



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 20, 2023 – 06:00 AM EDT

PDB ID : 5H8J
Title : Crystal structure of *Medicago truncatula* N-carbamoylputrescine amidohydrolase (MtCPA) in complex with cadaverine
Authors : Sekula, B.; Ruskowski, M.; Malinska, M.; Dauter, Z.
Deposited on : 2015-12-23
Resolution : 2.19 Å (reported)

This is a Full wwPDB X-ray Structure Validation 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 : 2.35.1
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) : 2.35.1

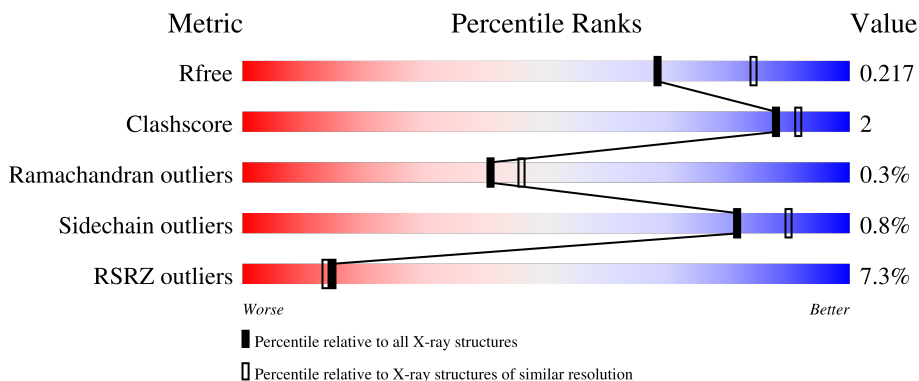
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.19 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	304	 10% 90% 7%
1	B	304	 4% 95%
1	C	304	 3% 98%
1	D	304	 % 94%
1	E	304	 % 93% 5%

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Mol	Chain	Length	Quality of chain
1	F	304	<p>93% 5% .</p>
1	G	304	<p>15% 89% 7% . .</p>
1	H	304	<p>38% 81% 7% 12%</p>
1	I	304	<p>9% 89% 7% .</p>
1	J	304	<p>3% 92% 5% .</p>
1	K	304	<p>3% 96% . . .</p>
1	L	304	<p>96% . .</p>
1	M	304	<p>95% . . .</p>
1	N	304	<p>96% . .</p>
1	O	304	<p>3% 93% . .</p>
1	P	304	<p>19% 90% . 8%</p>

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 41003 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 N-carbamoylputrescine amidohydrolase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	296	Total 2360	C 1508	N 407	O 435	S 10	0	3	0
1	B	297	Total 2357	C 1505	N 408	O 436	S 8	0	0	0
1	C	301	Total 2390	C 1524	N 412	O 444	S 10	0	1	0
1	D	298	Total 2382	C 1522	N 409	O 443	S 8	0	3	0
1	E	297	Total 2357	C 1505	N 408	O 436	S 8	0	0	0
1	F	298	Total 2365	C 1509	N 409	O 439	S 8	0	0	0
1	G	295	Total 2344	C 1497	N 405	O 434	S 8	0	0	0
1	H	268	Total 2131	C 1368	N 371	O 384	S 8	0	0	0
1	I	292	Total 2322	C 1484	N 400	O 429	S 9	0	1	0
1	J	298	Total 2369	C 1513	N 409	O 439	S 8	0	1	0
1	K	301	Total 2387	C 1522	N 412	O 444	S 9	0	0	0
1	L	298	Total 2374	C 1515	N 409	O 441	S 9	0	2	0
1	M	298	Total 2365	C 1509	N 409	O 439	S 8	0	0	0
1	N	298	Total 2369	C 1513	N 409	O 439	S 8	0	1	0
1	O	298	Total 2371	C 1513	N 409	O 441	S 8	0	1	0
1	P	279	Total 2217	C 1421	N 384	O 403	S 9	0	1	0

There are 48 discrepancies between the modelled and reference sequences:

