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PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Jun 17, 2024 – 07:34 AM EDT

PDB ID	:	2Y02
Title	:	TURKEY BETA1 ADRENERGIC RECEPTOR WITH STABILISING MUTATIONS AND BOUND AGONIST CARMOTEROL
Authors	:	Warne, A.; Moukhametzianov, R.; Baker, J.G.; Nehme, R.; Edwards, P.C.; Leslie, A.G.W.; Schertler, G.F.X.; Tate, C.G.
Deposited on	:	2010-11-30
Resolution	:	2.60 Å(reported)

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

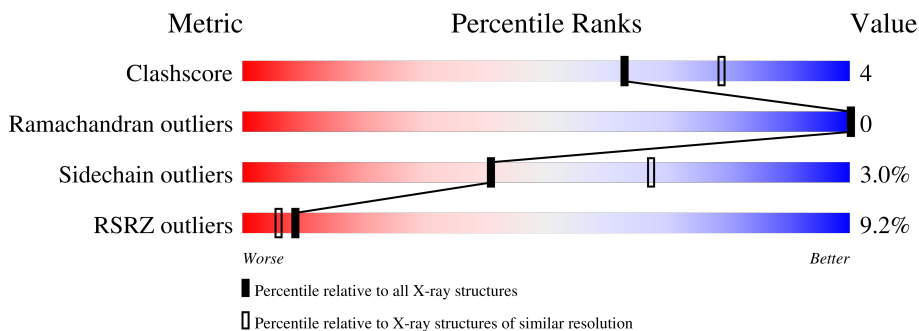|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 2.60 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
Clashscore		4
Ramachandran outliers		0
Sidechain outliers		3.0%
RSRZ outliers		9.2%

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))
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	315	9% / 82% 9% 9%
1	B	315	8% / 85% 9% · 5%

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:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	2CV	A	504	-	-	-	X
3	2CV	A	505	-	-	-	X
5	NA	A	701	-	-	-	X

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 5064 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 BETA-1 ADRENERGIC RECEPTOR.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	286	Total 2269	C 1498	N 372	O 379	S 20	0	0	0
1	B	298	Total 2371	C 1560	N 396	O 395	S 20	0	0	0

There are 86 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	31	MET	-	expression tag	UNP P07700
A	32	GLY	-	expression tag	UNP P07700
A	68	SER	ARG	engineered mutation	UNP P07700
A	90	VAL	MET	engineered mutation	UNP P07700
A	116	LEU	CYS	engineered mutation	UNP P07700
A	227	ALA	TYR	engineered mutation	UNP P07700
A	?	-	CYS	deletion	UNP P07700
A	?	-	GLU	deletion	UNP P07700
A	?	-	GLY	deletion	UNP P07700
A	?	-	ARG	deletion	UNP P07700
A	?	-	PHE	deletion	UNP P07700
A	?	-	TYR	deletion	UNP P07700
A	?	-	GLY	deletion	UNP P07700
A	?	-	SER	deletion	UNP P07700
A	?	-	GLN	deletion	UNP P07700
A	?	-	GLU	deletion	UNP P07700
A	?	-	GLN	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	GLN	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	LEU	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	GLN	deletion	UNP P07700

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	HIS	deletion	UNP P07700
A	?	-	GLN	deletion	UNP P07700
A	?	-	PRO	deletion	UNP P07700
A	?	-	ILE	deletion	UNP P07700
A	?	-	LEU	deletion	UNP P07700
A	?	-	GLY	deletion	UNP P07700
A	?	-	ASN	deletion	UNP P07700
A	?	-	GLY	deletion	UNP P07700
A	?	-	ARG	deletion	UNP P07700
A	282	LEU	ALA	engineered mutation	UNP P07700
A	327	ALA	PHE	engineered mutation	UNP P07700
A	338	MET	PHE	engineered mutation	UNP P07700
A	358	ALA	CYS	engineered mutation	UNP P07700
A	369	HIS	-	expression tag	UNP P07700
A	370	HIS	-	expression tag	UNP P07700
A	371	HIS	-	expression tag	UNP P07700
A	372	HIS	-	expression tag	UNP P07700
A	373	HIS	-	expression tag	UNP P07700
B	31	MET	-	expression tag	UNP P07700
B	32	GLY	-	expression tag	UNP P07700
B	68	SER	ARG	engineered mutation	UNP P07700
B	90	VAL	MET	engineered mutation	UNP P07700
B	116	LEU	CYS	engineered mutation	UNP P07700
B	227	ALA	TYR	engineered mutation	UNP P07700
B	?	-	CYS	deletion	UNP P07700
B	?	-	GLU	deletion	UNP P07700
B	?	-	GLY	deletion	UNP P07700
B	?	-	ARG	deletion	UNP P07700
B	?	-	PHE	deletion	UNP P07700
B	?	-	TYR	deletion	UNP P07700
B	?	-	GLY	deletion	UNP P07700
B	?	-	SER	deletion	UNP P07700
B	?	-	GLN	deletion	UNP P07700
B	?	-	GLU	deletion	UNP P07700
B	?	-	GLN	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700
B	?	-	GLN	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700
B	?	-	LEU	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	GLN	deletion	UNP P07700
B	?	-	HIS	deletion	UNP P07700
B	?	-	GLN	deletion	UNP P07700
B	?	-	PRO	deletion	UNP P07700
B	?	-	ILE	deletion	UNP P07700
B	?	-	LEU	deletion	UNP P07700
B	?	-	GLY	deletion	UNP P07700
B	?	-	ASN	deletion	UNP P07700
B	?	-	GLY	deletion	UNP P07700
B	?	-	ARG	deletion	UNP P07700
B	282	LEU	ALA	engineered mutation	UNP P07700
B	327	ALA	PHE	engineered mutation	UNP P07700
B	338	MET	PHE	engineered mutation	UNP P07700
B	358	ALA	CYS	engineered mutation	UNP P07700
B	369	HIS	-	expression tag	UNP P07700
B	370	HIS	-	expression tag	UNP P07700
B	371	HIS	-	expression tag	UNP P07700
B	372	HIS	-	expression tag	UNP P07700
B	373	HIS	-	expression tag	UNP P07700

- Molecule 2 is CHOLESTEROL HEMISUCCINATE (three-letter code: Y01) (formula: $C_{31}H_{50}O_4$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			35	31	4		
2	A	1	Total	C	O	0	0
			35	31	4		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	B	1	Total 35	C 31	O 4	0	0
2	B	1	Total 35	C 31	O 4	0	0

- Molecule 3 is HEGA-10 (three-letter code: 2CV) (formula: $C_{18}H_{37}NO_7$).
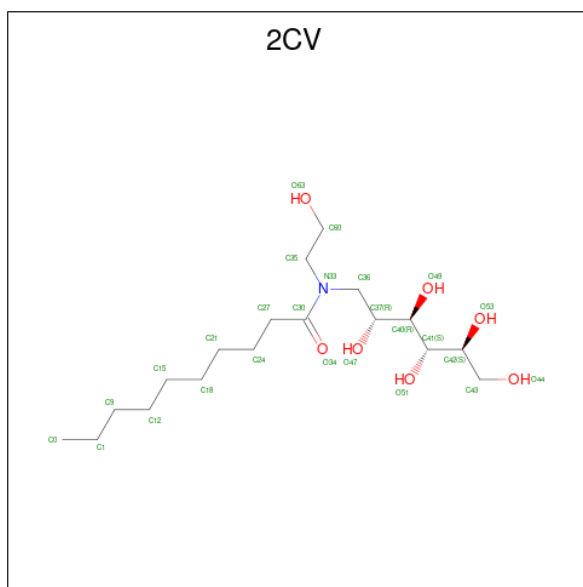
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 26	C 18	N 1	O 7	0	0
3	A	1	Total 5	C 5			0	0
3	A	1	Total 20	C 15	N 1	O 4	0	0
3	A	1	Total 26	C 18	N 1	O 7	0	0
3	A	1	Total 26	C 18	N 1	O 7	0	0
3	B	1	Total 20	C 15	N 1	O 4	0	0
3	B	1	Total 16	C 13	N 1	O 2	0	0
3	B	1	Total 16	C 13	N 1	O 2	0	0
3	B	1	Total 8	C 6	N 1	O 1	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	B	1	Total C N O 26 18 1 7				0	0

- Molecule 4 is CARMOTEROL (three-letter code: WHJ) (formula: $C_{21}H_{24}N_2O_4$).

