



wwPDB X-ray Structure Validation Summary Report ⓘ

Oct 4, 2023 – 06:46 PM EDT

PDB ID : 4PTJ
Title : Ensemble model for Escherichia coli dihydrofolate reductase at 277K
Authors : Keedy, D.A.; van den Bedem, H.; Sivak, D.A.; Petsko, G.A.; Ringe, D.; Wilson, M.A.; Fraser, J.S.
Deposited on : 2014-03-10
Resolution : 1.05 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	FAILED
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

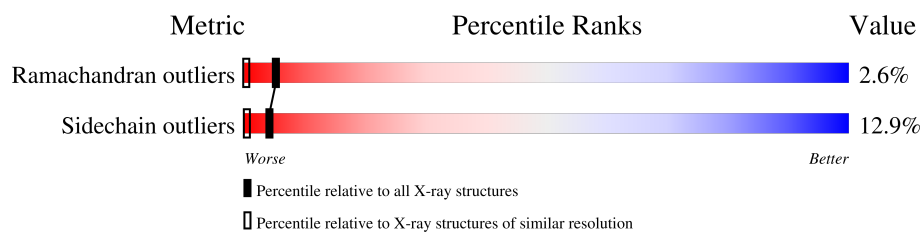
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.05 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))
Ramachandran outliers	138981	1204 (1.10-1.02)
Sidechain outliers	138945	1202 (1.10-1.02)

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 339833 atoms, of which 157875 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 Dihydrofolate reductase.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	1-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	2-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	3-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	4-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	5-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	6-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	7-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	8-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	9-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	10-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	11-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	12-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	13-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	14-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	15-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	16-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	17-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	18-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	19-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	20-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	21-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	22-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	23-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	24-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	25-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	26-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	27-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	28-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	29-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	30-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	31-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	32-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	33-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	34-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	35-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	36-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	37-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	38-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	39-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	40-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	41-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	42-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	43-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	44-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	45-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	46-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	47-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	48-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	49-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	50-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	51-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	52-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	53-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	54-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	55-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	56-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	57-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	58-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	59-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	60-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	61-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	62-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	63-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	64-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	65-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	66-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	67-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	68-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	69-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	70-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	71-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	72-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	73-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	74-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	75-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	76-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	77-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	78-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	79-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	80-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	81-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	82-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	83-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	84-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	85-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	86-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	87-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	88-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	89-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	90-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	91-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	92-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	93-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	94-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	95-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	96-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	97-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	98-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	99-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	100-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	101-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	102-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	103-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	104-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	105-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	106-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	107-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	108-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	109-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	110-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	111-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	112-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	113-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	114-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	115-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	116-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	117-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	118-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	119-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	120-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			
1	121-A	159	Total	C	H	N	O	S	0	0	0
			2491	805	1221	217	241	7			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	122-A	159	Total 2491	C 805	H 1221	N 217	O 241	S 7	0	0	0
1	123-A	159	Total 2491	C 805	H 1221	N 217	O 241	S 7	0	0	0
1	124-A	159	Total 2491	C 805	H 1221	N 217	O 241	S 7	0	0	0
1	125-A	159	Total 2491	C 805	H 1221	N 217	O 241	S 7	0	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
2	1-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	2-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	3-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	4-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	5-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	6-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	7-A	1	Total 49	C 19	H 17	N 7	O 6	0	0



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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	8-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	9-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	10-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	11-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	12-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	13-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	14-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	15-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	16-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	17-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	18-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	19-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	20-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	21-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	22-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	23-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	24-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	25-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	26-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	27-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	28-A	1	Total 49	C 19	H 17	N 7	O 6	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	29-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	30-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	31-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	32-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	33-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	34-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	35-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	36-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	37-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	38-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	39-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	40-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	41-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	42-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	43-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	44-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	45-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	46-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	47-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	48-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	49-A	1	Total 49	C 19	H 17	N 7	O 6	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	50-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	51-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	52-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	53-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	54-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	55-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	56-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	57-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	58-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	59-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	60-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	61-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	62-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	63-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	64-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	65-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	66-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	67-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	68-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	69-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	70-A	1	Total 49	C 19	H 17	N 7	O 6	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	71-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	72-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	73-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	74-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	75-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	76-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	77-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	78-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	79-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	80-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	81-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	82-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	83-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	84-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	85-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	86-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	87-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	88-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	89-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	90-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	91-A	1	Total 49	C 19	H 17	N 7	O 6	0	0

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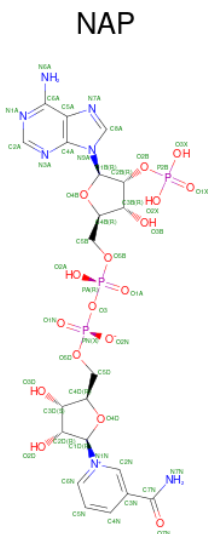
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	92-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	93-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	94-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	95-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	96-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	97-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	98-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	99-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	100-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	101-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	102-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	103-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	104-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	105-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	106-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	107-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	108-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	109-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	110-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	111-A	1	Total 49	C 19	H 17	N 7	O 6	0	0
2	112-A	1	Total 49	C 19	H 17	N 7	O 6	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	113-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	114-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	115-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	116-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	117-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	118-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	119-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	120-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	121-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	122-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	123-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	124-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		
2	125-A	1	Total	C	H	N	O	0	0
			49	19	17	7	6		

- Molecule 3 is NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE (three-letter code: NAP) (formula: C₂₁H₂₈N₇O₁₇P₃).



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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	15-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	16-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	17-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	18-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	19-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	20-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	21-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	22-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	23-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	24-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	25-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	26-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	27-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	28-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	29-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	30-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	31-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	32-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	33-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	34-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	35-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	36-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	37-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	38-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	39-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	40-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	41-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	42-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	43-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	44-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	45-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	46-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	47-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	48-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	49-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	50-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	51-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	52-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	53-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	54-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	55-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	56-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	57-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	58-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	59-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	60-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	61-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	62-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	63-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	64-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	65-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	66-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	67-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	68-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	69-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	70-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	71-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	72-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	73-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	74-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	75-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	76-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	77-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	78-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	79-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	80-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	81-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	82-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	83-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	84-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	85-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	86-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	87-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	88-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	89-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	90-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	91-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	92-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	93-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	94-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	95-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	96-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	97-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	98-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	99-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	100-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	101-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	102-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	103-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	104-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	105-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	106-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	107-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	108-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	109-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	110-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	111-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	112-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	113-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	114-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	115-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	116-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	117-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	118-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0
3	119-A	1	Total 73	C 21	H 25	N 7	O 17	P 3	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	120-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		
3	121-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		
3	122-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		
3	123-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		
3	124-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		
3	125-A	1	Total	C	H	N	O	P	0	0
			73	21	25	7	17	3		