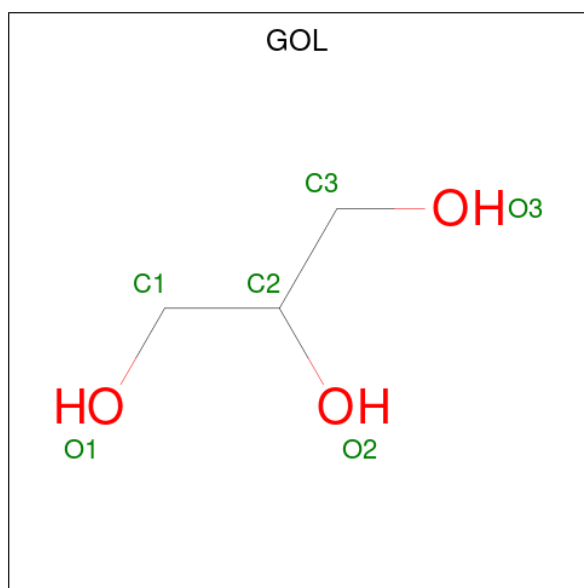
Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	SER	-	expression tag	UNP G7ITU5
A	-1	ASN	-	expression tag	UNP G7ITU5
A	0	ALA	-	expression tag	UNP G7ITU5
B	-2	SER	-	expression tag	UNP G7ITU5
B	-1	ASN	-	expression tag	UNP G7ITU5
B	0	ALA	-	expression tag	UNP G7ITU5
C	-2	SER	-	expression tag	UNP G7ITU5
C	-1	ASN	-	expression tag	UNP G7ITU5
C	0	ALA	-	expression tag	UNP G7ITU5
D	-2	SER	-	expression tag	UNP G7ITU5
D	-1	ASN	-	expression tag	UNP G7ITU5
D	0	ALA	-	expression tag	UNP G7ITU5
E	-2	SER	-	expression tag	UNP G7ITU5
E	-1	ASN	-	expression tag	UNP G7ITU5
E	0	ALA	-	expression tag	UNP G7ITU5
F	-2	SER	-	expression tag	UNP G7ITU5
F	-1	ASN	-	expression tag	UNP G7ITU5
F	0	ALA	-	expression tag	UNP G7ITU5
G	-2	SER	-	expression tag	UNP G7ITU5
G	-1	ASN	-	expression tag	UNP G7ITU5
G	0	ALA	-	expression tag	UNP G7ITU5
H	-2	SER	-	expression tag	UNP G7ITU5
H	-1	ASN	-	expression tag	UNP G7ITU5
H	0	ALA	-	expression tag	UNP G7ITU5
I	-2	SER	-	expression tag	UNP G7ITU5
I	-1	ASN	-	expression tag	UNP G7ITU5
I	0	ALA	-	expression tag	UNP G7ITU5
J	-2	SER	-	expression tag	UNP G7ITU5
J	-1	ASN	-	expression tag	UNP G7ITU5
J	0	ALA	-	expression tag	UNP G7ITU5
K	-2	SER	-	expression tag	UNP G7ITU5
K	-1	ASN	-	expression tag	UNP G7ITU5
K	0	ALA	-	expression tag	UNP G7ITU5
L	-2	SER	-	expression tag	UNP G7ITU5
L	-1	ASN	-	expression tag	UNP G7ITU5
L	0	ALA	-	expression tag	UNP G7ITU5
M	-2	SER	-	expression tag	UNP G7ITU5
M	-1	ASN	-	expression tag	UNP G7ITU5
M	0	ALA	-	expression tag	UNP G7ITU5
N	-2	SER	-	expression tag	UNP G7ITU5
N	-1	ASN	-	expression tag	UNP G7ITU5
N	0	ALA	-	expression tag	UNP G7ITU5

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Chain	Residue	Modelled	Actual	Comment	Reference
O	-2	SER	-	expression tag	UNP G7ITU5
O	-1	ASN	-	expression tag	UNP G7ITU5
O	0	ALA	-	expression tag	UNP G7ITU5
P	-2	SER	-	expression tag	UNP G7ITU5
P	-1	ASN	-	expression tag	UNP G7ITU5
P	0	ALA	-	expression tag	UNP G7ITU5