WHJ
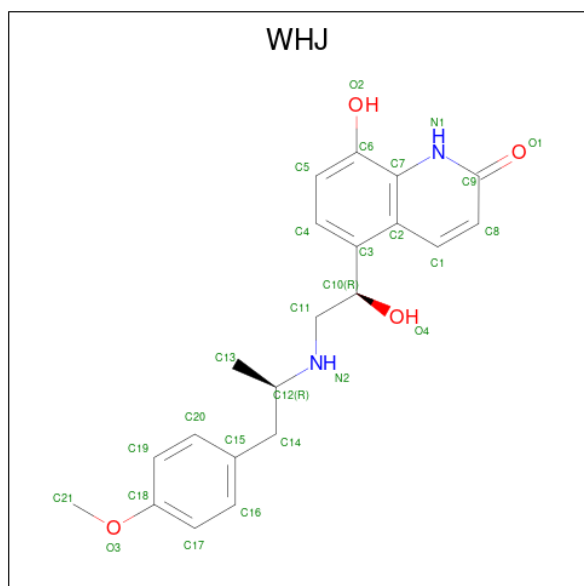
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total C N O 27 21 2 4				0	0
4	B	1	Total C N O 27 21 2 4				0	0

- Molecule 5 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	1	Total Na 1 1		0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	21	Total O 21 21		0	0
6	B	19	Total O 19 19		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: BETA-1 ADRENERGIC RECEPTOR

Chain A:

• Molecule 1: BETA-1 ADRENERGIC RECEPTOR

Chain B:
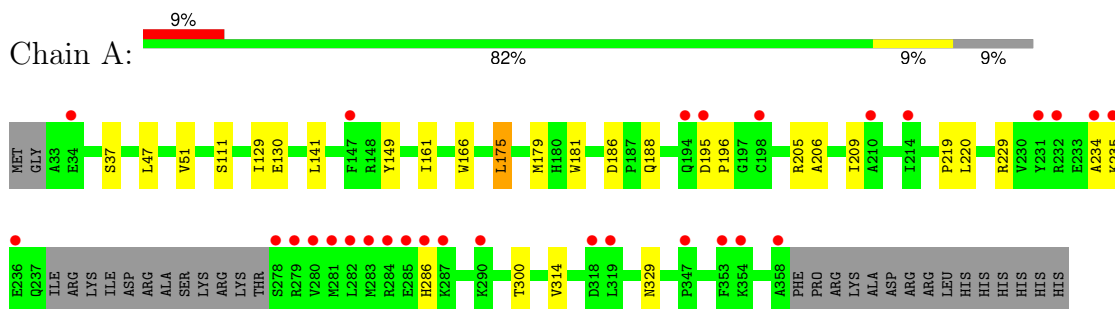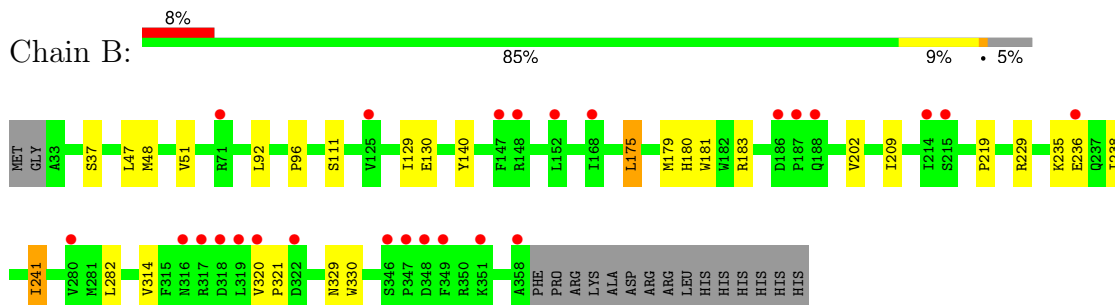
4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	89.60Å 61.70Å 101.40Å 90.00° 109.30° 90.00°	Depositor
Resolution (Å)	95.73 – 2.60 42.28 – 2.60	Depositor EDS
% Data completeness (in resolution range)	96.7 (95.73-2.60) 96.7 (42.28-2.60)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.89 (at 2.61Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
R, R_{free}	0.229 , 0.268 0.229 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	38.0	Xtriage
Anisotropy	0.256	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 66.3	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	0.91	EDS
Total number of atoms	5064	wwPDB-VP
Average B, all atoms (Å^2)	37.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.36% 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: Y01, 2CV, NA, WHJ

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	0.52	0/2323	0.58	0/3167
1	B	0.53	0/2426	0.59	0/3303
All	All	0.53	0/4749	0.58	0/6470

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	2269	0	2349	14	0
1	B	2371	0	2471	17	0
2	A	70	0	98	6	0
2	B	70	0	98	4	0
3	A	103	0	146	6	0
3	B	86	0	122	6	0
4	A	27	0	23	1	0
4	B	27	0	23	0	0
5	A	1	0	0	0	0
6	A	21	0	0	0	0
6	B	19	0	0	1	0
All	All	5064	0	5330	44	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 (44) 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)
3:A:501:2CV:H271	3:B:505:2CV:H352	1.47	0.95
3:B:501:2CV:H601	3:B:501:2CV:H272	1.56	0.84
1:A:175:LEU:HD13	1:A:179:MET:HG3	1.65	0.78
3:B:501:2CV:H272	3:B:501:2CV:C60	2.17	0.75
1:B:175:LEU:HB2	6:B:2012:HOH:O	1.86	0.75
1:B:209:ILE:HD11	1:B:314:VAL:HG11	1.68	0.75
1:A:47:LEU:O	1:A:51:VAL:HG23	1.94	0.68
3:A:505:2CV:H602	3:A:505:2CV:H37	1.80	0.64
2:A:402:Y01:HAA1	3:A:505:2CV:H01C	1.80	0.63
1:A:209:ILE:HD11	1:A:314:VAL:HG11	1.79	0.63
1:B:235:LYS:O	1:B:238:ILE:HG13	2.01	0.60
1:A:161:ILE:HG12	2:A:401:Y01:HBC	1.86	0.57
1:B:241:ILE:HD12	1:B:282:LEU:HD23	1.88	0.55
1:B:47:LEU:O	1:B:51:VAL:HG23	2.07	0.55
1:A:181:TRP:HB3	3:A:501:2CV:H152	1.89	0.55
1:A:129:ILE:HG13	1:A:219:PRO:HB2	1.90	0.53
1:A:205:ARG:HG2	1:A:314:VAL:HG13	1.91	0.53
1:B:129:ILE:HG13	1:B:219:PRO:HB2	1.94	0.48
2:B:402:Y01:HAE2	2:B:402:Y01:HAC1	1.97	0.47
1:B:48:MET:HE2	1:B:330:TRP:CH2	2.49	0.47
3:A:505:2CV:H271	3:A:505:2CV:H352	1.73	0.46
1:A:234:ALA:O	1:A:286:HIS:HE1	2.00	0.45
1:B:181:TRP:HB3	3:B:501:2CV:H152	1.98	0.45
1:A:141:LEU:HD23	1:A:149:TYR:HD1	1.81	0.44
1:A:195:ASP:HA	1:A:196:PRO:HD3	1.84	0.44
1:A:130:GLU:HG2	2:A:401:Y01:HAC3	2.00	0.44
2:A:402:Y01:HAU2	2:A:402:Y01:HAC1	1.99	0.44
1:B:140:TYR:CE1	1:B:229:ARG:HB3	2.52	0.44
2:A:401:Y01:HAD2	2:A:401:Y01:HAS2	1.90	0.43
1:A:206:ALA:HA	2:B:401:Y01:OAG	2.18	0.43
3:A:501:2CV:H271	3:B:505:2CV:H271	2.00	0.43
4:A:601:WHJ:H16	4:A:601:WHJ:H12	1.71	0.43
1:B:179:MET:O	1:B:180:HIS:HB2	2.19	0.43
1:B:48:MET:CE	1:B:330:TRP:CH2	3.02	0.42
1:B:241:ILE:CD1	1:B:282:LEU:HD23	2.49	0.42
1:B:180:HIS:CE1	1:B:183:ARG:CZ	3.02	0.42
2:B:401:Y01:HAJ2	2:B:401:Y01:HAC3	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:166:TRP:CE2	2:A:402:Y01:HAP1	2.55	0.42
3:B:505:2CV:H352	3:B:505:2CV:H271	1.75	0.41
1:A:220:LEU:HD11	1:A:300:THR:HG23	2.03	0.41
1:B:48:MET:HE2	1:B:330:TRP:HH2	1.86	0.41
1:B:130:GLU:HG2	2:B:401:Y01:HAC3	2.03	0.41
1:B:320:VAL:HA	1:B:321:PRO:HD2	1.93	0.41
1:B:92:LEU:O	1:B:96:PRO:HG2	2.21	0.40