- Molecule 4 is MANGANESE (II) ION (three-letter code: MN) (formula: Mn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	1-A	2	Total	Mn	0	0
			2	2		
4	2-A	2	Total	Mn	0	0
			2	2		
4	3-A	2	Total	Mn	0	0
			2	2		
4	4-A	2	Total	Mn	0	0
			2	2		
4	5-A	2	Total	Mn	0	0
			2	2		
4	6-A	2	Total	Mn	0	0
			2	2		
4	7-A	2	Total	Mn	0	0
			2	2		
4	8-A	2	Total	Mn	0	0
			2	2		
4	9-A	2	Total	Mn	0	0
			2	2		
4	10-A	2	Total	Mn	0	0
			2	2		
4	11-A	2	Total	Mn	0	0
			2	2		
4	12-A	2	Total	Mn	0	0
			2	2		
4	13-A	2	Total	Mn	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	14-A	2	Total 2	Mn 2	0	0
4	15-A	2	Total 2	Mn 2	0	0
4	16-A	2	Total 2	Mn 2	0	0
4	17-A	2	Total 2	Mn 2	0	0
4	18-A	2	Total 2	Mn 2	0	0
4	19-A	2	Total 2	Mn 2	0	0
4	20-A	2	Total 2	Mn 2	0	0
4	21-A	2	Total 2	Mn 2	0	0
4	22-A	2	Total 2	Mn 2	0	0
4	23-A	2	Total 2	Mn 2	0	0
4	24-A	2	Total 2	Mn 2	0	0
4	25-A	2	Total 2	Mn 2	0	0
4	26-A	2	Total 2	Mn 2	0	0
4	27-A	2	Total 2	Mn 2	0	0
4	28-A	2	Total 2	Mn 2	0	0
4	29-A	2	Total 2	Mn 2	0	0
4	30-A	2	Total 2	Mn 2	0	0
4	31-A	2	Total 2	Mn 2	0	0
4	32-A	2	Total 2	Mn 2	0	0
4	33-A	2	Total 2	Mn 2	0	0
4	34-A	2	Total 2	Mn 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	35-A	2	Total 2	Mn 2	0	0
4	36-A	2	Total 2	Mn 2	0	0
4	37-A	2	Total 2	Mn 2	0	0
4	38-A	2	Total 2	Mn 2	0	0
4	39-A	2	Total 2	Mn 2	0	0
4	40-A	2	Total 2	Mn 2	0	0
4	41-A	2	Total 2	Mn 2	0	0
4	42-A	2	Total 2	Mn 2	0	0
4	43-A	2	Total 2	Mn 2	0	0
4	44-A	2	Total 2	Mn 2	0	0
4	45-A	2	Total 2	Mn 2	0	0
4	46-A	2	Total 2	Mn 2	0	0
4	47-A	2	Total 2	Mn 2	0	0
4	48-A	2	Total 2	Mn 2	0	0
4	49-A	2	Total 2	Mn 2	0	0
4	50-A	2	Total 2	Mn 2	0	0
4	51-A	2	Total 2	Mn 2	0	0
4	52-A	2	Total 2	Mn 2	0	0
4	53-A	2	Total 2	Mn 2	0	0
4	54-A	2	Total 2	Mn 2	0	0
4	55-A	2	Total 2	Mn 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	56-A	2	Total 2	Mn 2	0	0
4	57-A	2	Total 2	Mn 2	0	0
4	58-A	2	Total 2	Mn 2	0	0
4	59-A	2	Total 2	Mn 2	0	0
4	60-A	2	Total 2	Mn 2	0	0
4	61-A	2	Total 2	Mn 2	0	0
4	62-A	2	Total 2	Mn 2	0	0
4	63-A	2	Total 2	Mn 2	0	0
4	64-A	2	Total 2	Mn 2	0	0
4	65-A	2	Total 2	Mn 2	0	0
4	66-A	2	Total 2	Mn 2	0	0
4	67-A	2	Total 2	Mn 2	0	0
4	68-A	2	Total 2	Mn 2	0	0
4	69-A	2	Total 2	Mn 2	0	0
4	70-A	2	Total 2	Mn 2	0	0
4	71-A	2	Total 2	Mn 2	0	0
4	72-A	2	Total 2	Mn 2	0	0
4	73-A	2	Total 2	Mn 2	0	0
4	74-A	2	Total 2	Mn 2	0	0
4	75-A	2	Total 2	Mn 2	0	0
4	76-A	2	Total 2	Mn 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	77-A	2	Total 2	Mn 2	0	0
4	78-A	2	Total 2	Mn 2	0	0
4	79-A	2	Total 2	Mn 2	0	0
4	80-A	2	Total 2	Mn 2	0	0
4	81-A	2	Total 2	Mn 2	0	0
4	82-A	2	Total 2	Mn 2	0	0
4	83-A	2	Total 2	Mn 2	0	0
4	84-A	2	Total 2	Mn 2	0	0
4	85-A	2	Total 2	Mn 2	0	0
4	86-A	2	Total 2	Mn 2	0	0
4	87-A	2	Total 2	Mn 2	0	0
4	88-A	2	Total 2	Mn 2	0	0
4	89-A	2	Total 2	Mn 2	0	0
4	90-A	2	Total 2	Mn 2	0	0
4	91-A	2	Total 2	Mn 2	0	0
4	92-A	2	Total 2	Mn 2	0	0
4	93-A	2	Total 2	Mn 2	0	0
4	94-A	2	Total 2	Mn 2	0	0
4	95-A	2	Total 2	Mn 2	0	0
4	96-A	2	Total 2	Mn 2	0	0
4	97-A	2	Total 2	Mn 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	98-A	2	Total 2	Mn 2	0	0
4	99-A	2	Total 2	Mn 2	0	0
4	100-A	2	Total 2	Mn 2	0	0
4	101-A	2	Total 2	Mn 2	0	0
4	102-A	2	Total 2	Mn 2	0	0
4	103-A	2	Total 2	Mn 2	0	0
4	104-A	2	Total 2	Mn 2	0	0
4	105-A	2	Total 2	Mn 2	0	0
4	106-A	2	Total 2	Mn 2	0	0
4	107-A	2	Total 2	Mn 2	0	0
4	108-A	2	Total 2	Mn 2	0	0
4	109-A	2	Total 2	Mn 2	0	0
4	110-A	2	Total 2	Mn 2	0	0
4	111-A	2	Total 2	Mn 2	0	0
4	112-A	2	Total 2	Mn 2	0	0
4	113-A	2	Total 2	Mn 2	0	0
4	114-A	2	Total 2	Mn 2	0	0
4	115-A	2	Total 2	Mn 2	0	0
4	116-A	2	Total 2	Mn 2	0	0
4	117-A	2	Total 2	Mn 2	0	0
4	118-A	2	Total 2	Mn 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	119-A	2	Total 2	Mn 2	0	0
4	120-A	2	Total 2	Mn 2	0	0
4	121-A	2	Total 2	Mn 2	0	0
4	122-A	2	Total 2	Mn 2	0	0
4	123-A	2	Total 2	Mn 2	0	0
4	124-A	2	Total 2	Mn 2	0	0
4	125-A	2	Total 2	Mn 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	1-A	89	Total 89	O 89	0	0
5	2-A	91	Total 91	O 91	0	0
5	3-A	82	Total 82	O 82	0	0
5	4-A	108	Total 108	O 108	0	0
5	5-A	105	Total 105	O 105	0	0
5	6-A	112	Total 112	O 112	0	0
5	7-A	107	Total 107	O 107	0	0
5	8-A	102	Total 102	O 102	0	0
5	9-A	96	Total 96	O 96	0	0
5	10-A	90	Total 90	O 90	0	0
5	11-A	110	Total 110	O 110	0	0
5	12-A	102	Total 102	O 102	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	13-A	117	Total 117	O 117	0	0
5	14-A	116	Total 116	O 116	0	0
5	15-A	113	Total 113	O 113	0	0
5	16-A	105	Total 105	O 105	0	0
5	17-A	95	Total 95	O 95	0	0
5	18-A	105	Total 105	O 105	0	0
5	19-A	108	Total 108	O 108	0	0
5	20-A	100	Total 100	O 100	0	0
5	21-A	103	Total 103	O 103	0	0
5	22-A	96	Total 96	O 96	0	0
5	23-A	110	Total 110	O 110	0	0
5	24-A	97	Total 97	O 97	0	0
5	25-A	106	Total 106	O 106	0	0
5	26-A	112	Total 112	O 112	0	0
5	27-A	102	Total 102	O 102	0	0
5	28-A	100	Total 100	O 100	0	0
5	29-A	95	Total 95	O 95	0	0
5	30-A	96	Total 96	O 96	0	0
5	31-A	93	Total 93	O 93	0	0
5	32-A	106	Total 106	O 106	0	0
5	33-A	105	Total 105	O 105	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	34-A	108	Total 108	O 108	0	0
5	35-A	100	Total 100	O 100	0	0
5	36-A	104	Total 104	O 104	0	0
5	37-A	108	Total 108	O 108	0	0
5	38-A	119	Total 119	O 119	0	0
5	39-A	118	Total 118	O 118	0	0
5	40-A	102	Total 102	O 102	0	0
5	41-A	98	Total 98	O 98	0	0
5	42-A	97	Total 97	O 97	0	0
5	43-A	102	Total 102	O 102	0	0
5	44-A	108	Total 108	O 108	0	0
5	45-A	107	Total 107	O 107	0	0
5	46-A	102	Total 102	O 102	0	0
5	47-A	102	Total 102	O 102	0	0
5	48-A	102	Total 102	O 102	0	0
5	49-A	105	Total 105	O 105	0	0
5	50-A	96	Total 96	O 96	0	0
5	51-A	104	Total 104	O 104	0	0
5	52-A	107	Total 107	O 107	0	0
5	53-A	105	Total 105	O 105	0	0
5	54-A	103	Total 103	O 103	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	55-A	106	Total 106	O 106	0	0
5	56-A	110	Total 110	O 110	0	0
5	57-A	108	Total 108	O 108	0	0
5	58-A	116	Total 116	O 116	0	0
5	59-A	108	Total 108	O 108	0	0
5	60-A	93	Total 93	O 93	0	0
5	61-A	109	Total 109	O 109	0	0
5	62-A	107	Total 107	O 107	0	0
5	63-A	110	Total 110	O 110	0	0
5	64-A	102	Total 102	O 102	0	0
5	65-A	96	Total 96	O 96	0	0
5	66-A	104	Total 104	O 104	0	0
5	67-A	99	Total 99	O 99	0	0
5	68-A	93	Total 93	O 93	0	0
5	69-A	95	Total 95	O 95	0	0
5	70-A	103	Total 103	O 103	0	0
5	71-A	103	Total 103	O 103	0	0
5	72-A	97	Total 97	O 97	0	0
5	73-A	108	Total 108	O 108	0	0
5	74-A	111	Total 111	O 111	0	0
5	75-A	109	Total 109	O 109	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	76-A	93	Total 93	O 93	0	0
5	77-A	87	Total 87	O 87	0	0
5	78-A	95	Total 95	O 95	0	0
5	79-A	115	Total 115	O 115	0	0
5	80-A	109	Total 109	O 109	0	0
5	81-A	106	Total 106	O 106	0	0
5	82-A	107	Total 107	O 107	0	0
5	83-A	116	Total 116	O 116	0	0
5	84-A	111	Total 111	O 111	0	0
5	85-A	118	Total 118	O 118	0	0
5	86-A	109	Total 109	O 109	0	0
5	87-A	113	Total 113	O 113	0	0
5	88-A	103	Total 103	O 103	0	0
5	89-A	109	Total 109	O 109	0	0
5	90-A	103	Total 103	O 103	0	0
5	91-A	93	Total 93	O 93	0	0
5	92-A	98	Total 98	O 98	0	0
5	93-A	117	Total 117	O 117	0	0
5	94-A	121	Total 121	O 121	0	0
5	95-A	111	Total 111	O 111	0	0
5	96-A	104	Total 104	O 104	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	97-A	93	Total 93	O 93	0	0
5	98-A	98	Total 98	O 98	0	0
5	99-A	99	Total 99	O 99	0	0
5	100-A	107	Total 107	O 107	0	0
5	101-A	107	Total 107	O 107	0	0
5	102-A	100	Total 100	O 100	0	0
5	103-A	105	Total 105	O 105	0	0
5	104-A	94	Total 94	O 94	0	0
5	105-A	90	Total 90	O 90	0	0
5	106-A	91	Total 91	O 91	0	0
5	107-A	113	Total 113	O 113	0	0
5	108-A	108	Total 108	O 108	0	0
5	109-A	111	Total 111	O 111	0	0
5	110-A	113	Total 113	O 113	0	0
5	111-A	109	Total 109	O 109	0	0
5	112-A	92	Total 92	O 92	0	0
5	113-A	101	Total 101	O 101	0	0
5	114-A	103	Total 103	O 103	0	0
5	115-A	102	Total 102	O 102	0	0
5	116-A	101	Total 101	O 101	0	0
5	117-A	95	Total 95	O 95	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	118-A	107	Total 107	O 107	0	0
5	119-A	106	Total 106	O 106	0	0
5	120-A	105	Total 105	O 105	0	0
5	121-A	115	Total 115	O 115	0	0
5	122-A	97	Total 97	O 97	0	0
5	123-A	105	Total 105	O 105	0	0
5	124-A	93	Total 93	O 93	0	0
5	125-A	102	Total 102	O 102	0	0

SEQUENCE-PLOTS INFOmissingINFO

3 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	34.30Å 45.52Å 98.71Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.40 – 1.05	Depositor
% Data completeness (in resolution range)	98.2 (49.40-1.05)	Depositor
R_{merge}	0.04	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.22 (at 1.05Å)	Xtriage
Refinement program	PHENIX 1.8.4-1496	Depositor
R, R_{free}	0.136 , 0.166	Depositor
Wilson B-factor (Å ²)	10.4	Xtriage
Anisotropy	0.167	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	339833	wwPDB-VP
Average B, all atoms (Å ²)	11.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.36% of the height of the origin peak. No significant pseudotranslation is detected.*

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.

