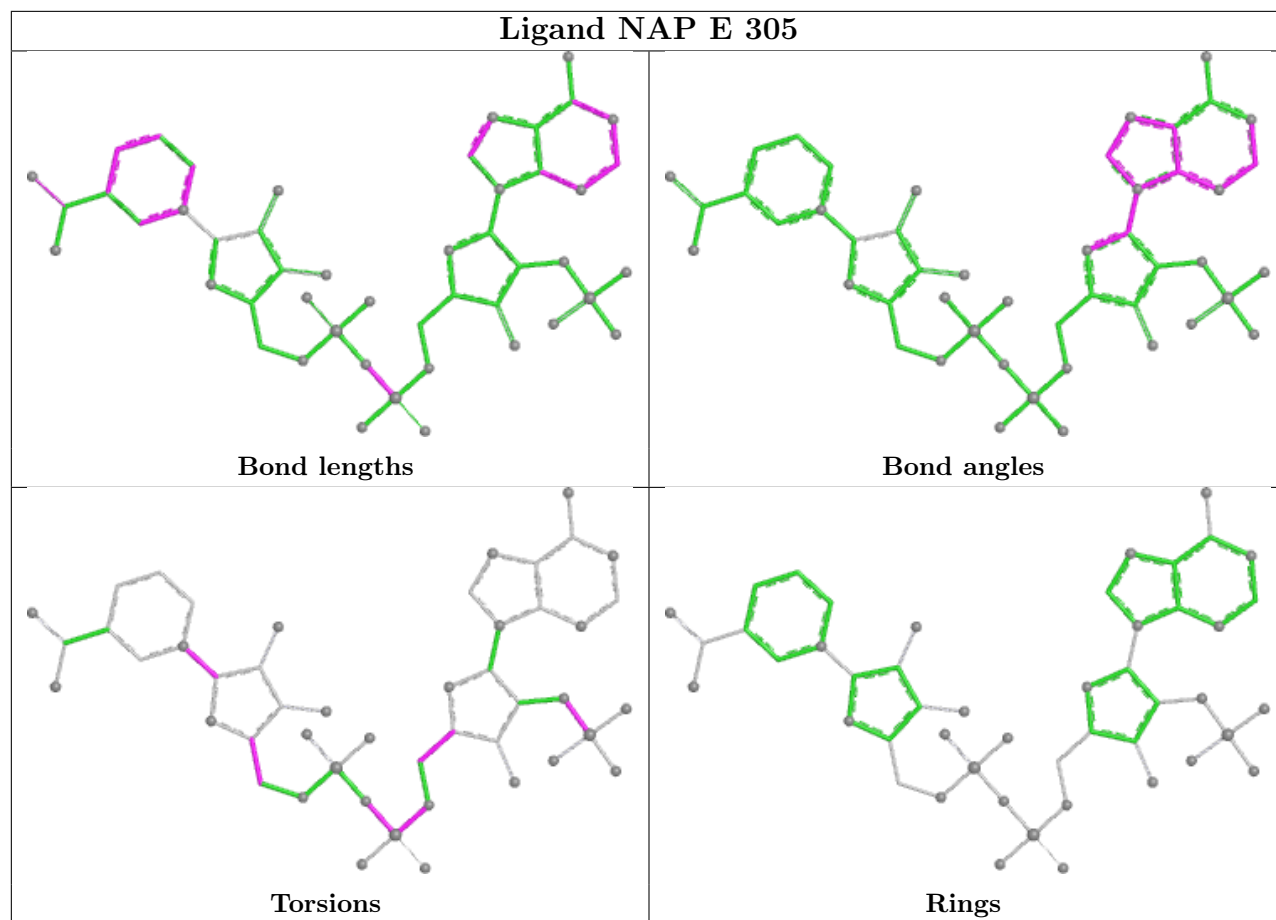
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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