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	282/315 (90%)	273 (97%)	9 (3%)	0	100	100
1	B	296/315 (94%)	289 (98%)	7 (2%)	0	100	100
All	All	578/630 (92%)	562 (97%)	16 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	247/273 (90%)	239 (97%)	8 (3%)	39	65

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	258/273 (94%)	251 (97%)	7 (3%)	44	71
All	All	505/546 (92%)	490 (97%)	15 (3%)	41	67

All (15) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	37	SER
1	A	111	SER
1	A	175	LEU
1	A	186	ASP
1	A	188	GLN
1	A	229	ARG
1	A	235	LYS
1	A	329	ASN
1	B	37	SER
1	B	111	SER
1	B	175	LEU
1	B	202	VAL
1	B	236	GLU
1	B	241	ILE
1	B	329	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	180	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

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5.6 Ligand geometry ⓘ

Of 17 ligands modelled in this entry, 1 is monoatomic - leaving 16 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	2CV	B	502	-	15,15,25	0.84	1 (6%)	16,16,30	0.57	0
3	2CV	B	505	-	25,25,25	0.76	0	29,30,30	0.75	1 (3%)
4	WHJ	B	601	-	29,29,29	1.79	7 (24%)	34,40,40	2.49	6 (17%)
3	2CV	A	505	-	25,25,25	0.68	0	29,30,30	0.78	1 (3%)
2	Y01	A	401	-	38,38,38	1.28	3 (7%)	57,57,57	1.99	13 (22%)
3	2CV	B	501	-	19,19,25	0.60	0	21,21,30	1.07	1 (4%)
4	WHJ	A	601	-	29,29,29	1.82	7 (24%)	34,40,40	2.26	8 (23%)
3	2CV	B	503	-	15,15,25	0.77	1 (6%)	16,16,30	0.52	0
2	Y01	B	402	-	38,38,38	1.37	2 (5%)	57,57,57	1.53	9 (15%)
2	Y01	B	401	-	38,38,38	1.35	3 (7%)	57,57,57	1.80	10 (17%)
2	Y01	A	402	-	38,38,38	1.45	4 (10%)	57,57,57	1.28	7 (12%)
3	2CV	A	501	-	25,25,25	0.51	0	29,30,30	0.83	1 (3%)
3	2CV	B	504	-	7,7,25	0.48	0	7,7,30	0.36	0
3	2CV	A	502	-	4,4,25	0.52	0	3,3,30	0.37	0
3	2CV	A	503	-	19,19,25	0.62	0	21,21,30	0.48	0
3	2CV	A	504	-	25,25,25	0.94	1 (4%)	29,30,30	0.74	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	2CV	B	502	-	-	4/16/16/34	-
3	2CV	B	505	-	-	16/34/34/34	-
4	WHJ	B	601	-	-	4/15/15/15	0/3/3/3
3	2CV	A	505	-	-	14/34/34/34	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	Y01	A	401	-	-	11/19/77/77	0/4/4/4
3	2CV	B	501	-	-	9/22/22/34	-
4	WHJ	A	601	-	-	5/15/15/15	0/3/3/3
3	2CV	B	503	-	-	3/16/16/34	-
2	Y01	B	402	-	-	8/19/77/77	0/4/4/4
2	Y01	B	401	-	-	11/19/77/77	0/4/4/4
2	Y01	A	402	-	-	7/19/77/77	0/4/4/4
3	2CV	A	501	-	-	12/34/34/34	-
3	2CV	B	504	-	-	3/5/5/34	-
3	2CV	A	502	-	-	1/2/2/34	-
3	2CV	A	503	-	-	9/22/22/34	-
3	2CV	A	504	-	-	12/34/34/34	-

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	402	Y01	CAK-CAI	-5.47	1.39	1.50
2	A	402	Y01	CAK-CAI	-5.03	1.39	1.50
2	A	401	Y01	CAK-CAI	-4.99	1.40	1.50
4	B	601	WHJ	C2-C3	4.91	1.50	1.41
2	B	401	Y01	CAK-CAI	-4.62	1.40	1.50
4	A	601	WHJ	C2-C3	4.56	1.49	1.41
4	B	601	WHJ	C2-C7	4.53	1.49	1.41
4	A	601	WHJ	C2-C7	4.28	1.48	1.41
2	B	401	Y01	CAI-CAZ	4.07	1.41	1.33
4	A	601	WHJ	C3-C10	-3.61	1.48	1.52
2	A	402	Y01	CAI-CAZ	3.55	1.40	1.33
2	A	401	Y01	CAI-CAZ	3.46	1.40	1.33
4	A	601	WHJ	C7-C6	3.11	1.48	1.40
4	B	601	WHJ	C8-C1	2.97	1.39	1.34
2	B	402	Y01	CAI-CAZ	2.97	1.39	1.33
4	B	601	WHJ	C7-C6	2.88	1.47	1.40
4	A	601	WHJ	C8-C1	2.84	1.39	1.34
4	B	601	WHJ	C7-N1	-2.79	1.34	1.39
4	A	601	WHJ	C7-N1	-2.64	1.34	1.39
4	B	601	WHJ	C2-C1	-2.56	1.39	1.44
4	A	601	WHJ	C2-C1	-2.47	1.39	1.44
2	A	401	Y01	CBI-CBG	-2.41	1.50	1.55
3	A	504	2CV	C27-C30	2.27	1.56	1.51
2	A	402	Y01	CBB-CBE	2.20	1.58	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	601	WHJ	C3-C10	-2.10	1.50	1.52
3	B	502	2CV	C27-C30	2.09	1.55	1.51
2	A	402	Y01	CAL-CAX	2.06	1.55	1.50
2	B	401	Y01	CAS-CBF	2.03	1.57	1.53
3	B	503	2CV	C27-C30	2.01	1.55	1.51