4 Model quality ⓘ

4.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MN, CSD, FOL, 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	1-A	0.85	1/1296 (0.1%)	1.08	6/1762 (0.3%)
1	2-A	0.87	3/1296 (0.2%)	1.20	14/1762 (0.8%)
1	3-A	0.85	2/1296 (0.2%)	1.11	10/1762 (0.6%)
1	4-A	0.90	4/1296 (0.3%)	1.09	11/1762 (0.6%)
1	5-A	0.87	4/1296 (0.3%)	1.16	12/1762 (0.7%)
1	6-A	0.87	1/1296 (0.1%)	1.17	13/1762 (0.7%)
1	7-A	1.06	7/1296 (0.5%)	1.26	16/1762 (0.9%)
1	8-A	0.88	0/1296	1.18	10/1762 (0.6%)
1	9-A	0.97	3/1296 (0.2%)	1.22	15/1762 (0.9%)
1	10-A	0.91	2/1296 (0.2%)	1.17	15/1762 (0.9%)
1	11-A	0.99	6/1296 (0.5%)	1.19	17/1762 (1.0%)
1	12-A	0.88	2/1296 (0.2%)	1.14	10/1762 (0.6%)
1	13-A	0.92	3/1296 (0.2%)	1.23	12/1762 (0.7%)
1	14-A	0.96	3/1296 (0.2%)	1.25	11/1762 (0.6%)
1	15-A	0.91	2/1296 (0.2%)	1.14	7/1762 (0.4%)
1	16-A	0.81	0/1296	1.08	4/1762 (0.2%)
1	17-A	0.86	3/1296 (0.2%)	1.20	14/1762 (0.8%)
1	18-A	1.00	4/1296 (0.3%)	1.20	14/1762 (0.8%)
1	19-A	0.95	3/1296 (0.2%)	1.19	11/1762 (0.6%)
1	20-A	0.92	5/1296 (0.4%)	1.13	6/1762 (0.3%)
1	21-A	0.86	1/1296 (0.1%)	1.06	8/1762 (0.5%)
1	22-A	0.89	2/1296 (0.2%)	1.16	10/1762 (0.6%)
1	23-A	0.88	3/1296 (0.2%)	1.08	6/1762 (0.3%)
1	24-A	0.96	6/1296 (0.5%)	1.15	11/1762 (0.6%)
1	25-A	0.94	4/1296 (0.3%)	1.05	3/1762 (0.2%)
1	26-A	0.83	2/1296 (0.2%)	1.13	10/1762 (0.6%)
1	27-A	0.91	3/1296 (0.2%)	1.07	5/1762 (0.3%)
1	28-A	1.04	8/1296 (0.6%)	1.25	17/1762 (1.0%)
1	29-A	1.17	8/1296 (0.6%)	1.21	13/1762 (0.7%)
1	30-A	0.85	2/1296 (0.2%)	1.05	4/1762 (0.2%)
1	31-A	0.82	1/1296 (0.1%)	1.03	7/1762 (0.4%)
1	32-A	0.98	4/1296 (0.3%)	1.23	16/1762 (0.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	33-A	0.91	5/1296 (0.4%)	1.14	13/1762 (0.7%)
1	34-A	0.94	4/1296 (0.3%)	1.15	11/1762 (0.6%)
1	35-A	0.87	2/1296 (0.2%)	1.20	14/1762 (0.8%)
1	36-A	0.87	3/1296 (0.2%)	1.12	10/1762 (0.6%)
1	37-A	0.91	5/1296 (0.4%)	1.10	7/1762 (0.4%)
1	38-A	0.95	5/1296 (0.4%)	1.19	10/1762 (0.6%)
1	39-A	0.91	1/1296 (0.1%)	1.06	7/1762 (0.4%)
1	40-A	0.84	1/1296 (0.1%)	1.11	9/1762 (0.5%)
1	41-A	0.94	3/1296 (0.2%)	1.22	16/1762 (0.9%)
1	42-A	0.85	1/1296 (0.1%)	1.21	9/1762 (0.5%)
1	43-A	0.97	4/1296 (0.3%)	1.18	11/1762 (0.6%)
1	44-A	0.97	4/1296 (0.3%)	1.20	13/1762 (0.7%)
1	45-A	1.05	9/1296 (0.7%)	1.13	8/1762 (0.5%)
1	46-A	0.92	4/1296 (0.3%)	1.16	11/1762 (0.6%)
1	47-A	1.01	8/1296 (0.6%)	1.15	8/1762 (0.5%)
1	48-A	0.90	2/1296 (0.2%)	1.16	12/1762 (0.7%)
1	49-A	0.98	8/1296 (0.6%)	1.08	4/1762 (0.2%)
1	50-A	0.92	4/1296 (0.3%)	1.07	9/1762 (0.5%)
1	51-A	0.94	3/1296 (0.2%)	1.16	11/1762 (0.6%)
1	52-A	1.00	6/1296 (0.5%)	1.06	6/1762 (0.3%)
1	53-A	0.87	3/1296 (0.2%)	1.07	10/1762 (0.6%)
1	54-A	1.01	6/1296 (0.5%)	1.15	11/1762 (0.6%)
1	55-A	0.96	4/1296 (0.3%)	1.20	17/1762 (1.0%)
1	56-A	0.89	4/1296 (0.3%)	1.13	10/1762 (0.6%)
1	57-A	0.95	3/1296 (0.2%)	1.20	13/1762 (0.7%)
1	58-A	0.95	3/1296 (0.2%)	1.13	7/1762 (0.4%)
1	59-A	0.85	1/1296 (0.1%)	1.10	9/1762 (0.5%)
1	60-A	0.87	0/1296	1.12	7/1762 (0.4%)
1	61-A	0.98	7/1296 (0.5%)	1.15	11/1762 (0.6%)
1	62-A	0.94	3/1296 (0.2%)	1.14	7/1762 (0.4%)
1	63-A	1.05	4/1296 (0.3%)	1.23	16/1762 (0.9%)
1	64-A	1.32	8/1296 (0.6%)	1.36	22/1762 (1.2%)
1	65-A	0.90	2/1296 (0.2%)	1.09	7/1762 (0.4%)
1	66-A	1.03	3/1296 (0.2%)	1.23	12/1762 (0.7%)
1	67-A	0.91	4/1296 (0.3%)	1.17	15/1762 (0.9%)
1	68-A	1.01	7/1296 (0.5%)	1.30	15/1762 (0.9%)
1	69-A	0.90	1/1296 (0.1%)	1.13	8/1762 (0.5%)
1	70-A	0.89	1/1296 (0.1%)	1.23	17/1762 (1.0%)
1	71-A	0.93	5/1296 (0.4%)	1.06	5/1762 (0.3%)
1	72-A	0.93	4/1296 (0.3%)	1.22	13/1762 (0.7%)
1	73-A	0.94	3/1296 (0.2%)	1.16	12/1762 (0.7%)
1	74-A	0.94	3/1296 (0.2%)	1.08	5/1762 (0.3%)
1	75-A	0.94	1/1296 (0.1%)	1.15	7/1762 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	76-A	0.95	3/1296 (0.2%)	1.20	13/1762 (0.7%)
1	77-A	0.99	5/1296 (0.4%)	1.16	10/1762 (0.6%)
1	78-A	0.94	2/1296 (0.2%)	1.17	11/1762 (0.6%)
1	79-A	1.09	5/1296 (0.4%)	1.17	8/1762 (0.5%)
1	80-A	0.91	2/1296 (0.2%)	1.15	11/1762 (0.6%)
1	81-A	0.95	4/1296 (0.3%)	1.21	15/1762 (0.9%)
1	82-A	1.05	8/1296 (0.6%)	1.16	14/1762 (0.8%)
1	83-A	0.97	6/1296 (0.5%)	1.22	14/1762 (0.8%)
1	84-A	0.98	6/1296 (0.5%)	1.19	15/1762 (0.9%)
1	85-A	0.85	0/1296	1.25	13/1762 (0.7%)
1	86-A	0.93	3/1296 (0.2%)	1.11	6/1762 (0.3%)
1	87-A	0.89	2/1296 (0.2%)	1.10	6/1762 (0.3%)
1	88-A	0.92	0/1296	1.22	13/1762 (0.7%)
1	89-A	0.93	3/1296 (0.2%)	1.14	9/1762 (0.5%)
1	90-A	0.88	1/1296 (0.1%)	1.15	13/1762 (0.7%)
1	91-A	0.99	3/1296 (0.2%)	1.18	13/1762 (0.7%)
1	92-A	0.96	4/1296 (0.3%)	1.24	13/1762 (0.7%)
1	93-A	1.02	7/1296 (0.5%)	1.28	14/1762 (0.8%)
1	94-A	0.93	4/1296 (0.3%)	1.17	11/1762 (0.6%)
1	95-A	0.99	6/1296 (0.5%)	1.14	9/1762 (0.5%)
1	96-A	1.01	4/1296 (0.3%)	1.32	17/1762 (1.0%)
1	97-A	0.89	3/1296 (0.2%)	1.13	12/1762 (0.7%)
1	98-A	1.00	6/1296 (0.5%)	1.22	13/1762 (0.7%)
1	99-A	0.88	3/1296 (0.2%)	1.12	12/1762 (0.7%)
1	100-A	0.89	1/1296 (0.1%)	1.17	11/1762 (0.6%)
1	101-A	0.94	4/1296 (0.3%)	1.15	11/1762 (0.6%)
1	102-A	0.95	5/1296 (0.4%)	1.19	13/1762 (0.7%)
1	103-A	0.92	2/1296 (0.2%)	1.13	11/1762 (0.6%)
1	104-A	0.97	6/1296 (0.5%)	1.24	14/1762 (0.8%)
1	105-A	0.88	3/1296 (0.2%)	1.09	8/1762 (0.5%)
1	106-A	0.93	4/1296 (0.3%)	1.15	8/1762 (0.5%)
1	107-A	0.96	4/1296 (0.3%)	1.17	11/1762 (0.6%)
1	108-A	1.05	5/1296 (0.4%)	1.17	16/1762 (0.9%)
1	109-A	1.04	5/1296 (0.4%)	1.23	11/1762 (0.6%)
1	110-A	1.30	5/1296 (0.4%)	1.16	9/1762 (0.5%)
1	111-A	1.34	5/1296 (0.4%)	1.16	11/1762 (0.6%)
1	112-A	1.36	3/1296 (0.2%)	1.16	8/1762 (0.5%)
1	113-A	0.95	6/1296 (0.5%)	1.06	6/1762 (0.3%)
1	114-A	0.88	0/1296	1.11	8/1762 (0.5%)
1	115-A	0.93	5/1296 (0.4%)	1.22	14/1762 (0.8%)
1	116-A	0.93	3/1296 (0.2%)	1.17	11/1762 (0.6%)
1	117-A	0.99	4/1296 (0.3%)	1.12	12/1762 (0.7%)
1	118-A	0.96	4/1296 (0.3%)	1.18	9/1762 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	119-A	1.00	5/1296 (0.4%)	1.14	9/1762 (0.5%)
1	120-A	0.96	3/1296 (0.2%)	1.10	7/1762 (0.4%)
1	121-A	1.01	5/1296 (0.4%)	1.15	12/1762 (0.7%)
1	122-A	0.97	5/1296 (0.4%)	1.22	11/1762 (0.6%)
1	123-A	0.94	5/1296 (0.4%)	1.11	7/1762 (0.4%)
1	124-A	0.98	5/1296 (0.4%)	1.15	12/1762 (0.7%)
1	125-A	1.10	5/1296 (0.4%)	1.12	12/1762 (0.7%)
All	All	0.96	461/162000 (0.3%)	1.16	1350/220250 (0.6%)