- Molecule 2 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	A	1	Total	C	O	0	0
			6	3	3		
2	B	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	C	1	Total	C	O	0	0
			6	3	3		
2	D	1	Total	C	O	0	0
			6	3	3		

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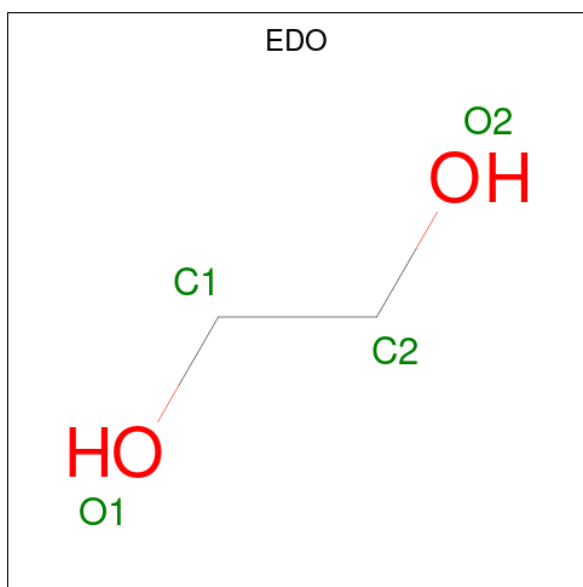
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	E	1	Total 6	C 3	O 3	0	0
2	E	1	Total 6	C 3	O 3	0	0
2	F	1	Total 6	C 3	O 3	0	0
2	F	1	Total 6	C 3	O 3	0	0
2	G	1	Total 6	C 3	O 3	0	0
2	H	1	Total 6	C 3	O 3	0	0
2	I	1	Total 6	C 3	O 3	0	0
2	I	1	Total 6	C 3	O 3	0	0
2	I	1	Total 6	C 3	O 3	0	0
2	K	1	Total 6	C 3	O 3	0	0
2	K	1	Total 6	C 3	O 3	0	0
2	M	1	Total 6	C 3	O 3	0	0
2	M	1	Total 6	C 3	O 3	0	0
2	M	1	Total 6	C 3	O 3	0	0
2	N	1	Total 6	C 3	O 3	0	0
2	O	1	Total 6	C 3	O 3	0	0
2	O	1	Total 6	C 3	O 3	0	0

- Molecule 3 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: C₄H₁₀O₃).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			7	4	3		
3	G	1	Total	C	O	0	0
			7	4	3		
3	L	1	Total	C	O	0	0
			7	4	3		

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C₂H₆O₂).



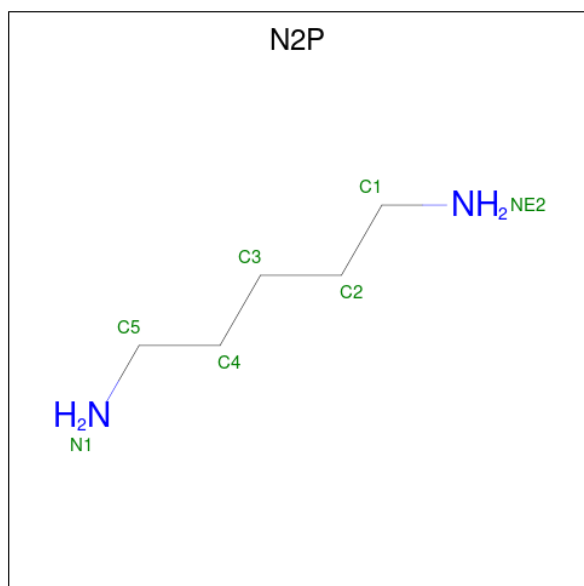
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C O 4 2 2	0	0
4	D	1	Total C O 4 2 2	0	0
4	F	1	Total C O 4 2 2	0	0
4	I	1	Total C O 4 2 2	0	0
4	J	1	Total C O 4 2 2	0	0
4	K	1	Total C O 4 2 2	0	0
4	L	1	Total C O 4 2 2	0	0
4	N	1	Total C O 4 2 2	0	0

- Molecule 5 is PENTANE-1,5-DIAMINE (three-letter code: N2P) (formula: C₅H₁₄N₂).



