WORLDWIDE PDB

PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Sep 17, 2025 – 03:18 PM JST

PDB ID	:	9VH0 / pdb_00009vh0
Title	:	SIRT2-H187A structure in complex with H3K18myr peptide and native NAD
Authors	:	Zhang, N.; Hao, Q.
Deposited on	:	2025-06-16
Resolution	:	2.41 Å(reported)

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

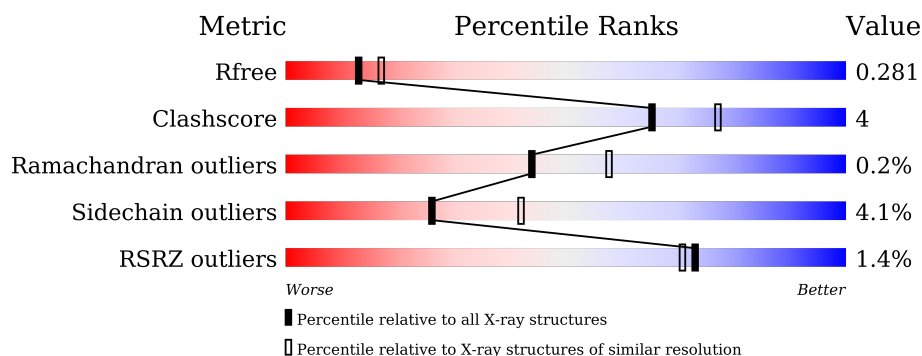|		
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

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 2.41 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		0.281
Clashscore		4
Ramachandran outliers		0.2%
Sidechain outliers		4.1%
RSRZ outliers		1.4%

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$_{free}$	164625	5670 (2.44-2.40)
Clashscore	180529	6299 (2.44-2.40)
Ramachandran outliers	177936	6232 (2.44-2.40)
Sidechain outliers	177891	6233 (2.44-2.40)
RSRZ outliers	164620	5670 (2.44-2.40)

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	302	82% 14% •
1	B	302	2% 81% 13% • 5%
2	C	6	17% 50% 50%
2	D	6	50% 33% 17%

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 4743 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 NAD-dependent protein deacetylase sirtuin-2.

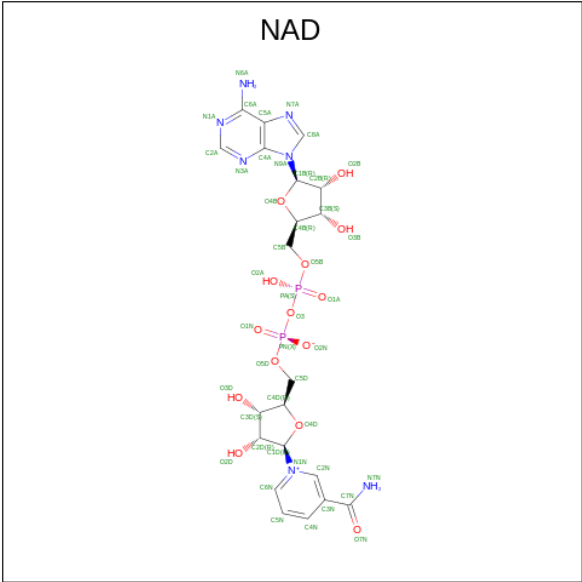| Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	292	Total	C	N	O	S	0	0	0
			2318	1484	386	431	17			
1	B	286	Total	C	N	O	S	0	2	0
			2178	1387	364	410	17			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	187	ALA	HIS	engineered mutation	UNP Q8IXJ6
B	187	ALA	HIS	engineered mutation	UNP Q8IXJ6

- Molecule 2 is a protein called Histone H3.1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	C	6	Total	C	N	O	0	0	0
			48	29	11	8			
2	D	5	Total	C	N	O	0	0	0
			39	25	7	7			

- Molecule 3 is NICOTINAMIDE-ADENINE-DINUCLEOTIDE (CCD ID: NAD) (formula: $C_{21}H_{27}N_7O_{14}P_2$) (labeled as "Ligand of Interest" by depositor).
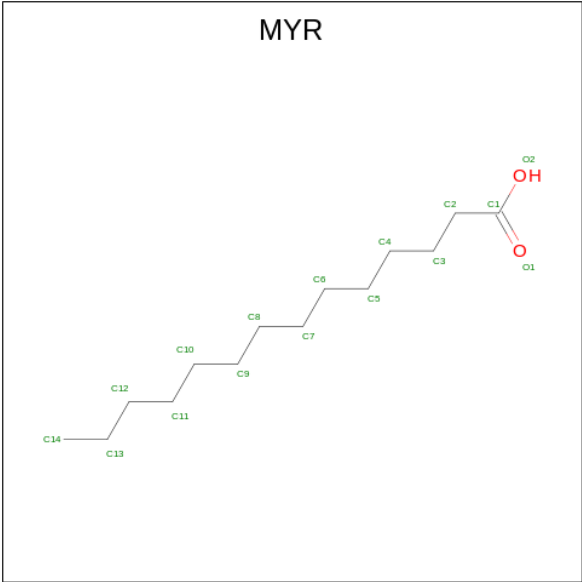
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			44	21	7	14	2		
3	B	1	Total	C	N	O	P	0	0
			44	21	7	14	2		