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	1-A	0	1
1	2-A	0	3
1	3-A	0	3
1	4-A	0	3
1	5-A	0	2
1	6-A	0	2
1	7-A	0	5
1	8-A	0	4
1	9-A	0	4
1	10-A	0	4
1	11-A	0	3
1	12-A	0	3
1	13-A	0	3
1	14-A	0	2
1	15-A	0	3
1	16-A	0	4
1	17-A	0	4
1	18-A	0	2
1	19-A	0	2
1	21-A	0	1
1	22-A	0	3
1	23-A	0	3
1	24-A	0	2
1	26-A	0	1
1	27-A	0	1
1	29-A	0	2
1	30-A	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	31-A	0	2
1	32-A	0	2
1	33-A	0	1
1	36-A	0	2
1	38-A	0	1
1	39-A	0	3
1	40-A	0	2
1	41-A	0	3
1	42-A	0	1
1	43-A	0	3
1	44-A	0	2
1	45-A	0	1
1	46-A	0	2
1	47-A	0	2
1	48-A	0	1
1	49-A	0	2
1	50-A	0	2
1	52-A	0	2
1	54-A	0	4
1	55-A	0	2
1	56-A	0	2
1	57-A	0	2
1	58-A	0	2
1	59-A	0	1
1	60-A	0	1
1	61-A	0	1
1	62-A	0	1
1	63-A	0	3
1	64-A	0	3
1	65-A	0	2
1	66-A	0	6
1	67-A	0	2
1	68-A	0	3
1	69-A	0	3
1	70-A	0	2
1	71-A	0	2
1	72-A	0	1
1	73-A	0	3
1	74-A	0	1
1	75-A	0	4
1	76-A	0	3
1	77-A	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	78-A	0	2
1	79-A	0	1
1	81-A	0	1
1	82-A	0	1
1	83-A	0	2
1	84-A	0	1
1	85-A	0	1
1	86-A	0	1
1	87-A	0	3
1	88-A	0	2
1	89-A	0	2
1	90-A	0	3
1	91-A	0	3
1	92-A	0	2
1	93-A	0	4
1	94-A	0	3
1	95-A	0	2
1	96-A	0	4
1	98-A	0	2
1	99-A	0	2
1	100-A	0	3
1	101-A	0	4
1	102-A	0	4
1	103-A	0	2
1	104-A	0	2
1	105-A	0	1
1	106-A	0	1
1	107-A	0	1
1	108-A	0	3
1	109-A	0	3
1	110-A	0	3
1	111-A	0	3
1	112-A	0	3
1	113-A	0	1
1	114-A	0	4
1	115-A	0	3
1	116-A	0	2
1	117-A	0	2
1	118-A	0	3
1	119-A	0	1
1	120-A	0	2
1	121-A	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	122-A	0	1
1	123-A	0	2
1	124-A	0	2
1	125-A	0	2
All	All	0	267

The worst 5 of 461 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	111-A	30	TRP	CB-CG	35.12	2.13	1.50
1	112-A	30	TRP	CB-CG	34.17	2.11	1.50
1	110-A	30	TRP	CB-CG	28.63	2.01	1.50
1	64-A	154	GLU	CB-CG	21.19	1.92	1.52
1	125-A	30	TRP	CB-CG	20.27	1.86	1.50

The worst 5 of 1350 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	68-A	16	MET	CG-SD-CE	-21.11	66.42	100.20
1	64-A	12	ARG	NE-CZ-NH2	20.89	130.75	120.30
1	85-A	125	PHE	C-N-CD	-19.27	78.22	120.60
1	98-A	12	ARG	NE-CZ-NH2	-17.49	111.56	120.30
1	19-A	52	ARG	NE-CZ-NH1	-15.53	112.53	120.30

There are no chirality outliers.

5 of 267 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1-A	128	TYR	Peptide
1	2-A	126	PRO	Peptide
1	2-A	128	TYR	Peptide
1	2-A	16	MET	Peptide
1	3-A	16	MET	Peptide