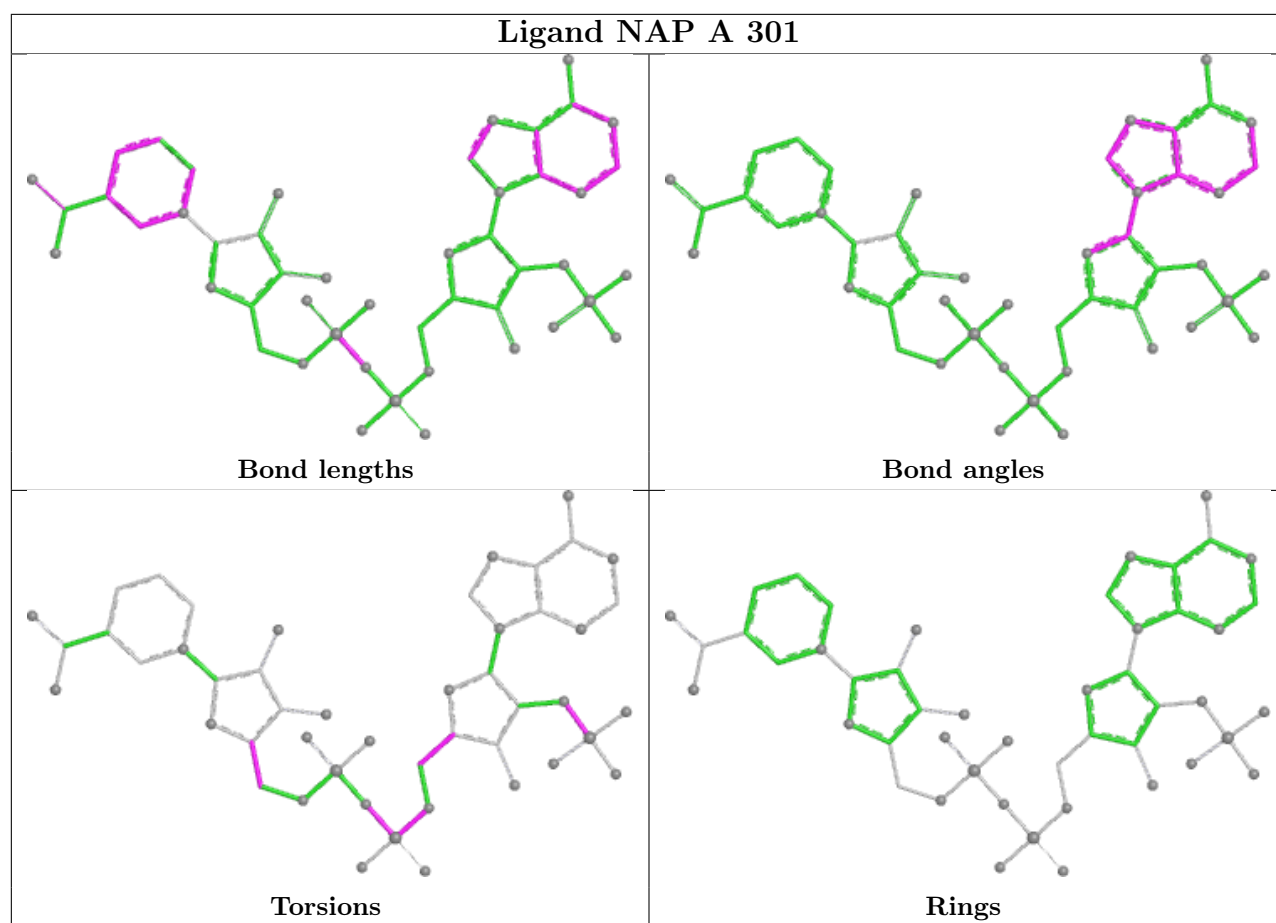
highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified 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.