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total	Zn	0	0
			1	1		
4	B	1	Total	Zn	0	0
			1	1		

- Molecule 5 is MYRISTIC ACID (CCD ID: MYR) (formula: $C_{14}H_{28}O_2$) (labeled as "Ligand of Interest" by depositor).

MYR

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	C	1	Total 15	C 14	O 1	0	0
5	D	1	Total 15	C 14	O 1	0	0

• Molecule 6 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	25	Total 25	O 25	0	0
6	B	15	Total 15	O 15	0	0

3 Residue-property plots ⓘ

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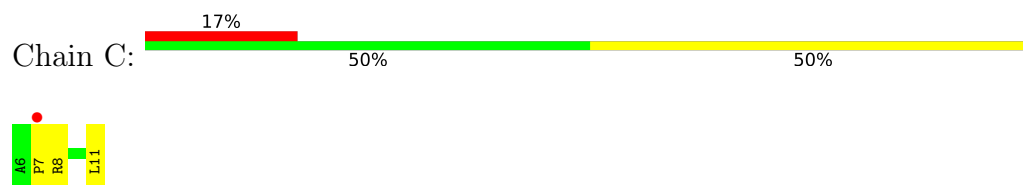
• Molecule 1: NAD-dependent protein deacetylase sirtuin-2
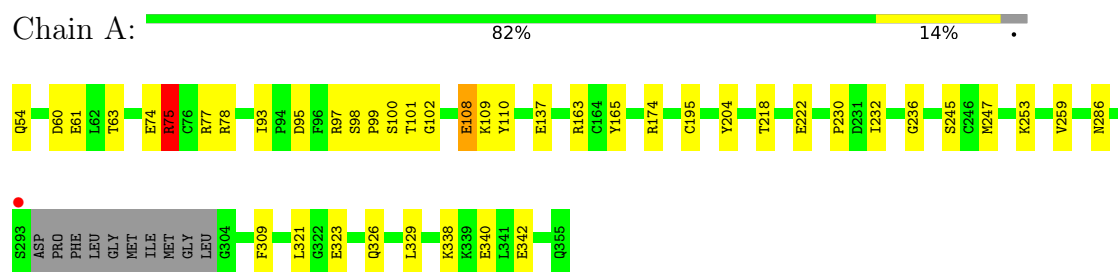
Chain A:

• Molecule 1: NAD-dependent protein deacetylase sirtuin-2

Chain B:

• Molecule 2: Histone H3.1

Chain C:

• Molecule 2: Histone H3.1

Chain D:
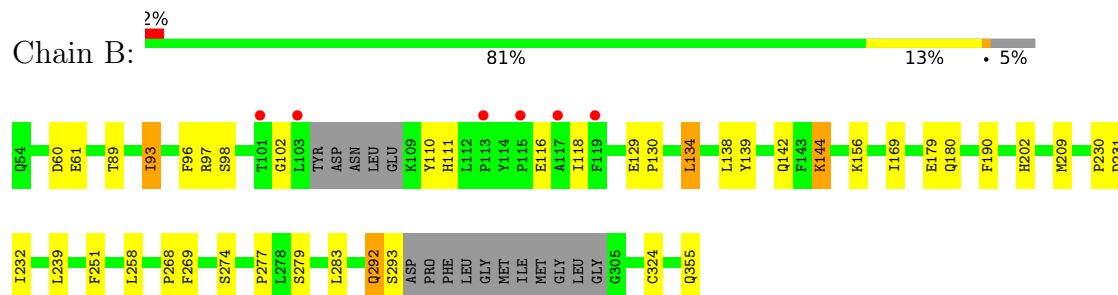
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	37.43Å 48.13Å 96.19Å 100.19° 91.58° 112.17°	Depositor
Resolution (Å)	47.13 – 2.41 47.13 – 2.41	Depositor EDS
% Data completeness (in resolution range)	92.1 (47.13-2.41) 92.1 (47.13-2.41)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.26 (at 2.42Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.105)	Depositor
R, R_{free}	0.198 , 0.273 0.207 , 0.281	Depositor DCC
R_{free} test set	1083 reflections (4.61%)	wwPDB-VP
Wilson B-factor (Å²)	37.6	Xtriage
Anisotropy	0.062	Xtriage
Bulk solvent k_{sol}(e/Å³), B_{sol}(Å²)	0.33 , 36.5	EDS
L-test for twinning[2]	$< |L| > = 0.51, < L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.020 for h,-h-k,-l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	4743	wwPDB-VP
Average B, all atoms (Å²)	47.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.78% 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 (i)