4.2 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	1-A	1270	1221	1221	0	0
1	2-A	1270	1221	1221	0	0
1	3-A	1270	1221	1220	0	0
1	4-A	1270	1221	1221	0	0
1	5-A	1270	1221	1221	0	0
1	6-A	1270	1221	1221	0	0
1	7-A	1270	1221	1221	0	0
1	8-A	1270	1221	1221	0	0
1	9-A	1270	1221	1220	0	0
1	10-A	1270	1221	1221	0	0
1	11-A	1270	1221	1221	0	0
1	12-A	1270	1221	1220	0	0
1	13-A	1270	1221	1221	0	0
1	14-A	1270	1221	1221	0	0
1	15-A	1270	1221	1221	0	0
1	16-A	1270	1221	1221	0	0
1	17-A	1270	1221	1221	0	0
1	18-A	1270	1221	1221	0	0
1	19-A	1270	1221	1221	0	0
1	20-A	1270	1221	1221	0	0
1	21-A	1270	1221	1221	0	0
1	22-A	1270	1221	1221	0	0
1	23-A	1270	1221	1221	0	0
1	24-A	1270	1221	1221	0	0
1	25-A	1270	1221	1221	0	0
1	26-A	1270	1221	1221	0	0
1	27-A	1270	1221	1221	0	0
1	28-A	1270	1221	1221	0	0
1	29-A	1270	1221	1221	0	0
1	30-A	1270	1221	1221	0	0
1	31-A	1270	1221	1221	0	0
1	32-A	1270	1221	1221	0	0
1	33-A	1270	1221	1221	0	0
1	34-A	1270	1221	1221	0	0
1	35-A	1270	1221	1221	0	0
1	36-A	1270	1221	1221	0	0
1	37-A	1270	1221	1220	0	0
1	38-A	1270	1221	1221	0	0
1	39-A	1270	1221	1221	0	0
1	40-A	1270	1221	1221	0	0
1	41-A	1270	1221	1221	0	0
1	42-A	1270	1221	1221	0	0
1	43-A	1270	1221	1221	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	44-A	1270	1221	1221	0	0
1	45-A	1270	1221	1221	0	0
1	46-A	1270	1221	1221	0	0
1	47-A	1270	1221	1221	0	0
1	48-A	1270	1221	1221	0	0
1	49-A	1270	1221	1221	0	0
1	50-A	1270	1221	1221	0	0
1	51-A	1270	1221	1222	0	0
1	52-A	1270	1221	1221	0	0
1	53-A	1270	1221	1221	0	0
1	54-A	1270	1221	1221	0	0
1	55-A	1270	1221	1220	0	0
1	56-A	1270	1221	1221	0	0
1	57-A	1270	1221	1221	0	0
1	58-A	1270	1221	1221	0	0
1	59-A	1270	1221	1221	0	0
1	60-A	1270	1221	1220	0	0
1	61-A	1270	1221	1221	0	0
1	62-A	1270	1221	1221	0	0
1	63-A	1270	1221	1221	0	0
1	64-A	1270	1221	1221	0	0
1	65-A	1270	1221	1221	0	0
1	66-A	1270	1221	1221	0	0
1	67-A	1270	1221	1221	0	0
1	68-A	1270	1221	1221	0	0
1	69-A	1270	1221	1221	0	0
1	70-A	1270	1221	1221	0	0
1	71-A	1270	1221	1221	0	0
1	72-A	1270	1221	1221	0	0
1	73-A	1270	1221	1221	0	0
1	74-A	1270	1221	1221	0	0
1	75-A	1270	1221	1221	0	0
1	76-A	1270	1221	1221	0	0
1	77-A	1270	1221	1221	0	0
1	78-A	1270	1221	1221	0	0
1	79-A	1270	1221	1222	0	0
1	80-A	1270	1221	1222	0	0
1	81-A	1270	1221	1221	0	0
1	82-A	1270	1221	1222	0	0
1	83-A	1270	1221	1221	0	0
1	84-A	1270	1221	1221	0	0
1	85-A	1270	1221	1221	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	86-A	1270	1221	1221	0	0
1	87-A	1270	1221	1221	0	0
1	88-A	1270	1221	1220	0	0
1	89-A	1270	1221	1221	0	0
1	90-A	1270	1221	1221	0	0
1	91-A	1270	1221	1221	0	0
1	92-A	1270	1221	1221	0	0
1	93-A	1270	1221	1220	0	0
1	94-A	1270	1221	1221	0	0
1	95-A	1270	1221	1221	0	0
1	96-A	1270	1221	1221	0	0
1	97-A	1270	1221	1221	0	0
1	98-A	1270	1221	1221	0	0
1	99-A	1270	1221	1220	0	0
1	100-A	1270	1221	1221	0	0
1	101-A	1270	1221	1221	0	0
1	102-A	1270	1221	1221	0	0
1	103-A	1270	1221	1221	0	0
1	104-A	1270	1221	1221	0	0
1	105-A	1270	1221	1221	0	0
1	106-A	1270	1221	1221	0	0
1	107-A	1270	1221	1221	0	0
1	108-A	1270	1221	1221	0	0
1	109-A	1270	1221	1221	0	0
1	110-A	1270	1221	1221	0	0
1	111-A	1270	1221	1220	0	0
1	112-A	1270	1221	1220	0	0
1	113-A	1270	1221	1219	0	0
1	114-A	1270	1221	1221	0	0
1	115-A	1270	1221	1221	0	0
1	116-A	1270	1221	1221	0	0
1	117-A	1270	1221	1221	0	0
1	118-A	1270	1221	1221	0	0
1	119-A	1270	1221	1221	0	0
1	120-A	1270	1221	1221	0	0
1	121-A	1270	1221	1221	0	0
1	122-A	1270	1221	1221	0	0
1	123-A	1270	1221	1221	0	0
1	124-A	1270	1221	1221	0	0
1	125-A	1270	1221	1221	0	0
2	1-A	32	17	17	0	0
2	2-A	32	17	17	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	3-A	32	17	17	0	0
2	4-A	32	17	17	0	0
2	5-A	32	17	17	0	0
2	6-A	32	17	17	0	0
2	7-A	32	17	17	0	0
2	8-A	32	17	17	0	0
2	9-A	32	17	17	0	0
2	10-A	32	17	17	0	0
2	11-A	32	17	17	0	0
2	12-A	32	17	17	0	0
2	13-A	32	17	17	0	0
2	14-A	32	17	17	0	0
2	15-A	32	17	17	0	0
2	16-A	32	17	17	0	0
2	17-A	32	17	17	0	0
2	18-A	32	17	17	0	0
2	19-A	32	17	17	0	0
2	20-A	32	17	17	0	0
2	21-A	32	17	17	0	0
2	22-A	32	17	17	0	0
2	23-A	32	17	17	0	0
2	24-A	32	17	17	0	0
2	25-A	32	17	17	0	0
2	26-A	32	17	17	0	0
2	27-A	32	17	17	0	0
2	28-A	32	17	17	0	0
2	29-A	32	17	17	0	0
2	30-A	32	17	17	0	0
2	31-A	32	17	17	0	0
2	32-A	32	17	17	0	0
2	33-A	32	17	17	0	0
2	34-A	32	17	17	0	0
2	35-A	32	17	17	0	0
2	36-A	32	17	17	0	0
2	37-A	32	17	17	0	0
2	38-A	32	17	17	0	0
2	39-A	32	17	17	0	0
2	40-A	32	17	17	0	0
2	41-A	32	17	17	0	0
2	42-A	32	17	17	0	0
2	43-A	32	17	17	0	0
2	44-A	32	17	17	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	45-A	32	17	17	0	0
2	46-A	32	17	17	0	0
2	47-A	32	17	17	0	0
2	48-A	32	17	17	0	0
2	49-A	32	17	17	0	0
2	50-A	32	17	17	0	0
2	51-A	32	17	17	0	0
2	52-A	32	17	17	0	0
2	53-A	32	17	17	0	0
2	54-A	32	17	17	0	0
2	55-A	32	17	17	0	0
2	56-A	32	17	17	0	0
2	57-A	32	17	17	0	0
2	58-A	32	17	17	0	0
2	59-A	32	17	17	0	0
2	60-A	32	17	17	0	0
2	61-A	32	17	17	0	0
2	62-A	32	17	16	0	0
2	63-A	32	17	17	0	0
2	64-A	32	17	16	0	0
2	65-A	32	17	17	0	0
2	66-A	32	17	17	0	0
2	67-A	32	17	16	0	0
2	68-A	32	17	16	0	0
2	69-A	32	17	17	0	0
2	70-A	32	17	15	0	0
2	71-A	32	17	17	0	0
2	72-A	32	17	17	0	0
2	73-A	32	17	17	0	0
2	74-A	32	17	17	0	0
2	75-A	32	17	17	0	0
2	76-A	32	17	17	0	0
2	77-A	32	17	17	0	0
2	78-A	32	17	17	0	0
2	79-A	32	17	17	0	0
2	80-A	32	17	17	0	0
2	81-A	32	17	17	0	0
2	82-A	32	17	17	0	0
2	83-A	32	17	17	0	0
2	84-A	32	17	17	0	0
2	85-A	32	17	17	0	0
2	86-A	32	17	17	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	87-A	32	17	17	0	0
2	88-A	32	17	17	0	0
2	89-A	32	17	17	0	0
2	90-A	32	17	17	0	0
2	91-A	32	17	17	0	0
2	92-A	32	17	17	0	0
2	93-A	32	17	17	0	0
2	94-A	32	17	17	0	0
2	95-A	32	17	17	0	0
2	96-A	32	17	17	0	0
2	97-A	32	17	17	0	0
2	98-A	32	17	17	0	0
2	99-A	32	17	17	0	0
2	100-A	32	17	17	0	0
2	101-A	32	17	17	0	0
2	102-A	32	17	17	0	0
2	103-A	32	17	17	0	0
2	104-A	32	17	17	0	0
2	105-A	32	17	17	0	0
2	106-A	32	17	17	0	0
2	107-A	32	17	17	0	0
2	108-A	32	17	17	0	0
2	109-A	32	17	17	0	0
2	110-A	32	17	17	0	0
2	111-A	32	17	17	0	0
2	112-A	32	17	17	0	0
2	113-A	32	17	17	0	0
2	114-A	32	17	17	0	0
2	115-A	32	17	17	0	0
2	116-A	32	17	17	0	0
2	117-A	32	17	17	0	0
2	118-A	32	17	17	0	0
2	119-A	32	17	17	0	0
2	120-A	32	17	17	0	0
2	121-A	32	17	17	0	0
2	122-A	32	17	17	0	0
2	123-A	32	17	17	0	0
2	124-A	32	17	17	0	0
2	125-A	32	17	17	0	0
3	1-A	48	25	25	0	0
3	2-A	48	25	25	0	0
3	3-A	48	25	25	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	4-A	48	25	25	0	0
3	5-A	48	25	25	0	0
3	6-A	48	25	25	0	0
3	7-A	48	25	25	0	0
3	8-A	48	25	25	0	0
3	9-A	48	25	25	0	0
3	10-A	48	25	25	0	0
3	11-A	48	25	25	0	0
3	12-A	48	25	25	0	0
3	13-A	48	25	25	0	0
3	14-A	48	25	25	0	0
3	15-A	48	25	25	0	0
3	16-A	48	25	25	0	0
3	17-A	48	25	25	0	0
3	18-A	48	25	25	0	0
3	19-A	48	25	25	0	0
3	20-A	48	25	25	0	0
3	21-A	48	25	25	0	0
3	22-A	48	25	25	0	0
3	23-A	48	25	25	0	0
3	24-A	48	25	25	0	0
3	25-A	48	25	25	0	0
3	26-A	48	25	25	0	0
3	27-A	48	25	25	0	0
3	28-A	48	25	25	0	0
3	29-A	48	25	25	0	0
3	30-A	48	25	25	0	0
3	31-A	48	25	25	0	0
3	32-A	48	25	25	0	0
3	33-A	48	25	25	0	0
3	34-A	48	25	25	0	0