All (57) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	601	WHJ	C8-C9-N1	11.16	122.02	115.84
4	A	601	WHJ	C8-C9-N1	9.89	121.32	115.84
2	A	401	Y01	OAW-CBC-CAV	6.84	122.12	108.04
2	B	401	Y01	OAW-CBC-CAR	6.70	124.20	108.37
4	B	601	WHJ	C7-N1-C9	-4.71	120.02	124.27
2	A	401	Y01	CBC-CAV-CAZ	-4.68	104.54	111.45
2	A	401	Y01	CAR-CBC-CAV	-4.40	104.85	110.97
2	B	401	Y01	OAW-CAY-CAM	4.40	120.99	111.48
2	B	401	Y01	CBC-CAV-CAZ	-4.34	105.05	111.45
2	A	402	Y01	OAW-CAY-CAM	4.32	120.84	111.48
4	B	601	WHJ	C11-N2-C12	4.22	121.04	115.17
4	B	601	WHJ	O1-C9-C8	-4.01	118.24	125.16
2	B	402	Y01	OAW-CBC-CAR	3.97	117.75	108.37
2	A	401	Y01	CAC-CBB-CBE	-3.96	106.93	112.88
2	A	401	Y01	CBG-CBI-CBE	-3.90	95.62	100.10
2	B	402	Y01	OAW-CAY-CAM	3.84	119.78	111.48
4	A	601	WHJ	C7-N1-C9	-3.61	121.01	124.27
4	A	601	WHJ	C11-N2-C12	3.51	120.06	115.17
2	B	402	Y01	CAP-CAQ-CBG	-3.41	98.47	105.14
2	B	402	Y01	CAV-CAZ-CBH	3.33	120.68	116.42
2	A	401	Y01	CBI-CBG-CBD	-3.31	109.71	114.41
4	A	601	WHJ	O1-C9-C8	-3.26	119.54	125.16
4	B	601	WHJ	C2-C7-C6	-3.25	118.39	120.67
2	A	401	Y01	CAU-CBI-CBE	-3.20	111.89	116.60
3	A	505	2CV	C35-N33-C36	3.02	119.56	116.14
2	B	401	Y01	CAO-CBB-CBE	2.96	116.47	110.33
3	B	501	2CV	C35-N33-C36	-2.95	112.81	116.14
2	B	401	Y01	CAR-CBC-CAV	-2.93	106.91	110.97
2	A	402	Y01	CAK-CBD-CBF	2.91	113.09	109.72
2	B	402	Y01	CBG-CBI-CBE	-2.88	96.79	100.10
2	A	402	Y01	CBG-CBI-CBE	-2.87	96.81	100.10
2	A	401	Y01	CAP-CBE-CBB	2.86	116.50	112.18
2	B	401	Y01	OAW-CAY-OAG	-2.82	117.10	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	501	2CV	C35-N33-C36	-2.78	112.99	116.14
2	B	402	Y01	CAV-CAZ-CAI	-2.75	116.84	120.57
2	A	401	Y01	OAW-CAY-CAM	2.73	117.38	111.48
2	A	401	Y01	CAO-CBB-CBE	2.68	115.89	110.33
4	A	601	WHJ	C2-C7-C6	-2.63	118.83	120.67
2	A	401	Y01	CAV-CAZ-CBH	2.61	119.76	116.42
2	B	401	Y01	CBG-CBI-CBE	-2.57	97.15	100.10
2	B	401	Y01	CAT-CAR-CBC	-2.50	106.25	110.33
2	A	402	Y01	CBC-OAW-CAY	-2.49	111.84	117.80
2	A	401	Y01	OAW-CBC-CAR	2.49	114.25	108.37
4	A	601	WHJ	C14-C15-C16	-2.41	116.42	120.90
2	A	402	Y01	OAW-CAY-OAG	-2.40	118.10	123.70
2	B	402	Y01	OAW-CAY-OAG	-2.37	118.16	123.70
3	B	505	2CV	C35-N33-C36	2.37	118.82	116.14
2	A	402	Y01	CAV-CAZ-CBH	2.34	119.41	116.42
2	B	401	Y01	CAC-CBB-CBE	-2.33	109.39	112.88
2	B	401	Y01	CAU-CBI-CBE	-2.29	113.23	116.60
2	B	402	Y01	OAW-CBC-CAV	-2.25	103.41	108.04
2	B	402	Y01	CAU-CBI-CBE	-2.24	113.31	116.60
4	A	601	WHJ	C19-C20-C15	-2.16	118.17	121.00
4	B	601	WHJ	C2-C1-C8	-2.11	118.69	121.05
4	A	601	WHJ	C2-C1-C8	-2.06	118.75	121.05
2	A	402	Y01	OAF-CAX-CAL	-2.02	116.70	123.09
2	A	401	Y01	CBI-CBE-CBB	-2.00	116.40	119.50

There are no chirality outliers.

All (129) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	Y01	CAX-CAL-CAM-CAY
2	A	402	Y01	OAG-CAY-OAW-CBC
2	B	401	Y01	CAR-CBC-OAW-CAY
2	B	402	Y01	OAG-CAY-OAW-CBC
2	B	402	Y01	CAM-CAY-OAW-CBC
3	A	501	2CV	C36-C37-C40-C41
3	A	501	2CV	C36-C37-C40-O49
3	A	501	2CV	O47-C37-C40-C41
3	A	501	2CV	O47-C37-C40-O49
3	A	501	2CV	C37-C40-C41-C42
3	A	501	2CV	C37-C40-C41-O51
3	A	501	2CV	O49-C40-C41-C42
3	A	501	2CV	O49-C40-C41-O51

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Mol	Chain	Res	Type	Atoms
3	A	503	2CV	O47-C37-C40-O49
3	A	504	2CV	N33-C36-C37-C40
3	A	504	2CV	N33-C36-C37-O47
3	A	504	2CV	C36-C37-C40-C41
3	A	504	2CV	C36-C37-C40-O49
3	A	504	2CV	O47-C37-C40-O49
3	A	505	2CV	C37-C36-N33-C35
3	A	505	2CV	C36-C37-C40-C41
3	A	505	2CV	C36-C37-C40-O49
3	A	505	2CV	O47-C37-C40-C41
3	A	505	2CV	O47-C37-C40-O49
3	A	505	2CV	C37-C40-C41-C42
3	A	505	2CV	C37-C40-C41-O51
3	A	505	2CV	O49-C40-C41-C42
3	A	505	2CV	O49-C40-C41-O51
3	A	505	2CV	O53-C42-C43-O44
3	B	501	2CV	N33-C35-C60-O63
3	B	501	2CV	N33-C36-C37-C40
3	B	501	2CV	N33-C36-C37-O47
3	B	505	2CV	C36-C37-C40-C41
3	B	505	2CV	C36-C37-C40-O49
3	B	505	2CV	O47-C37-C40-O49
3	B	505	2CV	C37-C40-C41-C42
3	B	505	2CV	C37-C40-C41-O51
3	B	505	2CV	O49-C40-C41-C42
3	B	505	2CV	O49-C40-C41-O51
3	B	505	2CV	C40-C41-C42-C43
3	B	505	2CV	C40-C41-C42-O53
3	B	505	2CV	O51-C41-C42-C43
3	B	505	2CV	O51-C41-C42-O53
4	B	601	WHJ	N2-C12-C14-C15
4	B	601	WHJ	C13-C12-C14-C15
2	B	402	Y01	CAR-CBC-OAW-CAY
3	A	501	2CV	C21-C24-C27-C30
3	A	504	2CV	N33-C35-C60-O63
4	B	601	WHJ	C19-C18-O3-C21
4	B	601	WHJ	C17-C18-O3-C21
4	A	601	WHJ	C17-C18-O3-C21
4	A	601	WHJ	C19-C18-O3-C21
2	A	402	Y01	CAM-CAY-OAW-CBC
3	A	505	2CV	C41-C42-C43-O44
3	A	504	2CV	O47-C37-C40-C41

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Mol	Chain	Res	Type	Atoms
3	B	505	2CV	O47-C37-C40-C41
3	A	503	2CV	C21-C24-C27-C30
2	A	401	Y01	CAR-CBC-OAW-CAY
3	B	501	2CV	C60-C35-N33-C30
3	B	504	2CV	C21-C24-C27-C30
2	A	401	Y01	CAO-CBB-CBE-CBI
2	B	401	Y01	CAO-CBB-CBE-CBI
2	B	401	Y01	CAC-CBB-CBE-CAP
2	A	401	Y01	CAC-CBB-CBE-CBI
2	B	401	Y01	CAC-CBB-CBE-CBI
3	A	501	2CV	N33-C35-C60-O63
2	A	401	Y01	CAC-CBB-CBE-CAP
2	A	401	Y01	CAN-CAJ-CAO-CBB
3	A	501	2CV	C37-C36-N33-C35
2	A	401	Y01	CAJ-CAN-CBA-CAB
3	A	504	2CV	C18-C21-C24-C27
3	B	502	2CV	C9-C12-C15-C18
2	A	401	Y01	CAJ-CAN-CBA-CAA
2	A	402	Y01	CAJ-CAN-CBA-CAB
3	B	501	2CV	C60-C35-N33-C36
3	A	501	2CV	C37-C36-N33-C30
3	A	505	2CV	C37-C36-N33-C30
3	A	503	2CV	C15-C12-C9-C1
2	B	401	Y01	CAM-CAY-OAW-CBC
2	B	402	Y01	CAJ-CAN-CBA-CAB
2	B	401	Y01	CAX-CAL-CAM-CAY
2	B	401	Y01	OAG-CAY-OAW-CBC
3	B	503	2CV	C21-C24-C27-C30
4	A	601	WHJ	C13-C12-N2-C11
3	B	505	2CV	C12-C15-C18-C21
3	A	504	2CV	C21-C24-C27-C30
3	A	503	2CV	N33-C36-C37-O47
2	B	401	Y01	CAN-CAJ-CAO-CBB
3	A	503	2CV	C12-C15-C18-C21
3	B	505	2CV	C15-C18-C21-C24
3	B	503	2CV	C15-C12-C9-C1
2	B	401	Y01	CAO-CBB-CBE-CAP
3	A	503	2CV	N33-C36-C37-C40
3	A	503	2CV	C36-C37-C40-O49
3	B	504	2CV	C18-C21-C24-C27
2	A	402	Y01	CAJ-CAN-CBA-CAA
3	A	504	2CV	C0-C1-C9-C12