5.1 Standard geometry (i)

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

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	0.60	0/2370	1.20	9/3197 (0.3%)
1	B	0.58	0/2224	1.10	2/3014 (0.1%)
2	C	0.82	0/47	1.32	0/59
2	D	0.78	0/39	1.16	0/49
All	All	0.60	0/4680	1.16	11/6319 (0.2%)

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	4
2	C	0	1
2	D	0	1
All	All	0	6

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	231	ASP	CB-CA-C	6.31	120.77	111.88
1	A	108	GLU	CB-CG-CD	6.25	123.23	112.60
1	A	63	THR	CA-CB-OG1	-6.22	100.27	109.60
1	A	340	GLU	N-CA-CB	-5.76	101.65	110.12
1	A	75	ARG	N-CA-CB	-5.74	101.66	110.16
1	A	218	THR	CA-CB-OG1	-5.74	100.99	109.60
1	A	75	ARG	CB-CA-C	5.64	120.44	110.85
1	A	259	VAL	N-CA-CB	-5.62	104.34	111.64
1	B	202	HIS	CA-CB-CG	5.61	119.41	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	93	ILE	CA-C-O	5.43	122.72	119.19
1	A	329	LEU	N-CA-CB	-5.22	102.43	110.16

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	174	ARG	Sidechain
1	A	309	PHE	Peptide
1	A	75	ARG	Sidechain
1	A	77	ARG	Sidechain
2	C	7	PRO	Peptide
2	D	7	PRO	Peptide

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	2318	0	2294	13	0
1	B	2178	0	2075	21	0
2	C	48	0	48	2	0
2	D	39	0	39	1	0
3	A	44	0	26	0	0
3	B	44	0	26	2	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
5	C	15	0	27	0	0
5	D	15	0	27	0	0
6	A	25	0	0	0	0
6	B	15	0	0	2	0
All	All	4743	0	4562	34	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 4.

All (34) 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:292:GLN:HA	6:B:505:HOH:O	1.96	0.64
1:A:98:SER:O	1:A:102:GLY:HA3	2.07	0.53
1:B:138:LEU:O	1:B:139:TYR:C	2.51	0.53
1:B:268:PRO:O	1:B:269:PHE:C	2.52	0.52
1:B:209:MET:HE2	1:B:230:PRO:HG3	1.91	0.52
1:B:134:LEU:HD22	1:B:138:LEU:HD13	1.92	0.52
1:A:99:PRO:O	1:A:101:THR:N	2.35	0.51
1:B:156:LYS:HA	6:B:504:HOH:O	2.11	0.50
1:B:97:ARG:O	1:B:98:SER:C	2.55	0.49
1:A:286:ASN:O	1:A:321:LEU:HA	2.14	0.47
1:B:142:GLN:OE1	1:B:144:LYS:HE2	2.14	0.47
1:B:60:ASP:OD1	1:B:61:GLU:N	2.47	0.47
1:A:95:ASP:OD1	1:A:95:ASP:C	2.59	0.46
1:B:96:PHE:CD1	3:B:401:NAD:H6N	2.50	0.46
1:A:204:TYR:OH	1:A:222:GLU:HG2	2.16	0.46
1:A:230:PRO:C	1:A:232:ILE:H	2.23	0.46
1:A:338:LYS:HG2	1:A:342:GLU:OE2	2.16	0.45
1:B:129:GLU:N	1:B:130:PRO:CD	2.79	0.45
1:B:258:LEU:HD13	1:B:283:LEU:HD23	1.98	0.45
1:A:60:ASP:OD1	1:A:61:GLU:N	2.50	0.44
1:A:323:GLU:HB2	1:A:326:GLN:HG2	2.00	0.43
1:B:239:LEU:HD11	2:D:9:LYS:HB2	2.00	0.43
1:B:110:TYR:O	1:B:111:HIS:C	2.62	0.42
1:B:292:GLN:O	1:B:293:SER:C	2.62	0.42
1:A:236:GLY:O	2:C:8:ARG:NH1	2.39	0.42
1:B:89:THR:HA	1:B:93:ILE:O	2.19	0.42
1:B:324:CYS:N	3:B:401:NAD:N1A	2.66	0.42
1:A:163:ARG:HG2	1:A:165:TYR:CE1	2.55	0.41
1:B:169:ILE:HD13	1:B:190:PHE:HB2	2.02	0.41
1:B:251:PHE:O	1:B:277:PRO:HD3	2.21	0.41
1:A:97:ARG:HH22	2:C:11:LEU:CD2	2.34	0.41
1:B:98:SER:O	1:B:102:GLY:N	2.54	0.40
1:B:116:GLU:C	1:B:118:ILE:H	2.29	0.40
1:A:110:TYR:OH	1:A:137:GLU:OE1	2.37	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	288/302 (95%)	276 (96%)	11 (4%)	1 (0%)	37	50
1	B	282/302 (93%)	264 (94%)	18 (6%)	0	100	100
2	C	4/6 (67%)	4 (100%)	0	0	100	100
2	D	3/6 (50%)	2 (67%)	1 (33%)	0	100	100
All	All	577/616 (94%)	546 (95%)	30 (5%)	1 (0%)	44	58