3	35-A	48	25	25	0	0
3	36-A	48	25	25	0	0
3	37-A	48	25	25	0	0
3	38-A	48	25	25	0	0
3	39-A	48	25	25	0	0
3	40-A	48	25	25	0	0
3	41-A	48	25	25	0	0
3	42-A	48	25	25	0	0
3	43-A	48	25	25	0	0
3	44-A	48	25	25	0	0
3	45-A	48	25	25	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	46-A	48	25	25	0	0
3	47-A	48	25	25	0	0
3	48-A	48	25	25	0	0
3	49-A	48	25	25	0	0
3	50-A	48	25	25	0	0
3	51-A	48	25	25	0	0
3	52-A	48	25	25	0	0
3	53-A	48	25	25	0	0
3	54-A	48	25	25	0	0
3	55-A	48	25	25	0	0
3	56-A	48	25	25	0	0
3	57-A	48	25	25	0	0
3	58-A	48	25	25	0	0
3	59-A	48	25	25	0	0
3	60-A	48	25	25	0	0
3	61-A	48	25	25	0	0
3	62-A	48	25	25	0	0
3	63-A	48	25	25	0	0
3	64-A	48	25	25	0	0
3	65-A	48	25	25	0	0
3	66-A	48	25	25	0	0
3	67-A	48	25	25	0	0
3	68-A	48	25	25	0	0
3	69-A	48	25	25	0	0
3	70-A	48	25	25	0	0
3	71-A	48	25	25	0	0
3	72-A	48	25	25	0	0
3	73-A	48	25	25	0	0
3	74-A	48	25	25	0	0
3	75-A	48	25	25	0	0
3	76-A	48	25	25	0	0
3	77-A	48	25	25	0	0
3	78-A	48	25	25	0	0
3	79-A	48	25	25	0	0
3	80-A	48	25	25	0	0
3	81-A	48	25	25	0	0
3	82-A	48	25	25	0	0
3	83-A	48	25	25	0	0
3	84-A	48	25	25	0	0
3	85-A	48	25	25	0	0
3	86-A	48	25	25	0	0
3	87-A	48	25	25	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	88-A	48	25	25	0	0
3	89-A	48	25	25	0	0
3	90-A	48	25	25	0	0
3	91-A	48	25	25	0	0
3	92-A	48	25	25	0	0
3	93-A	48	25	25	0	0
3	94-A	48	25	25	0	0
3	95-A	48	25	25	0	0
3	96-A	48	25	25	0	0
3	97-A	48	25	25	0	0
3	98-A	48	25	25	0	0
3	99-A	48	25	25	0	0
3	100-A	48	25	25	0	0
3	101-A	48	25	25	0	0
3	102-A	48	25	25	0	0
3	103-A	48	25	25	0	0
3	104-A	48	25	25	0	0
3	105-A	48	25	25	0	0
3	106-A	48	25	25	0	0
3	107-A	48	25	25	0	0
3	108-A	48	25	25	0	0
3	109-A	48	25	25	0	0
3	110-A	48	25	25	0	0
3	111-A	48	25	25	0	0
3	112-A	48	25	25	0	0
3	113-A	48	25	25	0	0
3	114-A	48	25	25	0	0
3	115-A	48	25	25	0	0
3	116-A	48	25	25	0	0
3	117-A	48	25	25	0	0
3	118-A	48	25	25	0	0
3	119-A	48	25	25	0	0
3	120-A	48	25	25	0	0
3	121-A	48	25	25	0	0
3	122-A	48	25	25	0	0
3	123-A	48	25	25	0	0
3	124-A	48	25	25	0	0
3	125-A	48	25	25	0	0
4	1-A	2	0	0	0	0
4	2-A	2	0	0	0	0
4	3-A	2	0	0	0	0
4	4-A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	5-A	2	0	0	0	0
4	6-A	2	0	0	0	0
4	7-A	2	0	0	0	0
4	8-A	2	0	0	0	0
4	9-A	2	0	0	0	0
4	10-A	2	0	0	0	0
4	11-A	2	0	0	0	0
4	12-A	2	0	0	0	0
4	13-A	2	0	0	0	0
4	14-A	2	0	0	0	0
4	15-A	2	0	0	0	0
4	16-A	2	0	0	0	0
4	17-A	2	0	0	0	0
4	18-A	2	0	0	0	0
4	19-A	2	0	0	0	0
4	20-A	2	0	0	0	0
4	21-A	2	0	0	0	0
4	22-A	2	0	0	0	0
4	23-A	2	0	0	0	0
4	24-A	2	0	0	0	0
4	25-A	2	0	0	0	0
4	26-A	2	0	0	0	0
4	27-A	2	0	0	0	0
4	28-A	2	0	0	0	0
4	29-A	2	0	0	0	0
4	30-A	2	0	0	0	0
4	31-A	2	0	0	0	0
4	32-A	2	0	0	0	0
4	33-A	2	0	0	0	0
4	34-A	2	0	0	0	0
4	35-A	2	0	0	0	0
4	36-A	2	0	0	0	0
4	37-A	2	0	0	0	0
4	38-A	2	0	0	0	0
4	39-A	2	0	0	0	0
4	40-A	2	0	0	0	0
4	41-A	2	0	0	0	0
4	42-A	2	0	0	0	0
4	43-A	2	0	0	0	0
4	44-A	2	0	0	0	0
4	45-A	2	0	0	0	0
4	46-A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	47-A	2	0	0	0	0
4	48-A	2	0	0	0	0
4	49-A	2	0	0	0	0
4	50-A	2	0	0	0	0
4	51-A	2	0	0	0	0
4	52-A	2	0	0	0	0
4	53-A	2	0	0	0	0
4	54-A	2	0	0	0	0
4	55-A	2	0	0	0	0
4	56-A	2	0	0	0	0
4	57-A	2	0	0	0	0
4	58-A	2	0	0	0	0
4	59-A	2	0	0	0	0
4	60-A	2	0	0	0	0
4	61-A	2	0	0	0	0
4	62-A	2	0	0	0	0
4	63-A	2	0	0	0	0
4	64-A	2	0	0	0	0
4	65-A	2	0	0	0	0
4	66-A	2	0	0	0	0
4	67-A	2	0	0	0	0
4	68-A	2	0	0	0	0
4	69-A	2	0	0	0	0
4	70-A	2	0	0	0	0
4	71-A	2	0	0	0	0
4	72-A	2	0	0	0	0
4	73-A	2	0	0	0	0
4	74-A	2	0	0	0	0
4	75-A	2	0	0	0	0
4	76-A	2	0	0	0	0
4	77-A	2	0	0	0	0
4	78-A	2	0	0	0	0
4	79-A	2	0	0	0	0
4	80-A	2	0	0	0	0
4	81-A	2	0	0	0	0
4	82-A	2	0	0	0	0
4	83-A	2	0	0	0	0
4	84-A	2	0	0	0	0
4	85-A	2	0	0	0	0
4	86-A	2	0	0	0	0
4	87-A	2	0	0	0	0
4	88-A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	89-A	2	0	0	0	0
4	90-A	2	0	0	0	0
4	91-A	2	0	0	0	0
4	92-A	2	0	0	0	0
4	93-A	2	0	0	0	0
4	94-A	2	0	0	0	0
4	95-A	2	0	0	0	0
4	96-A	2	0	0	0	0
4	97-A	2	0	0	0	0
4	98-A	2	0	0	0	0
4	99-A	2	0	0	0	0
4	100-A	2	0	0	0	0
4	101-A	2	0	0	0	0
4	102-A	2	0	0	0	0
4	103-A	2	0	0	0	0
4	104-A	2	0	0	0	0
4	105-A	2	0	0	0	0
4	106-A	2	0	0	0	0
4	107-A	2	0	0	0	0
4	108-A	2	0	0	0	0
4	109-A	2	0	0	0	0
4	110-A	2	0	0	0	0
4	111-A	2	0	0	0	0
4	112-A	2	0	0	0	0
4	113-A	2	0	0	0	0
4	114-A	2	0	0	0	0
4	115-A	2	0	0	0	0
4	116-A	2	0	0	0	0
4	117-A	2	0	0	0	0
4	118-A	2	0	0	0	0
4	119-A	2	0	0	0	0
4	120-A	2	0	0	0	0
4	121-A	2	0	0	0	0
4	122-A	2	0	0	0	0
4	123-A	2	0	0	0	0
4	124-A	2	0	0	0	0
4	125-A	2	0	0	0	0
5	1-A	89	0	0	0	0
5	2-A	91	0	0	0	0
5	3-A	82	0	0	0	0
5	4-A	108	0	0	0	0
5	5-A	105	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	6-A	112	0	0	0	0
5	7-A	107	0	0	0	0
5	8-A	102	0	0	0	0
5	9-A	96	0	0	0	0
5	10-A	90	0	0	0	0
5	11-A	110	0	0	0	0
5	12-A	102	0	0	0	0
5	13-A	117	0	0	0	0
5	14-A	116	0	0	0	0
5	15-A	113	0	0	0	0
5	16-A	105	0	0	0	0
5	17-A	95	0	0	0	0
5	18-A	105	0	0	0	0
5	19-A	108	0	0	0	0
5	20-A	100	0	0	0	0
5	21-A	103	0	0	0	0
5	22-A	96	0	0	0	0
5	23-A	110	0	0	0	0
5	24-A	97	0	0	0	0
5	25-A	106	0	0	0	0
5	26-A	112	0	0	0	0
5	27-A	102	0	0	0	0
5	28-A	100	0	0	0	0
5	29-A	95	0	0	0	0
5	30-A	96	0	0	0	0
5	31-A	93	0	0	0	0
5	32-A	106	0	0	0	0
5	33-A	105	0	0	0	0
5	34-A	108	0	0	0	0
5	35-A	100	0	0	0	0
5	36-A	104	0	0	0	0
5	37-A	108	0	0	0	0
5	38-A	119	0	0	0	0
5	39-A	118	0	0	0	0
5	40-A	102	0	0	0	0
5	41-A	98	0	0	0	0
5	42-A	97	0	0	0	0
5	43-A	102	0	0	0	0
5	44-A	108	0	0	0	0
5	45-A	107	0	0	0	0
5	46-A	102	0	0	0	0
5	47-A	102	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	48-A	102	0	0	0	0
5	49-A	105	0	0	0	0
5	50-A	96	0	0	0	0
5	51-A	104	0	0	0	0
5	52-A	107	0	0	0	0
5	53-A	105	0	0	0	0
5	54-A	103	0	0	0	0
5	55-A	106	0	0	0	0
5	56-A	110	0	0	0	0
5	57-A	108	0	0	0	0
5	58-A	116	0	0	0	0
5	59-A	108	0	0	0	0
5	60-A	93	0	0	0	0
5	61-A	109	0	0	0	0
5	62-A	107	0	0	0	0
5	63-A	110	0	0	0	0
5	64-A	102	0	0	0	0
5	65-A	96	0	0	0	0
5	66-A	104	0	0	0	0
5	67-A	99	0	0	0	0
5	68-A	93	0	0	0	0
5	69-A	95	0	0	0	0
5	70-A	103	0	0	0	0
5	71-A	103	0	0	0	0
5	72-A	97	0	0	0	0
5	73-A	108	0	0	0	0
5	74-A	111	0	0	0	0
5	75-A	109	0	0	0	0
5	76-A	93	0	0	0	0
5	77-A	87	0	0	0	0
5	78-A	95	0	0	0	0
5	79-A	115	0	0	0	0
5	80-A	109	0	0	0	0
5	81-A	106	0	0	0	0
5	82-A	107	0	0	0	0
5	83-A	116	0	0	0	0
5	84-A	111	0	0	0	0
5	85-A	118	0	0	0	0
5	86-A	109	0	0	0	0
5	87-A	113	0	0	0	0
5	88-A	103	0	0	0	0
5	89-A	109	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	90-A	103	0	0	0	0
5	91-A	93	0	0	0	0
5	92-A	98	0	0	0	0
5	93-A	117	0	0	0	0
5	94-A	121	0	0	0	0
5	95-A	111	0	0	0	0
5	96-A	104	0	0	0	0
5	97-A	93	0	0	0	0
5	98-A	98	0	0	0	0
5	99-A	99	0	0	0	0
5	100-A	107	0	0	0	0
5	101-A	107	0	0	0	0
5	102-A	100	0	0	0	0
5	103-A	105	0	0	0	0
5	104-A	94	0	0	0	0
5	105-A	90	0	0	0	0
5	106-A	91	0	0	0	0
5	107-A	113	0	0	0	0
5	108-A	108	0	0	0	0
5	109-A	111	0	0	0	0
5	110-A	113	0	0	0	0
5	111-A	109	0	0	0	0
5	112-A	92	0	0	0	0
5	113-A	101	0	0	0	0
5	114-A	103	0	0	0	0
5	115-A	102	0	0	0	0
5	116-A	101	0	0	0	0
5	117-A	95	0	0	0	0
5	118-A	107	0	0	0	0
5	119-A	106	0	0	0	0
5	120-A	105	0	0	0	0
5	121-A	115	0	0	0	0
5	122-A	97	0	0	0	0
5	123-A	105	0	0	0	0
5	124-A	93	0	0	0	0
5	125-A	102	0	0	0	0
All	All	181958	157875	157860	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