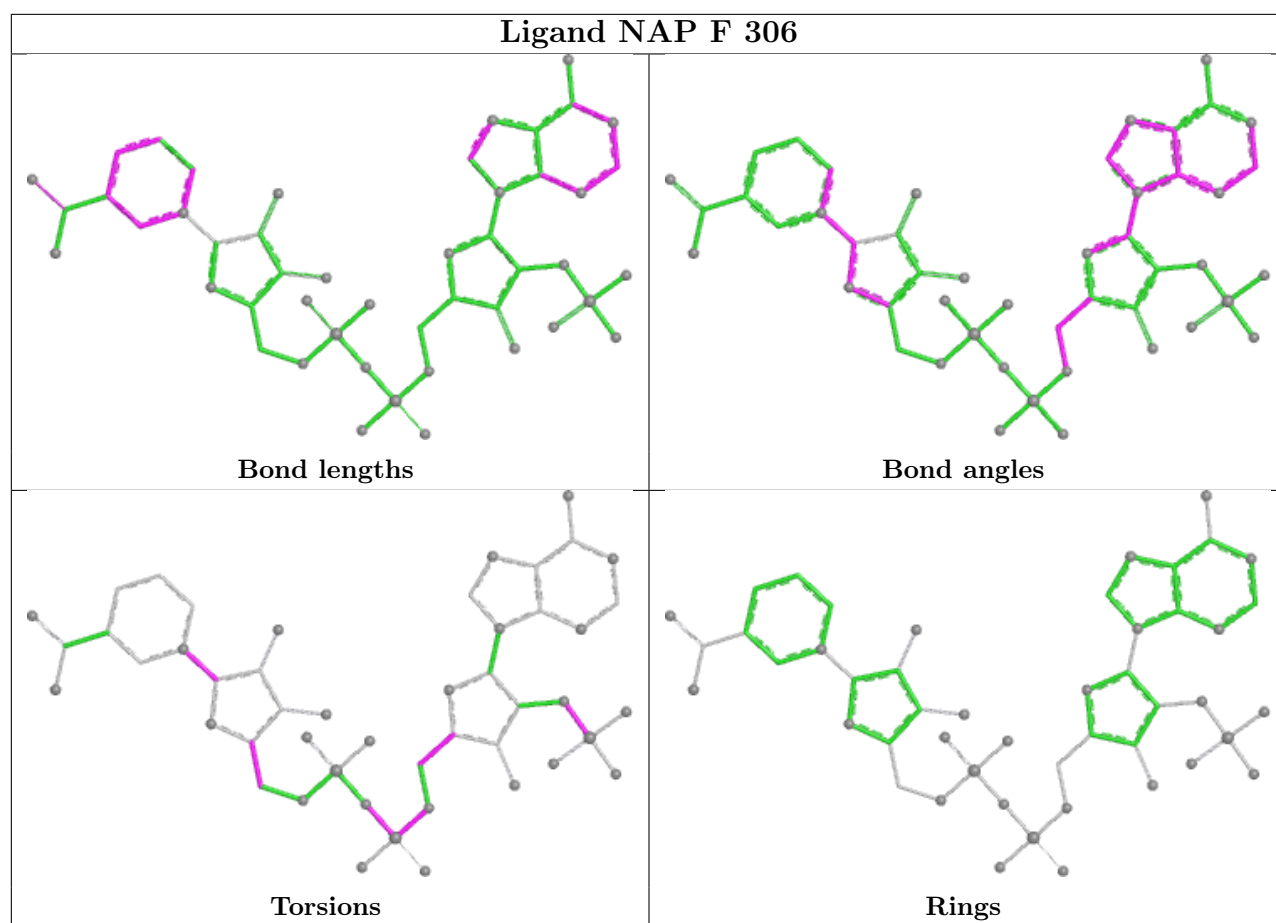












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	248/248 (100%)	-1.79	0 100 100	18, 30, 48, 55	0
1	B	248/248 (100%)	-1.82	0 100 100	18, 30, 44, 52	0
1	C	248/248 (100%)	-1.82	0 100 100	20, 32, 46, 55	0
1	D	248/248 (100%)	-1.80	0 100 100	21, 32, 50, 58	0
1	E	248/248 (100%)	-1.77	0 100 100	23, 36, 52, 60	0
1	F	248/248 (100%)	-1.78	0 100 100	26, 36, 53, 61	0
All	All	1488/1488 (100%)	-1.80	0 100 100	18, 32, 50, 61	0

There are no RSRZ outliers to report.

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides 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.