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	100	SER

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	252/262 (96%)	242 (96%)	10 (4%)	27	43
1	B	226/262 (86%)	214 (95%)	12 (5%)	19	31
2	C	4/5 (80%)	4 (100%)	0	100	100
2	D	4/5 (80%)	4 (100%)	0	100	100
All	All	486/534 (91%)	464 (96%)	22 (4%)	26	38

All (22) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	54	GLN
1	A	74	GLU
1	A	75	ARG
1	A	78	ARG
1	A	108	GLU
1	A	109	LYS
1	A	195	CYS
1	A	245	SER
1	A	247	MET
1	A	253	LYS
1	B	93	ILE
1	B	134	LEU
1	B	144	LYS
1	B	179	GLU
1	B	180	GLN
1	B	232	ILE
1	B	274[A]	SER
1	B	274[B]	SER
1	B	279[A]	SER
1	B	279[B]	SER
1	B	292	GLN
1	B	355	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	54	GLN
1	A	355	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 oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 6 ligands modelled in this entry, 2 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	NAD	A	401	-	42,48,48	0.81	2 (4%)	50,73,73	0.78	0
3	NAD	B	401	-	42,48,48	0.75	1 (2%)	50,73,73	0.80	1 (2%)
5	MYR	D	101	2	14,14,15	0.38	0	13,13,15	0.44	0
5	MYR	C	101	2	14,14,15	0.44	0	13,13,15	0.37	0

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	NAD	A	401	-	-	9/26/62/62	0/5/5/5
3	NAD	B	401	-	-	12/26/62/62	0/5/5/5
5	MYR	D	101	2	-	5/11/12/13	-
5	MYR	C	101	2	-	7/11/12/13	-

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	401	NAD	C2N-N1N	3.42	1.39	1.35
3	B	401	NAD	C2N-N1N	3.00	1.38	1.35
3	A	401	NAD	C8A-N7A	-2.11	1.30	1.34

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	401	NAD	C6N-N1N-C2N	-2.13	120.03	121.97

There are no chirality outliers.

All (33) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	401	NAD	C5D-O5D-PN-O3
3	A	401	NAD	C5D-O5D-PN-O1N
3	A	401	NAD	C5D-O5D-PN-O2N
3	A	401	NAD	C2D-C1D-N1N-C2N
3	A	401	NAD	C2D-C1D-N1N-C6N
3	B	401	NAD	C5B-O5B-PA-O1A
3	B	401	NAD	C5D-O5D-PN-O3
3	B	401	NAD	C5D-O5D-PN-O1N
3	B	401	NAD	C2D-C1D-N1N-C2N
3	B	401	NAD	C2D-C1D-N1N-C6N
3	A	401	NAD	C3D-C4D-C5D-O5D
3	A	401	NAD	O4D-C4D-C5D-O5D
3	B	401	NAD	O4B-C4B-C5B-O5B
5	D	101	MYR	C7-C8-C9-C10
5	C	101	MYR	C9-C10-C11-C12
5	D	101	MYR	C3-C4-C5-C6
5	D	101	MYR	C10-C11-C12-C13
5	C	101	MYR	C11-C10-C9-C8
5	C	101	MYR	C6-C7-C8-C9
5	D	101	MYR	C2-C3-C4-C5
5	D	101	MYR	C11-C10-C9-C8
5	C	101	MYR	C10-C11-C12-C13
5	C	101	MYR	C11-C12-C13-C14
5	C	101	MYR	C3-C4-C5-C6
3	B	401	NAD	PN-O3-PA-O5B
3	B	401	NAD	C3B-C4B-C5B-O5B
3	B	401	NAD	C5B-O5B-PA-O3
3	B	401	NAD	PN-O3-PA-O1A
3	B	401	NAD	C5B-O5B-PA-O2A
3	B	401	NAD	C5D-O5D-PN-O2N
5	C	101	MYR	C4-C5-C6-C7
3	A	401	NAD	C4D-C5D-O5D-PN
3	A	401	NAD	O4B-C4B-C5B-O5B

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	401	NAD	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 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 NAD A 401