4.3 Torsion angles ⓘ

4.3.1 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	1-A	156/159 (98%)	145 (93%)	8 (5%)	3 (2%)	8	0
1	2-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	3-A	156/159 (98%)	147 (94%)	4 (3%)	5 (3%)	4	0
1	4-A	156/159 (98%)	147 (94%)	6 (4%)	3 (2%)	8	0
1	5-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	6-A	156/159 (98%)	147 (94%)	5 (3%)	4 (3%)	5	0
1	7-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	8-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	9-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	10-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	11-A	156/159 (98%)	144 (92%)	11 (7%)	1 (1%)	25	5
1	12-A	156/159 (98%)	141 (90%)	12 (8%)	3 (2%)	8	0
1	13-A	156/159 (98%)	147 (94%)	3 (2%)	6 (4%)	3	0
1	14-A	156/159 (98%)	148 (95%)	5 (3%)	3 (2%)	8	0
1	15-A	156/159 (98%)	144 (92%)	10 (6%)	2 (1%)	12	1
1	16-A	156/159 (98%)	150 (96%)	2 (1%)	4 (3%)	5	0
1	17-A	156/159 (98%)	149 (96%)	4 (3%)	3 (2%)	8	0
1	18-A	156/159 (98%)	146 (94%)	7 (4%)	3 (2%)	8	0
1	19-A	156/159 (98%)	149 (96%)	2 (1%)	5 (3%)	4	0
1	20-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	21-A	156/159 (98%)	150 (96%)	4 (3%)	2 (1%)	12	1
1	22-A	156/159 (98%)	143 (92%)	10 (6%)	3 (2%)	8	0
1	23-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	24-A	156/159 (98%)	145 (93%)	9 (6%)	2 (1%)	12	1
1	25-A	156/159 (98%)	147 (94%)	5 (3%)	4 (3%)	5	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	26-A	156/159 (98%)	148 (95%)	7 (4%)	1 (1%)	25	5
1	27-A	156/159 (98%)	149 (96%)	5 (3%)	2 (1%)	12	1
1	28-A	156/159 (98%)	145 (93%)	10 (6%)	1 (1%)	25	5
1	29-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	30-A	156/159 (98%)	144 (92%)	7 (4%)	5 (3%)	4	0
1	31-A	156/159 (98%)	148 (95%)	7 (4%)	1 (1%)	25	5
1	32-A	156/159 (98%)	151 (97%)	4 (3%)	1 (1%)	25	5
1	33-A	156/159 (98%)	149 (96%)	6 (4%)	1 (1%)	25	5
1	34-A	156/159 (98%)	149 (96%)	6 (4%)	1 (1%)	25	5
1	35-A	156/159 (98%)	144 (92%)	9 (6%)	3 (2%)	8	0
1	36-A	156/159 (98%)	145 (93%)	5 (3%)	6 (4%)	3	0
1	37-A	156/159 (98%)	145 (93%)	8 (5%)	3 (2%)	8	0
1	38-A	156/159 (98%)	143 (92%)	10 (6%)	3 (2%)	8	0
1	39-A	156/159 (98%)	146 (94%)	7 (4%)	3 (2%)	8	0
1	40-A	156/159 (98%)	148 (95%)	5 (3%)	3 (2%)	8	0
1	41-A	156/159 (98%)	142 (91%)	9 (6%)	5 (3%)	4	0
1	42-A	156/159 (98%)	147 (94%)	6 (4%)	3 (2%)	8	0
1	43-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	44-A	156/159 (98%)	148 (95%)	6 (4%)	2 (1%)	12	1
1	45-A	156/159 (98%)	144 (92%)	11 (7%)	1 (1%)	25	5
1	46-A	156/159 (98%)	149 (96%)	4 (3%)	3 (2%)	8	0
1	47-A	156/159 (98%)	150 (96%)	4 (3%)	2 (1%)	12	1
1	48-A	156/159 (98%)	144 (92%)	7 (4%)	5 (3%)	4	0
1	49-A	156/159 (98%)	149 (96%)	2 (1%)	5 (3%)	4	0
1	50-A	156/159 (98%)	151 (97%)	3 (2%)	2 (1%)	12	1
1	51-A	156/159 (98%)	148 (95%)	7 (4%)	1 (1%)	25	5
1	52-A	156/159 (98%)	149 (96%)	6 (4%)	1 (1%)	25	5
1	53-A	156/159 (98%)	148 (95%)	5 (3%)	3 (2%)	8	0
1	54-A	156/159 (98%)	146 (94%)	8 (5%)	2 (1%)	12	1
1	55-A	156/159 (98%)	146 (94%)	8 (5%)	2 (1%)	12	1
1	56-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	57-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	58-A	156/159 (98%)	148 (95%)	5 (3%)	3 (2%)	8	0
1	59-A	156/159 (98%)	149 (96%)	4 (3%)	3 (2%)	8	0
1	60-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	61-A	156/159 (98%)	149 (96%)	3 (2%)	4 (3%)	5	0
1	62-A	156/159 (98%)	148 (95%)	3 (2%)	5 (3%)	4	0
1	63-A	156/159 (98%)	144 (92%)	5 (3%)	7 (4%)	2	0
1	64-A	156/159 (98%)	136 (87%)	7 (4%)	13 (8%)	1	0
1	65-A	156/159 (98%)	140 (90%)	10 (6%)	6 (4%)	3	0
1	66-A	156/159 (98%)	146 (94%)	2 (1%)	8 (5%)	2	0
1	67-A	156/159 (98%)	143 (92%)	8 (5%)	5 (3%)	4	0
1	68-A	156/159 (98%)	146 (94%)	6 (4%)	4 (3%)	5	0
1	69-A	156/159 (98%)	147 (94%)	6 (4%)	3 (2%)	8	0
1	70-A	156/159 (98%)	149 (96%)	5 (3%)	2 (1%)	12	1
1	71-A	156/159 (98%)	145 (93%)	9 (6%)	2 (1%)	12	1
1	72-A	156/159 (98%)	147 (94%)	5 (3%)	4 (3%)	5	0
1	73-A	156/159 (98%)	148 (95%)	5 (3%)	3 (2%)	8	0
1	74-A	156/159 (98%)	147 (94%)	6 (4%)	3 (2%)	8	0
1	75-A	156/159 (98%)	151 (97%)	3 (2%)	2 (1%)	12	1
1	76-A	156/159 (98%)	143 (92%)	8 (5%)	5 (3%)	4	0
1	77-A	156/159 (98%)	149 (96%)	3 (2%)	4 (3%)	5	0
1	78-A	156/159 (98%)	148 (95%)	6 (4%)	2 (1%)	12	1
1	79-A	156/159 (98%)	143 (92%)	6 (4%)	7 (4%)	2	0
1	80-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	81-A	156/159 (98%)	146 (94%)	6 (4%)	4 (3%)	5	0
1	82-A	156/159 (98%)	141 (90%)	8 (5%)	7 (4%)	2	0
1	83-A	156/159 (98%)	147 (94%)	4 (3%)	5 (3%)	4	0
1	84-A	156/159 (98%)	144 (92%)	6 (4%)	6 (4%)	3	0
1	85-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	86-A	156/159 (98%)	147 (94%)	6 (4%)	3 (2%)	8	0
1	87-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	88-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	89-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	90-A	156/159 (98%)	144 (92%)	6 (4%)	6 (4%)	3	0
1	91-A	156/159 (98%)	145 (93%)	5 (3%)	6 (4%)	3	0
1	92-A	156/159 (98%)	145 (93%)	5 (3%)	6 (4%)	3	0
1	93-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	94-A	156/159 (98%)	147 (94%)	2 (1%)	7 (4%)	2	0
1	95-A	156/159 (98%)	148 (95%)	3 (2%)	5 (3%)	4	0
1	96-A	156/159 (98%)	142 (91%)	10 (6%)	4 (3%)	5	0
1	97-A	156/159 (98%)	140 (90%)	10 (6%)	6 (4%)	3	0
1	98-A	156/159 (98%)	145 (93%)	6 (4%)	5 (3%)	4	0
1	99-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	100-A	156/159 (98%)	145 (93%)	5 (3%)	6 (4%)	3	0
1	101-A	156/159 (98%)	146 (94%)	4 (3%)	6 (4%)	3	0
1	102-A	156/159 (98%)	148 (95%)	4 (3%)	4 (3%)	5	0
1	103-A	156/159 (98%)	147 (94%)	3 (2%)	6 (4%)	3	0
1	104-A	156/159 (98%)	144 (92%)	6 (4%)	6 (4%)	3	0
1	105-A	156/159 (98%)	141 (90%)	12 (8%)	3 (2%)	8	0
1	106-A	156/159 (98%)	144 (92%)	5 (3%)	7 (4%)	2	0
1	107-A	156/159 (98%)	146 (94%)	6 (4%)	4 (3%)	5	0
1	108-A	156/159 (98%)	145 (93%)	7 (4%)	4 (3%)	5	0
1	109-A	156/159 (98%)	145 (93%)	8 (5%)	3 (2%)	8	0
1	110-A	156/159 (98%)	143 (92%)	10 (6%)	3 (2%)	8	0
1	111-A	156/159 (98%)	147 (94%)	5 (3%)	4 (3%)	5	0
1	112-A	156/159 (98%)	143 (92%)	9 (6%)	4 (3%)	5	0
1	113-A	156/159 (98%)	146 (94%)	7 (4%)	3 (2%)	8	0
1	114-A	156/159 (98%)	145 (93%)	6 (4%)	5 (3%)	4	0
1	115-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	116-A	156/159 (98%)	147 (94%)	5 (3%)	4 (3%)	5	0
1	117-A	156/159 (98%)	143 (92%)	7 (4%)	6 (4%)	3	0
1	118-A	156/159 (98%)	143 (92%)	8 (5%)	5 (3%)	4	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	119-A	156/159 (98%)	143 (92%)	8 (5%)	5 (3%)	4	0
1	120-A	156/159 (98%)	144 (92%)	6 (4%)	6 (4%)	3	0
1	121-A	156/159 (98%)	140 (90%)	10 (6%)	6 (4%)	3	0
1	122-A	156/159 (98%)	143 (92%)	5 (3%)	8 (5%)	2	0
1	123-A	156/159 (98%)	146 (94%)	5 (3%)	5 (3%)	4	0
1	124-A	156/159 (98%)	145 (93%)	6 (4%)	5 (3%)	4	0
1	125-A	156/159 (98%)	142 (91%)	9 (6%)	5 (3%)	4	0
All	All	19500/19875 (98%)	18238 (94%)	756 (4%)	506 (3%)	5	0

5 of 506 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	1-A	17	GLU
1	1-A	127	ASP
1	2-A	17	GLU
1	2-A	18	ASN
1	3-A	17	GLU

4.3.2 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	1-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	2-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	3-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	4-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	5-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	6-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	7-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	8-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	9-A	135/135 (100%)	114 (84%)	21 (16%)	2	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	10-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	11-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	12-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	13-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	14-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	15-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	16-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	17-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	18-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	19-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	20-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	21-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	22-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	23-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	24-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	25-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	26-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	27-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	28-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	29-A	135/135 (100%)	111 (82%)	24 (18%)	2	0
1	30-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	31-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	32-A	135/135 (100%)	111 (82%)	24 (18%)	2	0
1	33-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	34-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	35-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	36-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	37-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	38-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	39-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	40-A	135/135 (100%)	118 (87%)	17 (13%)	4	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	41-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	42-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	43-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	44-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	45-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	46-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	47-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	48-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	49-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	50-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	51-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	52-A	135/135 (100%)	122 (90%)	13 (10%)	8	0
1	53-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	54-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	55-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	56-A	135/135 (100%)	111 (82%)	24 (18%)	2	0
1	57-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	58-A	135/135 (100%)	121 (90%)	14 (10%)	7	0
1	59-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	60-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	61-A	135/135 (100%)	121 (90%)	14 (10%)	7	0
1	62-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	63-A	135/135 (100%)	121 (90%)	14 (10%)	7	0
1	64-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	65-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	66-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	67-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	68-A	135/135 (100%)	113 (84%)	22 (16%)	2	0
1	69-A	135/135 (100%)	113 (84%)	22 (16%)	2	0
1	70-A	135/135 (100%)	113 (84%)	22 (16%)	2	0
1	71-A	135/135 (100%)	114 (84%)	21 (16%)	2	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	72-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	73-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	74-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	75-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	76-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	77-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	78-A	135/135 (100%)	124 (92%)	11 (8%)	11	0
1	79-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	80-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	81-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	82-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	83-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	84-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	85-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	86-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	87-A	135/135 (100%)	112 (83%)	23 (17%)	2	0
1	88-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	89-A	135/135 (100%)	113 (84%)	22 (16%)	2	0
1	90-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	91-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	92-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	93-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	94-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
1	95-A	135/135 (100%)	120 (89%)	15 (11%)	6	0
1	96-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	97-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	98-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	99-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	100-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	101-A	135/135 (100%)	115 (85%)	20 (15%)	3	0
1	102-A	135/135 (100%)	123 (91%)	12 (9%)	9	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	103-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	104-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	105-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	106-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	107-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	108-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	109-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	110-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	111-A	135/135 (100%)	114 (84%)	21 (16%)	2	0
1	112-A	135/135 (100%)	127 (94%)	8 (6%)	19	2
1	113-A	135/135 (100%)	124 (92%)	11 (8%)	11	0
1	114-A	135/135 (100%)	123 (91%)	12 (9%)	9	0
1	115-A	135/135 (100%)	111 (82%)	24 (18%)	2	0
1	116-A	135/135 (100%)	116 (86%)	19 (14%)	3	0
1	117-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	118-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	119-A	135/135 (100%)	124 (92%)	11 (8%)	11	0
1	120-A	135/135 (100%)	121 (90%)	14 (10%)	7	0
1	121-A	135/135 (100%)	117 (87%)	18 (13%)	4	0
1	122-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	123-A	135/135 (100%)	125 (93%)	10 (7%)	13	1
1	124-A	135/135 (100%)	119 (88%)	16 (12%)	5	0
1	125-A	135/135 (100%)	118 (87%)	17 (13%)	4	0
All	All	16875/16875 (100%)	14694 (87%)	2181 (13%)	4	0

5 of 2181 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	105-A	23	ASN
1	108-A	128	TYR
1	105-A	18	ASN
1	119-A	20	MET
1	44-A	12	ARG

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

4.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

125 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	CSD	2-A	152	1	3,7,8	2.08	1 (33%)	1,8,10	6.22	1 (100%)
1	CSD	1-A	152	1	3,7,8	1.15	0	1,8,10	4.88	1 (100%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	CSD	2-A	152	1	-	1/2/6/8	-
1	CSD	1-A	152	1	-	2/2/6/8	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	2-A	152	CSD	CB-SG	-3.07	1.61	1.79

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2-A	152	CSD	OD1-SG-CB	6.22	117.37	105.54
1	1-A	152	CSD	OD1-SG-CB	4.88	114.83	105.54

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	1-A	152	CSD	N-CA-CB-SG
1	1-A	152	CSD	CA-CB-SG-OD1
1	2-A	152	CSD	CA-CB-SG-OD1

There are no ring outliers.