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Mol	Chain	Res	Type	Atoms
3	B	501	2CV	O47-C37-C40-O49
2	A	401	Y01	CAO-CBB-CBE-CAP
2	B	402	Y01	CAJ-CAN-CBA-CAA
3	A	504	2CV	C12-C15-C18-C21
3	B	504	2CV	C15-C18-C21-C24
3	A	505	2CV	C15-C18-C21-C24
3	B	503	2CV	C0-C1-C9-C12
3	A	503	2CV	C9-C12-C15-C18
3	B	505	2CV	C37-C36-N33-C35
4	A	601	WHJ	C12-C14-C15-C16
3	B	501	2CV	C15-C12-C9-C1
2	A	402	Y01	CAJ-CAO-CBB-CAC
3	B	501	2CV	C21-C24-C27-C30
3	A	505	2CV	C12-C15-C18-C21
2	A	402	Y01	CAM-CAL-CAX-OAF
3	A	503	2CV	C15-C18-C21-C24
2	A	402	Y01	CAM-CAL-CAX-OAH
4	A	601	WHJ	C12-C14-C15-C20
3	B	502	2CV	C12-C15-C18-C21
3	B	502	2CV	C15-C12-C9-C1
2	B	401	Y01	CAM-CAL-CAX-OAH
2	A	401	Y01	CAM-CAL-CAX-OAH
2	B	401	Y01	CAM-CAL-CAX-OAF
2	B	402	Y01	CAM-CAL-CAX-OAH
2	A	401	Y01	CAM-CAL-CAX-OAF
2	B	402	Y01	CAM-CAL-CAX-OAF
3	A	504	2CV	C9-C12-C15-C18
3	B	502	2CV	C0-C1-C9-C12
3	A	502	2CV	C12-C15-C18-C21
3	B	501	2CV	C36-C37-C40-O49
3	B	505	2CV	C18-C21-C24-C27
2	B	402	Y01	CAL-CAM-CAY-OAW

There are no ring outliers.

9 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	505	2CV	3	0
3	A	505	2CV	3	0
2	A	401	Y01	3	0
3	B	501	2CV	3	0
4	A	601	WHJ	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	402	Y01	1	0
2	B	401	Y01	3	0
2	A	402	Y01	3	0
3	A	501	2CV	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 2CV B 502

Bond lengths　　　　Bond angles

Torsions　　　　Rings

Ligand 2CV B 505

Bond lengths

Bond angles

Torsions

Rings

Ligand WHJ B 601

Bond lengths

Bond angles

Torsions

Rings

Ligand 2CV A 505

Bond lengths

Bond angles

Torsions

Rings

Ligand Y01 A 401

Bond lengths

Bond angles

Torsions

Rings

Ligand 2CV B 501

Bond lengths

Bond angles

Torsions

Rings

Ligand WHJ A 601

Bond lengths

Bond angles

Torsions

Rings

Ligand 2CV B 503

Bond lengths

Bond angles

Torsions

Rings

Ligand Y01 B 402

Bond lengths

Bond angles

Torsions

Rings

Ligand Y01 B 401

Bond lengths

Bond angles

Torsions

Rings

Ligand Y01 A 402

Bond lengths

Bond angles

Torsions

Rings

Ligand 2CV A 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 2CV B 504	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 2CV A 502

Bond lengths

Bond angles

Torsions

Rings

Ligand 2CV A 503

Ligand 2CV A 504

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	286/315 (90%)	0.66	29 (10%)	7	4	11, 33, 75, 91	0
1	B	298/315 (94%)	0.52	25 (8%)	11	7	13, 32, 60, 80	0
All	All	584/630 (92%)	0.59	54 (9%)	9	6	11, 33, 67, 91	0

All (54) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	283	MET	8.0
1	A	280	VAL	6.7
1	A	281	MET	6.3
1	A	279	ARG	6.3
1	A	282	LEU	5.6
1	A	284	ARG	5.6
1	A	234	ALA	5.6
1	A	194	GLN	5.5
1	B	322	ASP	4.9
1	A	34	GLU	4.7
1	A	278	SER	4.6
1	A	319	LEU	4.5
1	A	231	TYR	4.3
1	B	148	ARG	4.1
1	B	188	GLN	4.0
1	A	286	HIS	4.0
1	A	287	LYS	3.9
1	B	187	PRO	3.5
1	B	147	PHE	3.3
1	B	317	ARG	3.2
1	B	346	SER	3.2
1	B	349	PHE	3.2
1	A	236	GLU	3.2
1	B	347	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
1	B	351	LYS	3.1
1	B	236	GLU	3.1
1	B	320	VAL	3.0
1	B	186	ASP	2.9
1	B	316	ASN	2.9
1	B	318	ASP	2.9
1	B	358	ALA	2.9
1	A	285	GLU	2.9
1	A	290	LYS	2.8
1	A	214	ILE	2.8
1	A	198	CYS	2.7
1	A	147	PHE	2.7
1	B	348	ASP	2.7
1	B	71	ARG	2.7
1	B	280	VAL	2.6
1	A	354	LYS	2.6
1	A	347	PRO	2.6
1	A	235	LYS	2.6
1	B	214	ILE	2.5
1	A	358	ALA	2.4
1	A	318	ASP	2.4
1	B	319	LEU	2.3
1	B	215	SER	2.2
1	B	168	ILE	2.2
1	A	195	ASP	2.2
1	B	125	VAL	2.1
1	A	232	ARG	2.1
1	A	210	ALA	2.1
1	B	152	LEU	2.1
1	A	353	PHE	2.1