Bond lengths

Bond angles

Torsions

Rings

Ligand NAD B 401

Bond lengths

Bond angles

Torsions

Rings

Ligand MYR D 101

Bond lengths

Bond angles

Torsions

Rings

Ligand MYR C 101

Bond lengths

Bond angles

Torsions

Rings
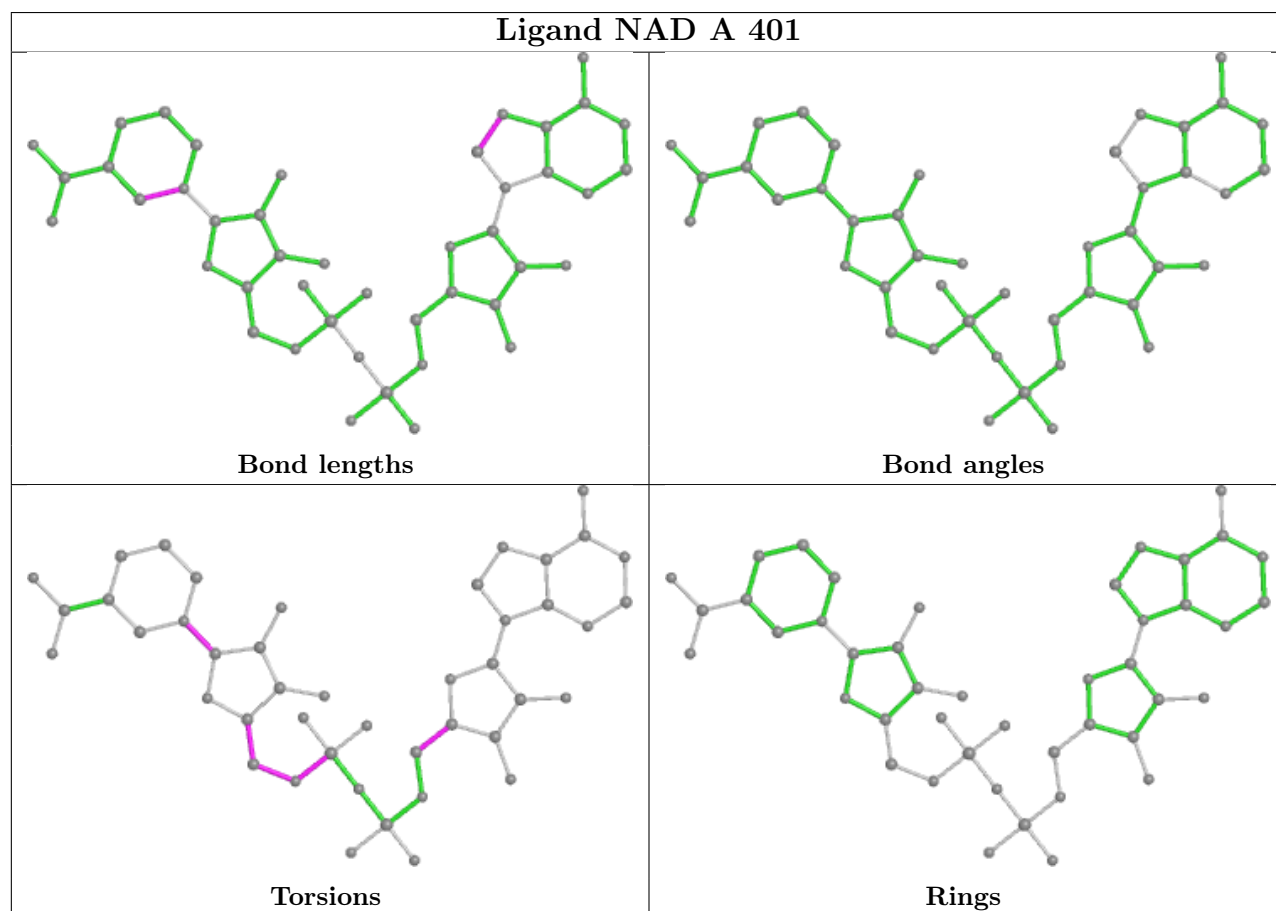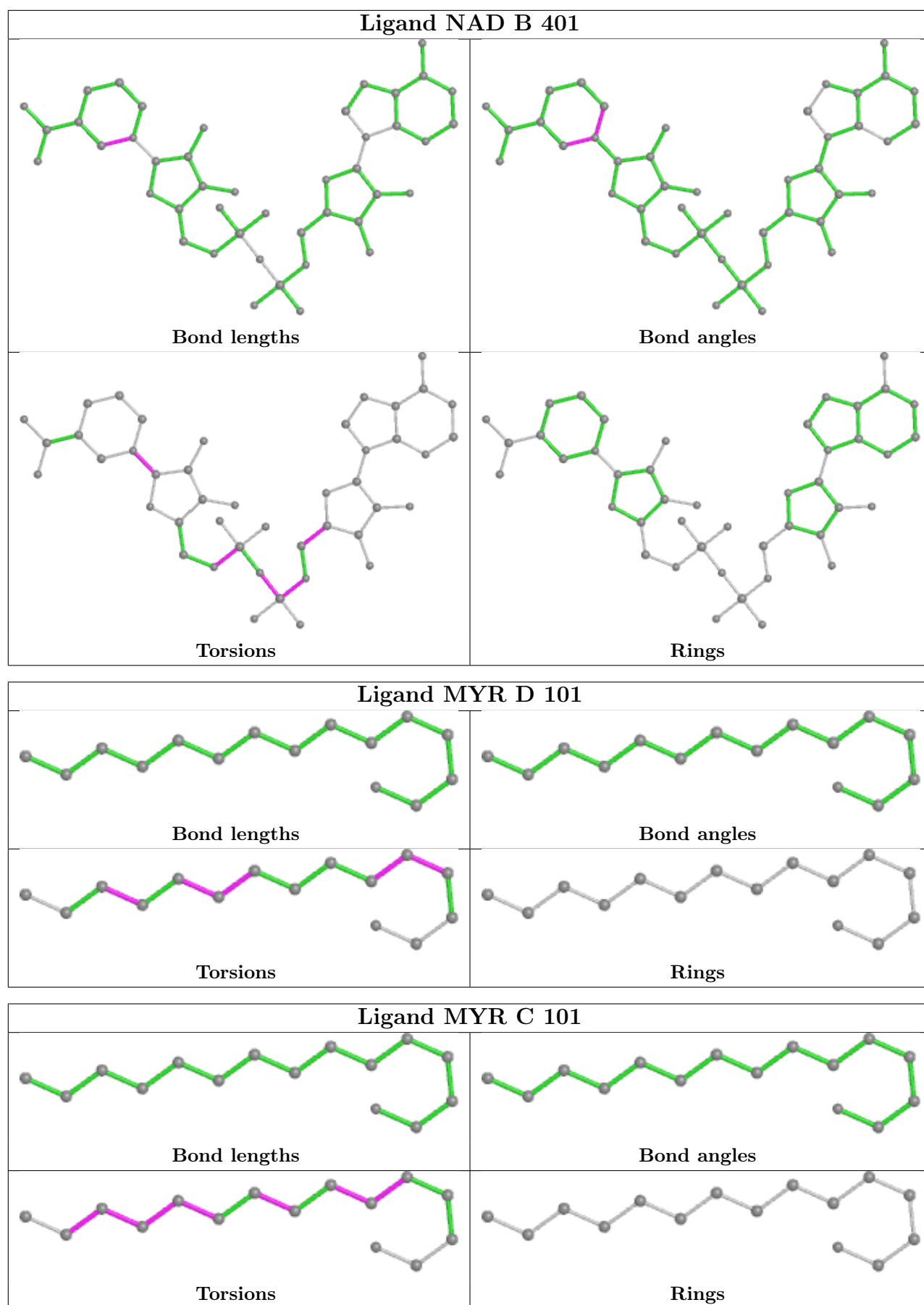
5.7 Other polymers ⓘ