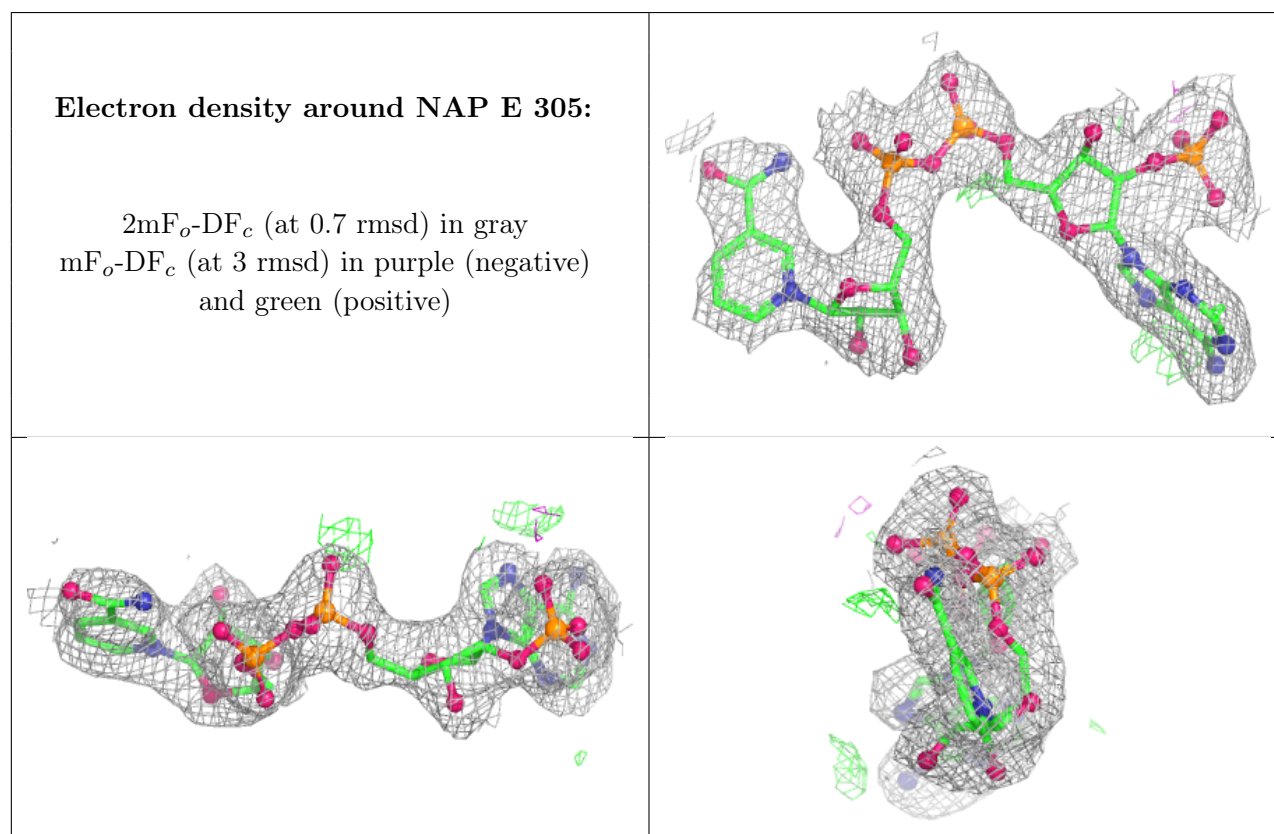
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	PO4	B	312	5/5	0.99	0.04	61,62,63,64	0

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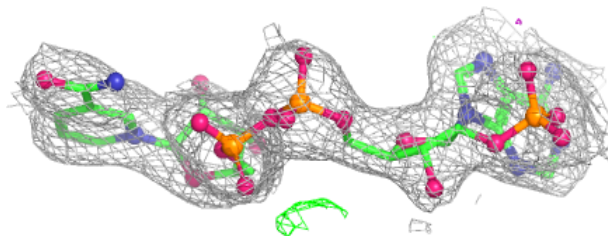
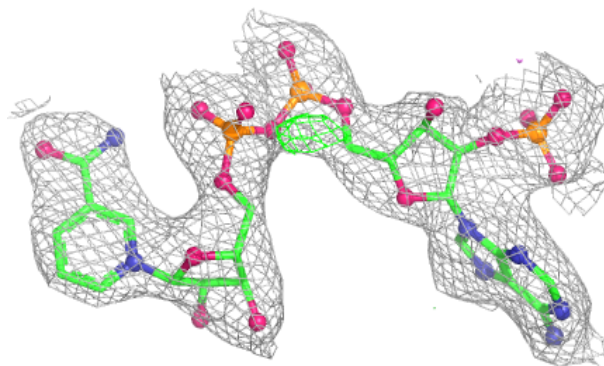
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	PO4	C	313	5/5	0.99	0.04	72,73,73,74	0
3	PO4	D	314	5/5	0.99	0.03	66,66,67,67	0
3	PO4	E	315	5/5	0.99	0.03	71,71,72,73	0
2	NAP	E	305	48/48	1.00	0.02	31,37,42,43	0
2	NAP	F	306	48/48	1.00	0.02	29,40,45,46	0
3	PO4	A	311	5/5	1.00	0.02	43,43,45,45	0
2	NAP	A	301	48/48	1.00	0.02	21,26,33,34	0
2	NAP	B	302	48/48	1.00	0.02	19,28,33,34	0
2	NAP	C	303	48/48	1.00	0.02	22,29,36,38	0
2	NAP	D	304	48/48	1.00	0.02	26,32,36,38	0
3	PO4	F	316	5/5	1.00	0.02	60,61,62,62	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.