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(Å²)	Q<0.9
3	2CV	A	504	26/26	0.50	0.51	40,72,90,91	0
3	2CV	A	505	26/26	0.57	0.44	40,85,98,99	0
3	2CV	B	505	26/26	0.67	0.35	30,77,88,90	0
3	2CV	B	502	16/26	0.72	0.32	20,52,73,78	0
3	2CV	A	503	20/26	0.72	0.39	50,73,85,86	0
3	2CV	A	501	26/26	0.73	0.29	16,50,62,63	0
3	2CV	B	503	16/26	0.74	0.34	48,66,89,90	0
5	NA	A	701	1/1	0.75	0.49	48,48,48,48	0
3	2CV	B	501	20/26	0.79	0.34	17,51,62,64	0
3	2CV	A	502	5/26	0.81	0.28	34,37,41,41	0
2	Y01	A	402	35/35	0.82	0.28	29,49,95,97	0
2	Y01	A	401	35/35	0.85	0.30	15,27,47,52	0
3	2CV	B	504	8/26	0.85	0.55	58,64,67,69	0
2	Y01	B	402	35/35	0.88	0.22	35,41,74,75	0
4	WHJ	A	601	27/27	0.91	0.26	21,24,67,70	0
2	Y01	B	401	35/35	0.91	0.26	13,22,47,50	0
4	WHJ	B	601	27/27	0.92	0.26	16,25,49,54	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.
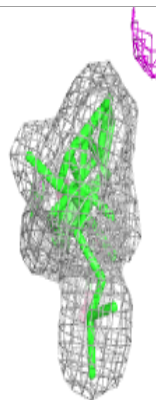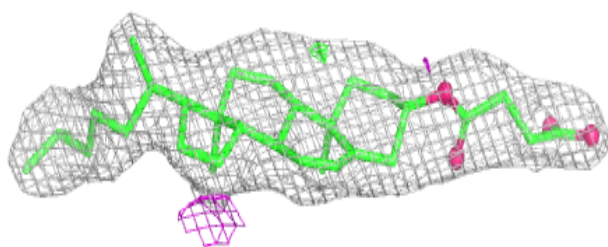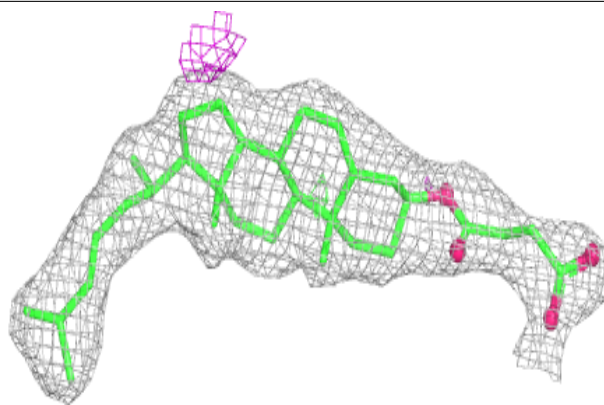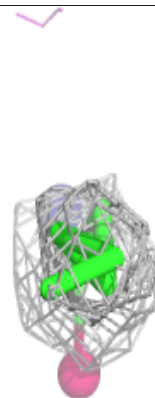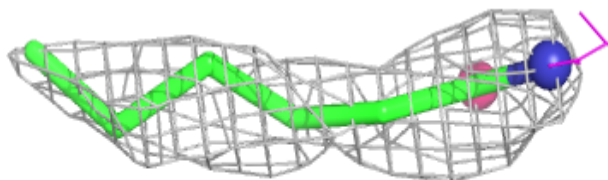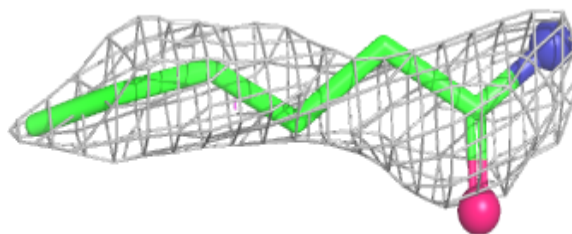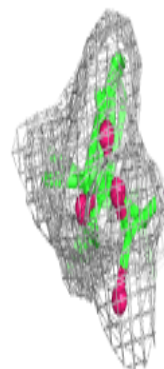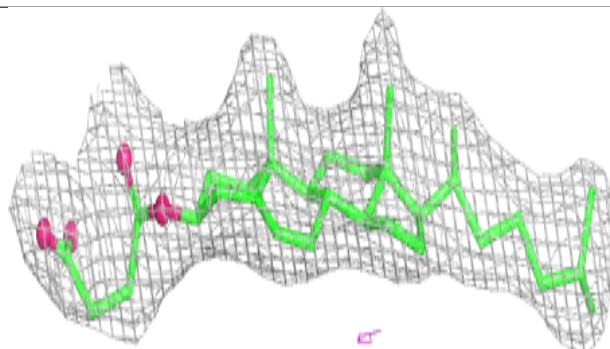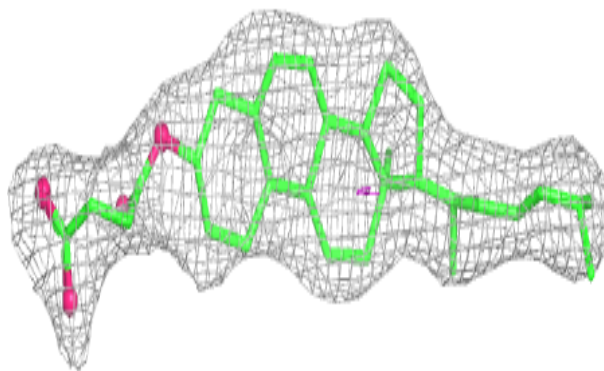
Electron density around 2CV A 504:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
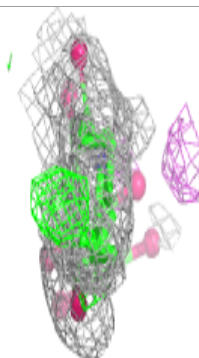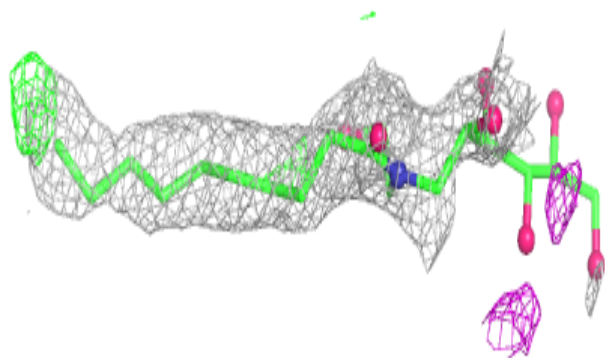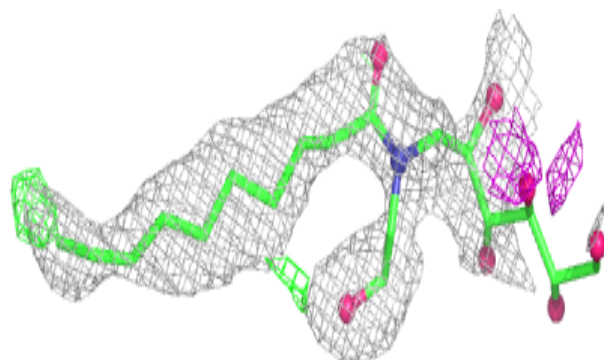
Electron density around 2CV A 505:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
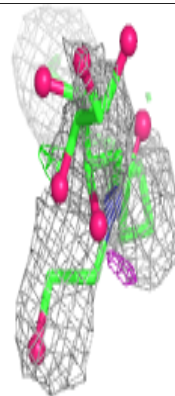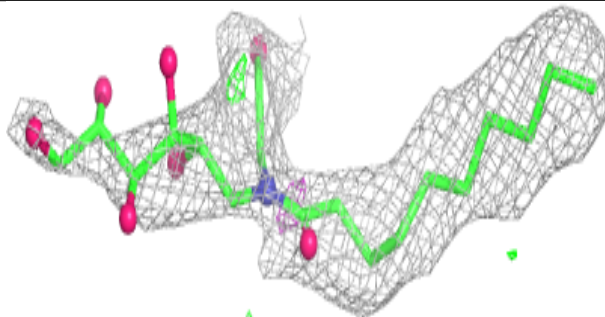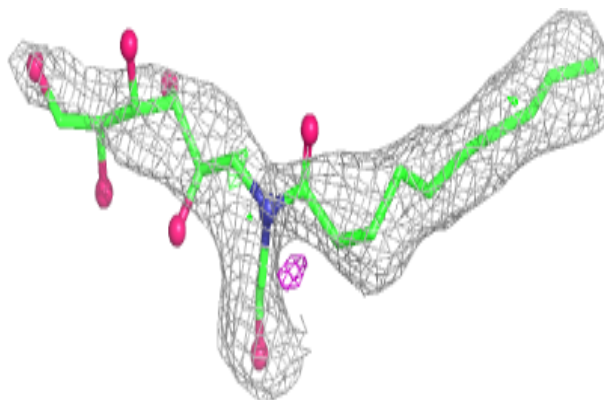
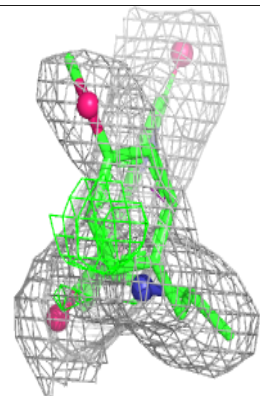**Electron density around 2CV B 505:**