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(Å^2)	Q<0.9
1	A	292/302 (96%)	-0.30	1 (0%)	90	89	23, 38, 61, 90	0
1	B	286/302 (94%)	0.01	6 (2%)	63	61	18, 49, 88, 112	2 (0%)
2	C	6/6 (100%)	0.75	1 (16%)	5	5	41, 55, 59, 67	0
2	D	5/6 (83%)	0.60	0	100	100	65, 67, 73, 74	0
All	All	589/616 (95%)	-0.13	8 (1%)	73	71	18, 43, 78, 112	2 (0%)

All (8) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	119	PHE	3.0
1	B	101	THR	2.9
2	C	7	PRO	2.7
1	B	103	LEU	2.6
1	A	293	SER	2.2
1	B	113	PRO	2.1
1	B	115	PRO	2.1
1	B	117	ALA	2.0

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

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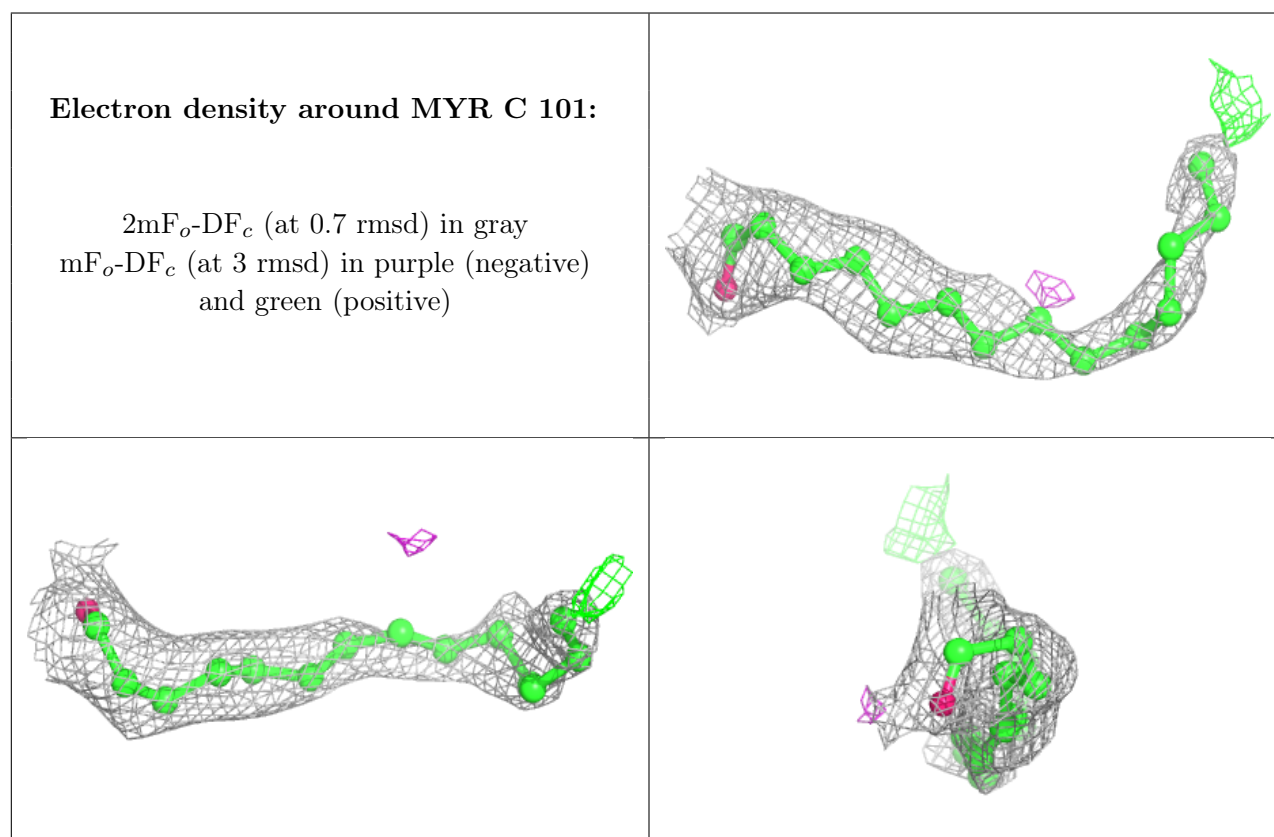
6.3 Carbohydrates ⓘ