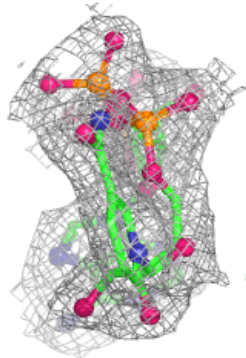
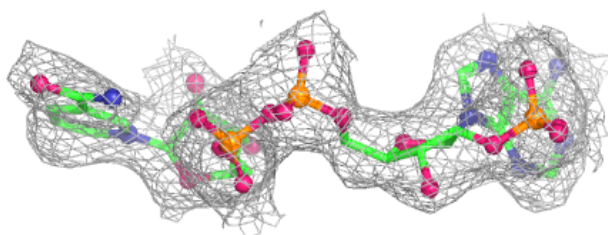
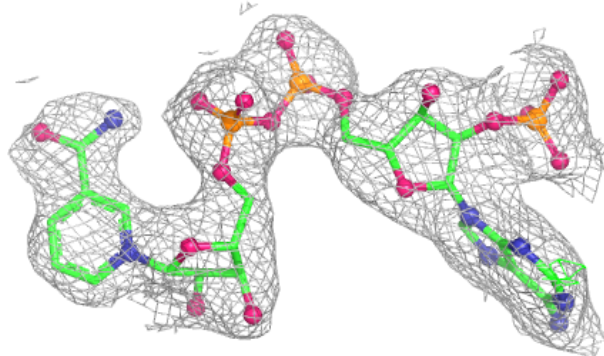


Electron density around NAP F 306:

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

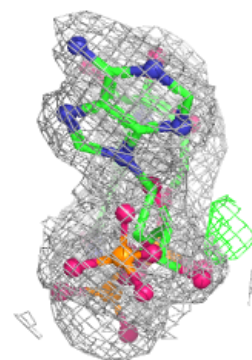
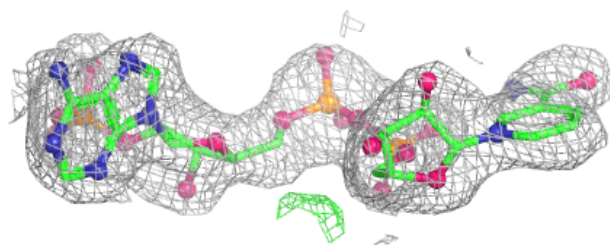
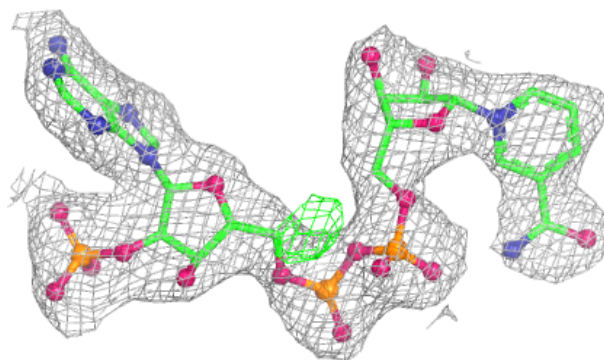
**Electron density around NAP A 301:**