No monomer is involved in short contacts.

4.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

4.6 Ligand geometry [i](#)

Of 500 ligands modelled in this entry, 250 are monoatomic - leaving 250 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
2	FOL	1-A	201	-	34,34,34	1.20	3 (8%)	44,47,47	2.16	11 (25%)
3	NAP	2-A	202	-	45,52,52	2.95	8 (17%)	56,80,80	1.33	8 (14%)
3	NAP	1-A	202	-	45,52,52	2.96	9 (20%)	56,80,80	1.33	8 (14%)
2	FOL	2-A	201	-	34,34,34	1.33	5 (14%)	44,47,47	2.12	15 (34%)
3	NAP	3-A	202	-	45,52,52	2.94	9 (20%)	56,80,80	1.39	9 (16%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	FOL	1-A	201	-	-	6/22/22/22	0/3/3/3
3	NAP	2-A	202	-	-	3/31/67/67	0/5/5/5
3	NAP	1-A	202	-	-	3/31/67/67	0/5/5/5
2	FOL	2-A	201	-	-	3/22/22/22	0/3/3/3
3	NAP	3-A	202	-	-	2/31/67/67	0/5/5/5

The worst 5 of 34 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	1-A	202	NAP	C2D-C1D	-11.57	1.36	1.53
3	2-A	202	NAP	C2D-C1D	-11.35	1.36	1.53
3	3-A	202	NAP	C2D-C1D	-11.16	1.36	1.53
3	2-A	202	NAP	O4B-C1B	10.25	1.55	1.41
3	1-A	202	NAP	O4B-C1B	10.24	1.55	1.41

The worst 5 of 51 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1-A	201	FOL	N8-C8A-N1	6.92	123.72	115.82
2	2-A	201	FOL	C4A-C4-N3	-6.64	114.35	123.43
2	1-A	201	FOL	C4A-C4-N3	-5.06	116.50	123.43
2	2-A	201	FOL	C2-N3-C4	4.87	123.67	115.93
3	1-A	202	NAP	C5A-C6A-N6A	4.68	127.46	120.35

There are no chirality outliers.

5 of 17 torsion outliers are listed below:

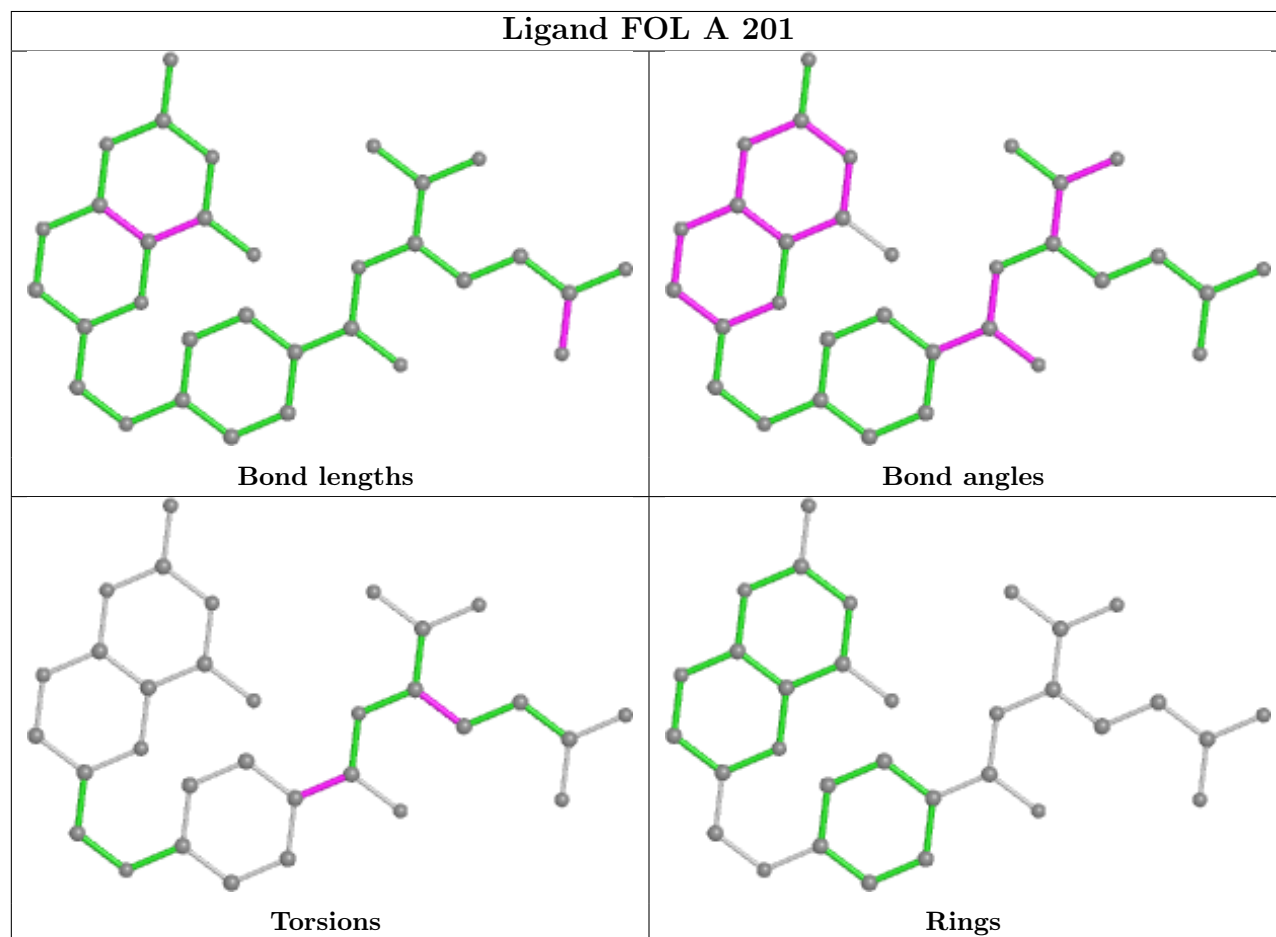
Mol	Chain	Res	Type	Atoms
3	1-A	202	NAP	O4D-C1D-N1N-C6N
3	2-A	202	NAP	C2B-O2B-P2B-O3X
3	2-A	202	NAP	O4D-C1D-N1N-C6N
3	3-A	202	NAP	O4D-C1D-N1N-C6N
2	1-A	201	FOL	O-C-C11-C12

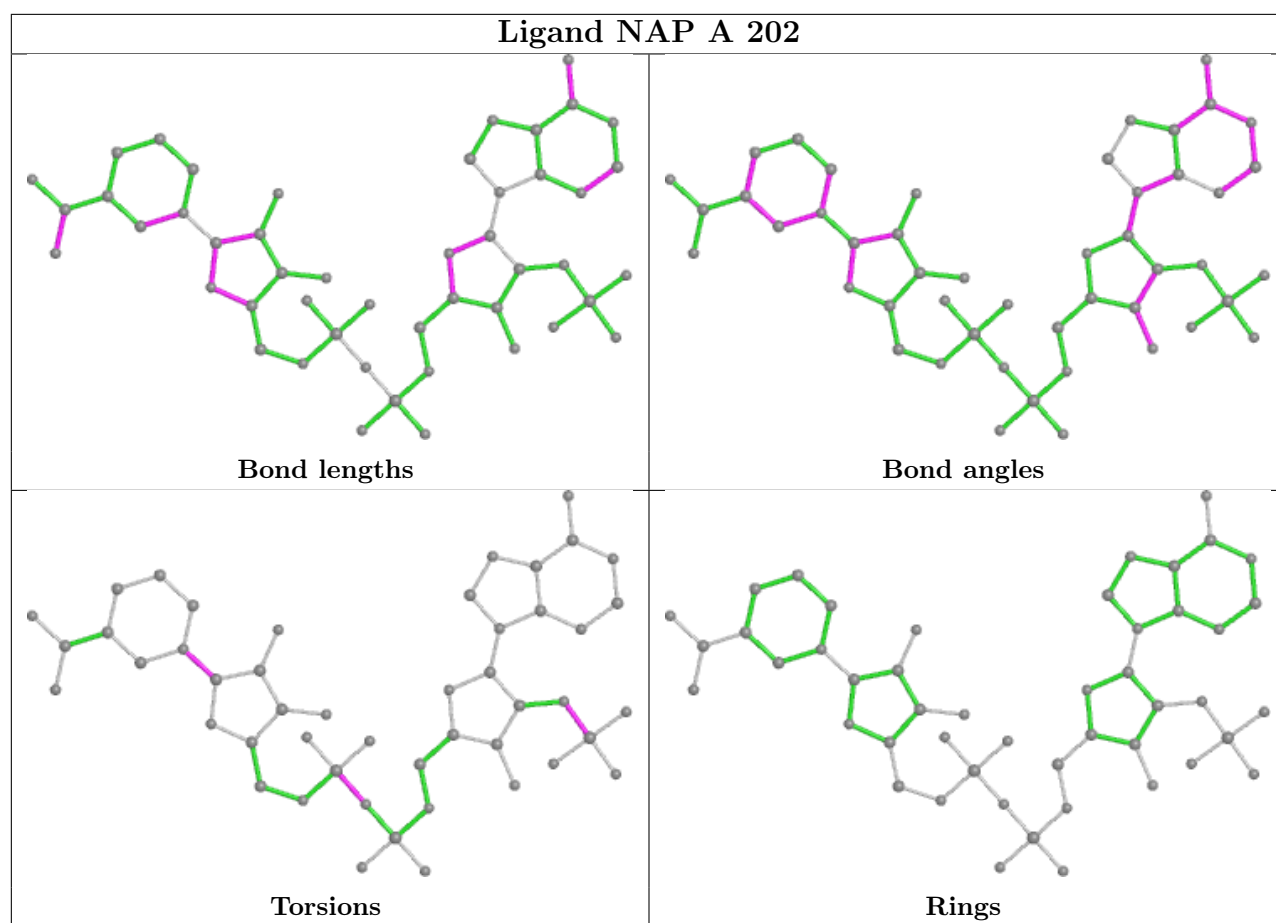
There are no ring outliers.

No monomer is involved in short contacts.

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.





4.7 Other polymers [i](#)

There are no such residues in this entry.

4.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

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

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

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

5.3 Carbohydrates [i](#)

EDS failed to run properly - this section is therefore empty.

5.4 Ligands [i](#)

EDS failed to run properly - this section is therefore empty.

5.5 Other polymers [i](#)

EDS failed to run properly - this section is therefore empty.