There are no 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
5	MYR	C	101	15/16	0.89	0.17	39,54,64,65	0
5	MYR	D	101	15/16	0.89	0.21	64,75,94,95	0
3	NAD	B	401	44/44	0.95	0.07	40,52,57,59	0
3	NAD	A	401	44/44	0.96	0.06	27,37,42,47	0
4	ZN	B	402	1/1	0.99	0.03	57,57,57,57	0
4	ZN	A	402	1/1	1.00	0.02	42,42,42,42	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.
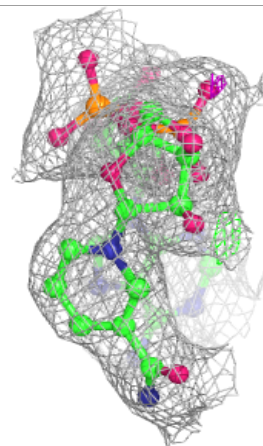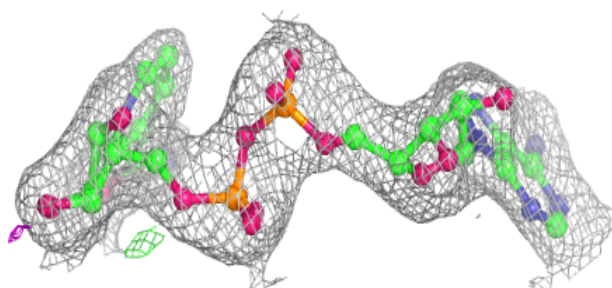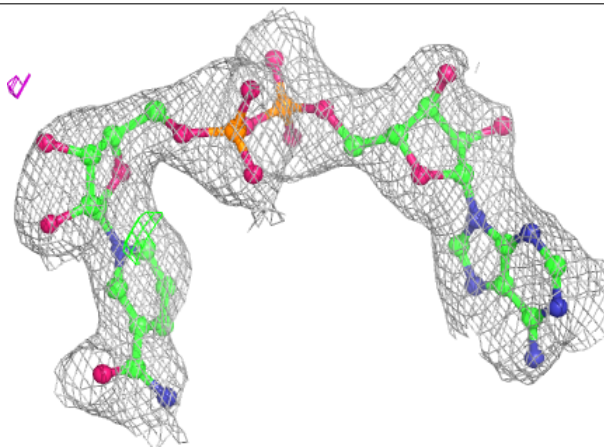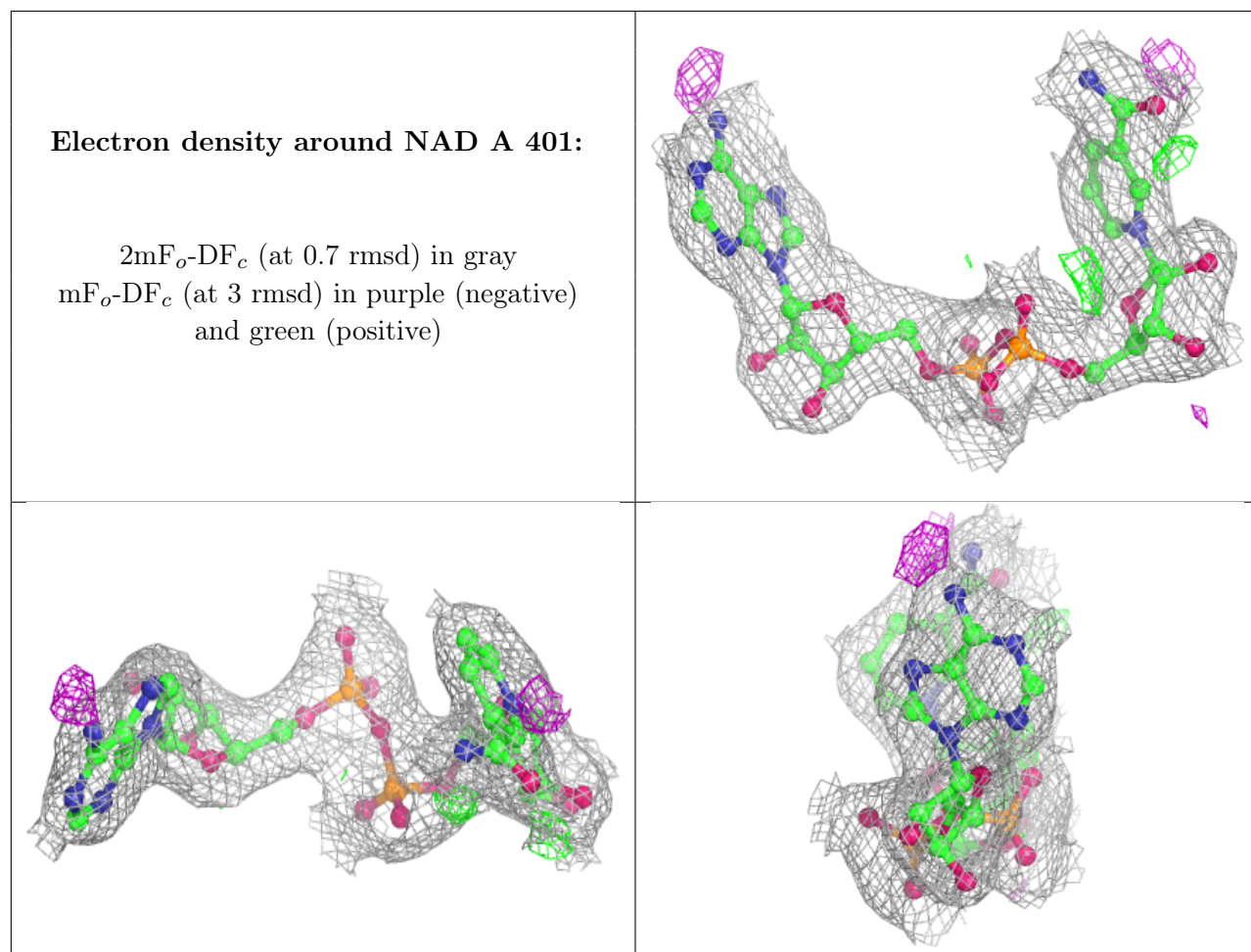

Electron density around MYR C 101:

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

Electron density around MYR D 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
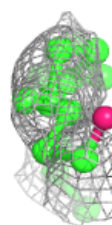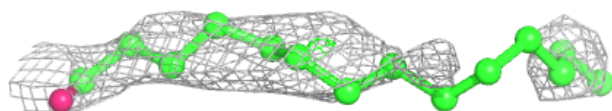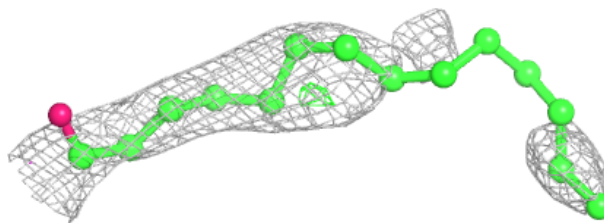
Electron density around NAD B 401:

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

Electron density around NAD A 401:

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