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

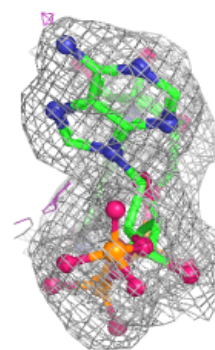
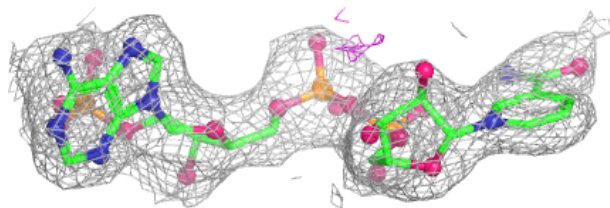
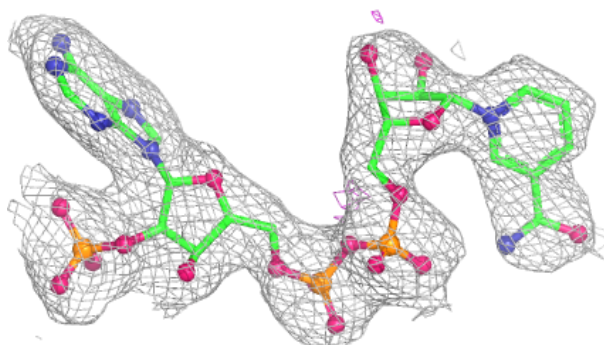


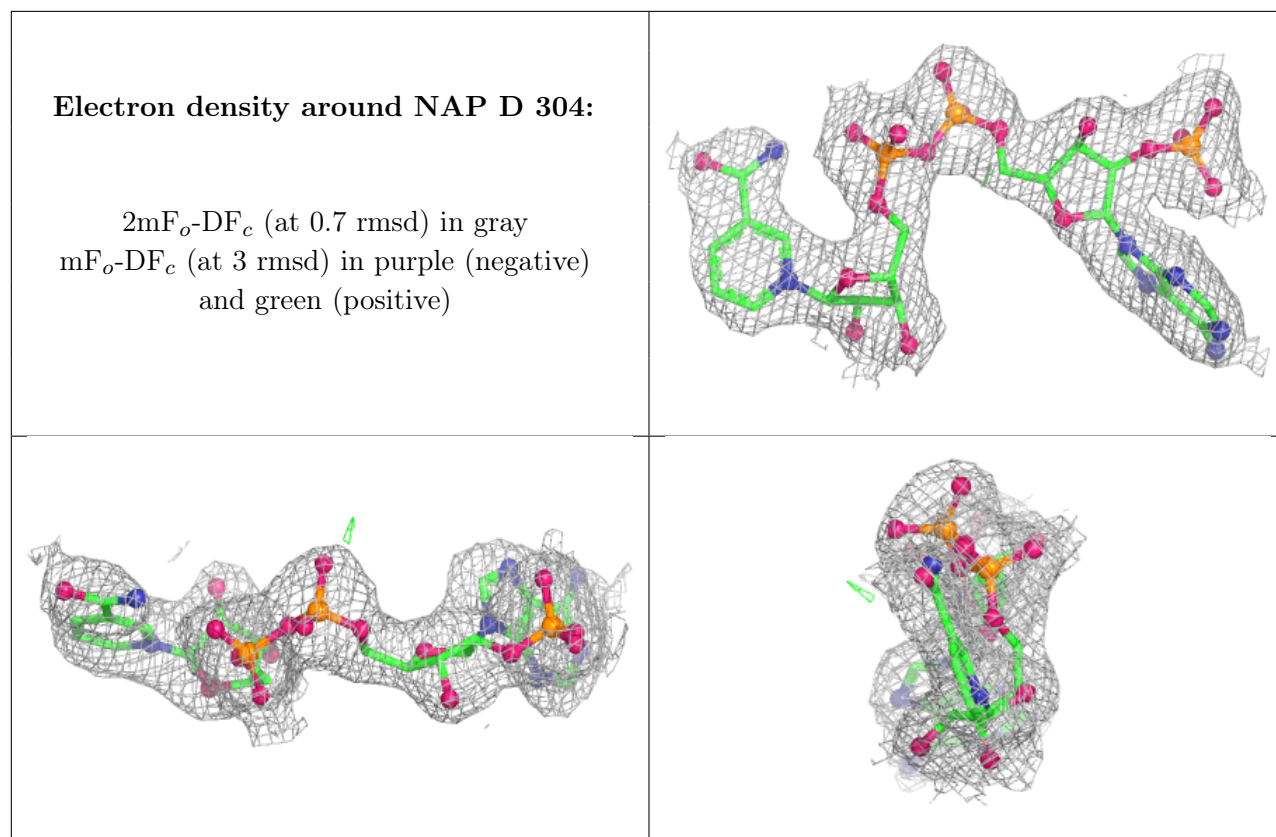
Electron density around NAP B 302:

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

**Electron density around NAP C 303:**

$2mF_o-DF_c$ (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.