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
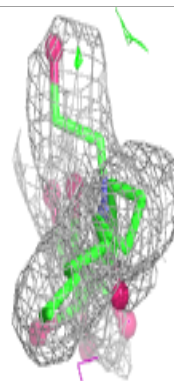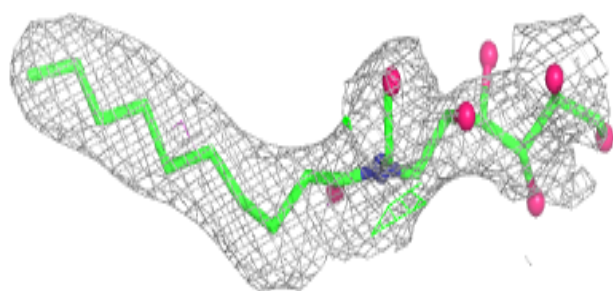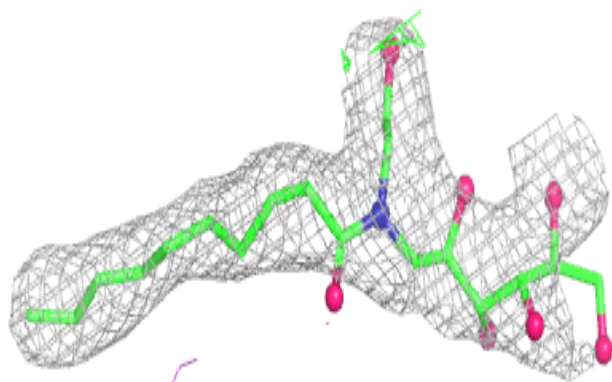
Electron density around 2CV B 502:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
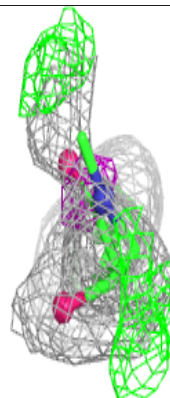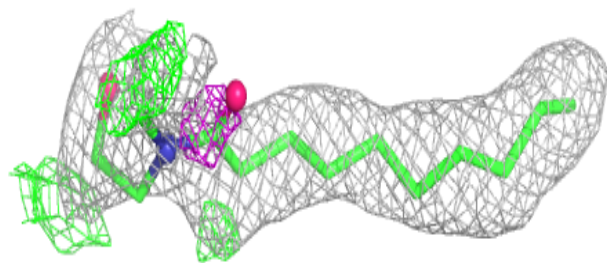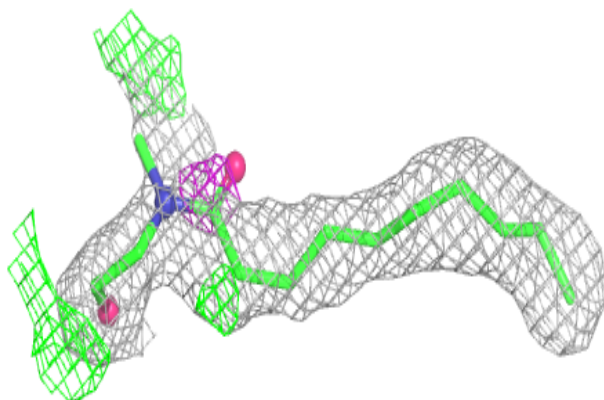
Electron density around 2CV A 503:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
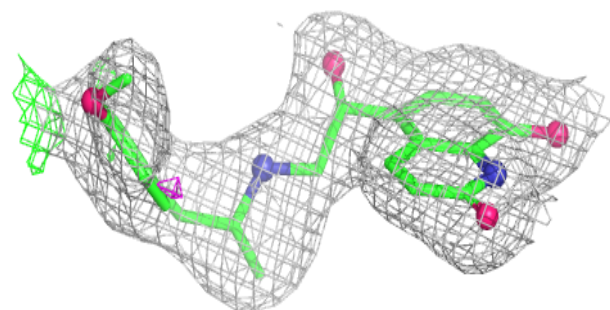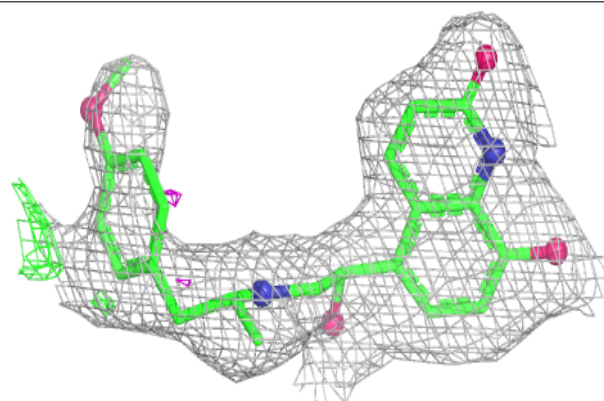mF_o-DF_c (at 3 rmsd) in purple (negative)
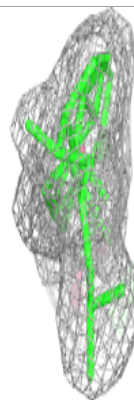and green (positive)
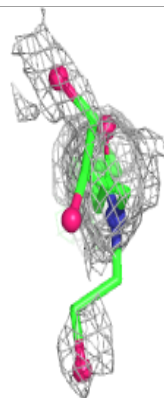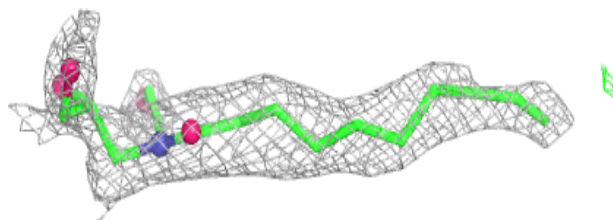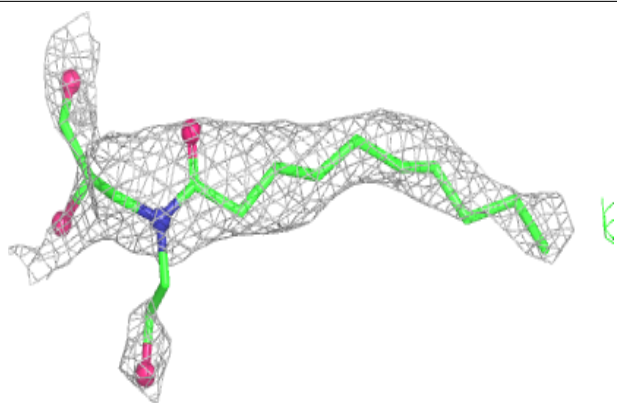
Electron density around 2CV A 501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
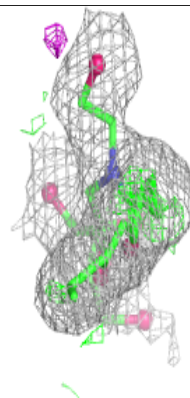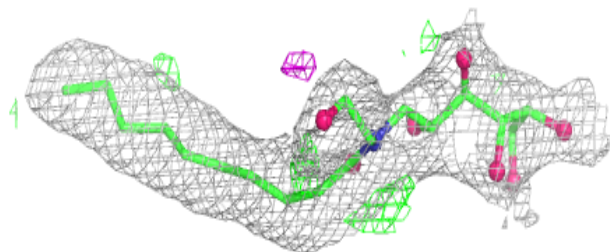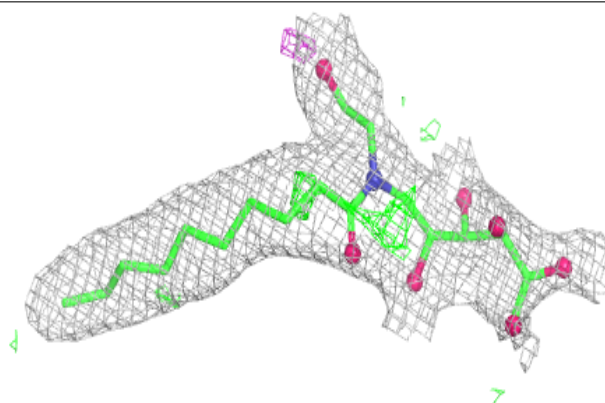
Electron density around 2CV B 503:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
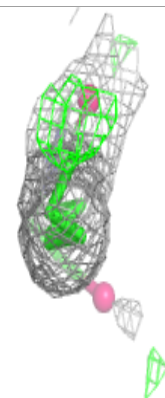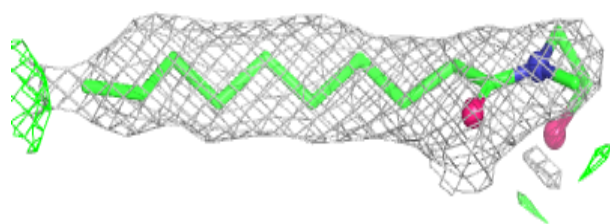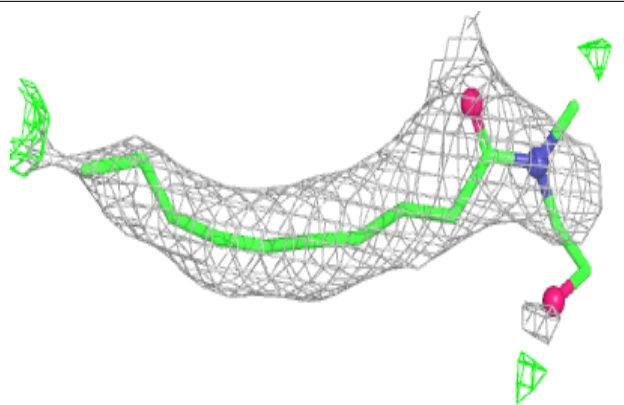
Electron density around 2CV B 501:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
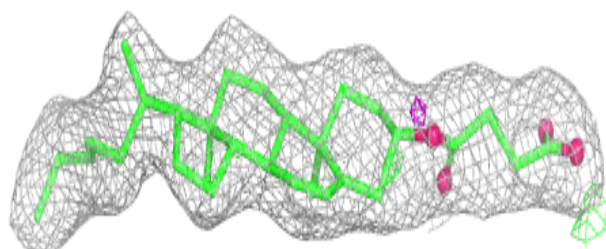$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
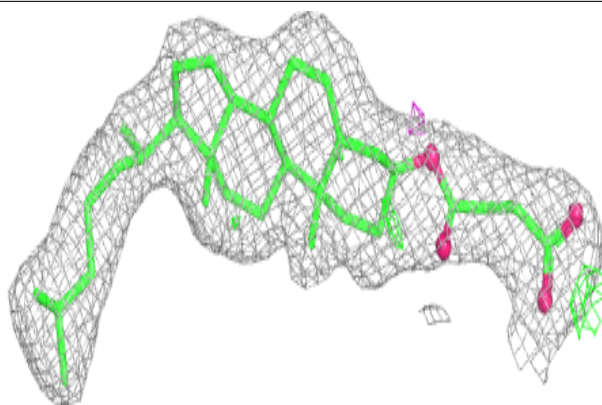and green (positive)
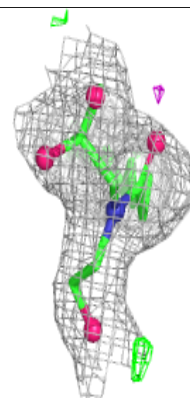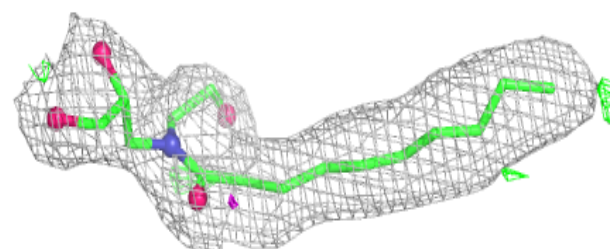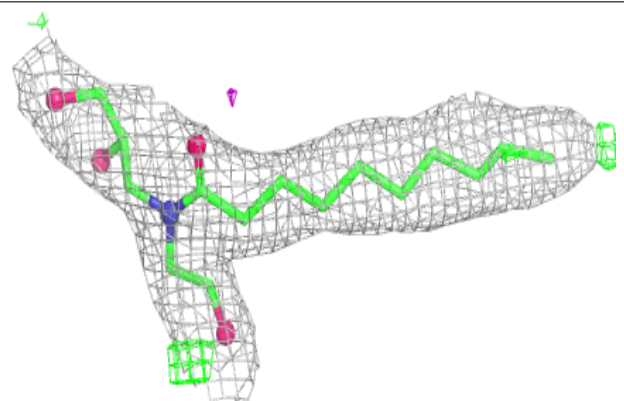
Electron density around 2CV A 502:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
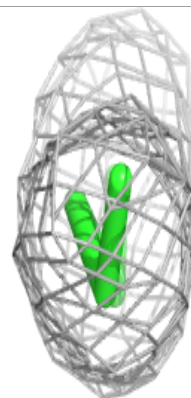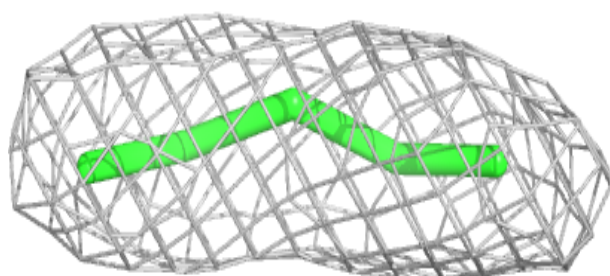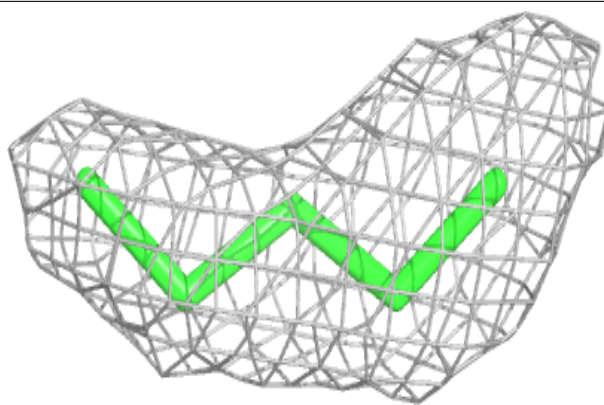
Electron density around Y01 A 402:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
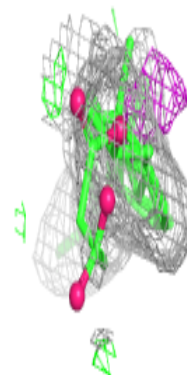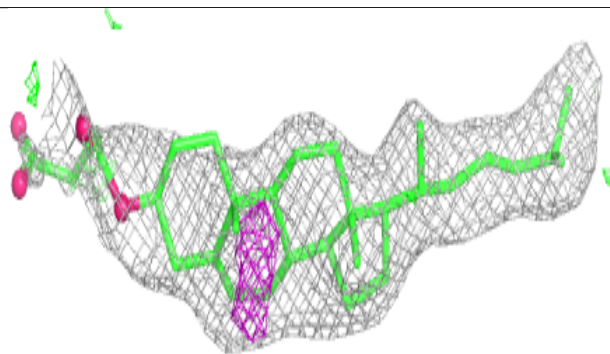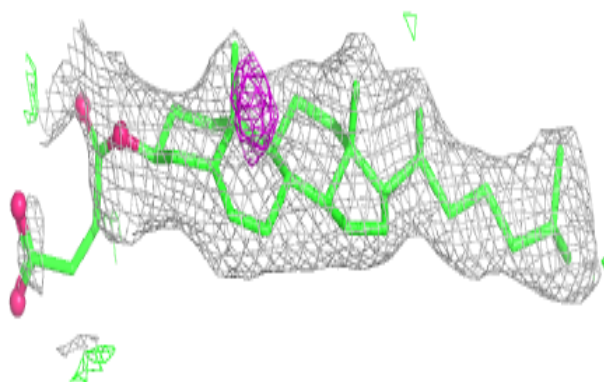
Electron density around Y01 A 401:

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

Electron density around 2CV B 504:

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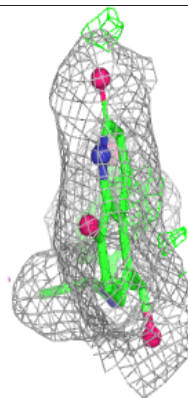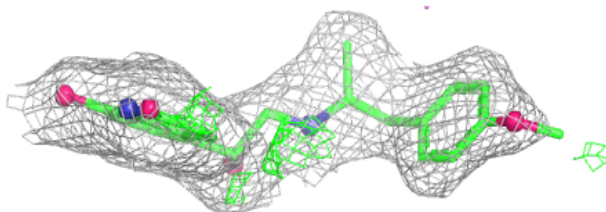$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
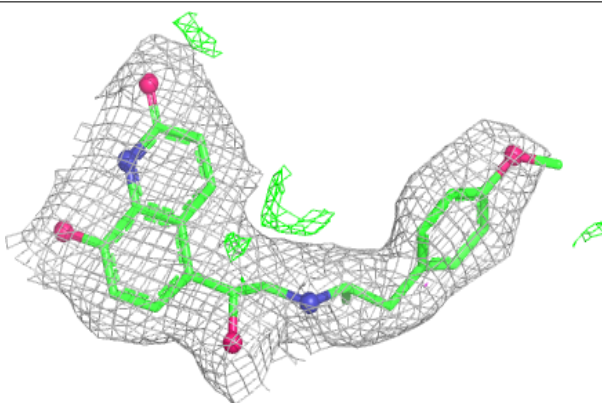and green (positive)

Electron density around Y01 B 402:

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

Electron density around WHJ A 601:

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

Electron density around Y01 B 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)

Electron density around WHJ B 601:

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