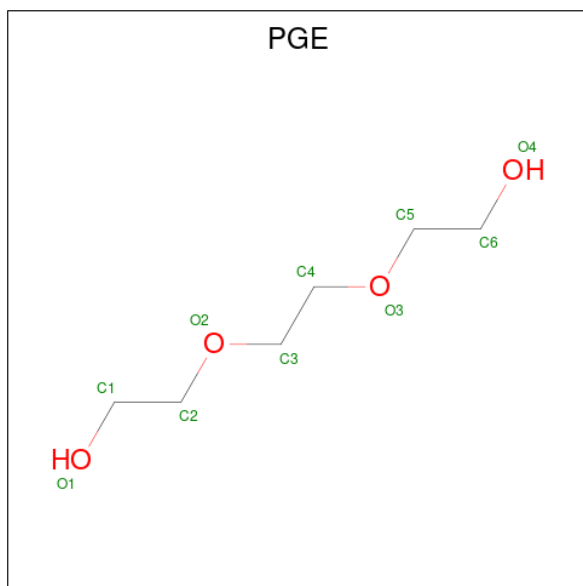
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C N 7 5 2	0	0
5	C	1	Total C N 7 5 2	0	0
5	D	1	Total C N 7 5 2	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	E	1	Total	C	N	0	0
			7	5	2		
5	F	1	Total	C	N	0	0
			7	5	2		
5	G	1	Total	C	N	0	0
			7	5	2		
5	J	1	Total	C	N	0	0
			7	5	2		
5	K	1	Total	C	N	0	0
			7	5	2		
5	L	1	Total	C	N	0	0
			7	5	2		
5	M	1	Total	C	N	0	0
			7	5	2		
5	N	1	Total	C	N	0	0
			7	5	2		
5	O	1	Total	C	N	0	0
			7	5	2		

- Molecule 6 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: C₆H₁₄O₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	B	1	Total	C	O	0	0
			10	6	4		

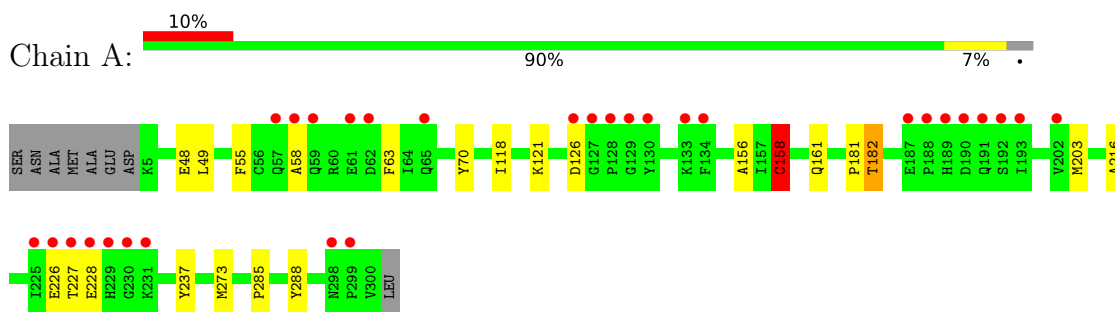
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	157	Total O 157 157	0	0
7	B	233	Total O 233 233	0	0
7	C	258	Total O 258 258	0	0
7	D	288	Total O 288 288	0	0
7	E	236	Total O 236 236	0	0
7	F	177	Total O 177 177	0	0
7	G	120	Total O 120 120	0	0
7	H	38	Total O 38 38	0	0
7	I	171	Total O 171 171	0	0
7	J	232	Total O 232 232	0	0
7	K	241	Total O 241 241	0	0
7	L	277	Total O 277 277	0	0
7	M	263	Total O 263 263	0	0
7	N	253	Total O 253 253	0	0
7	O	206	Total O 206 206	0	0
7	P	92	Total O 92 92	0	0

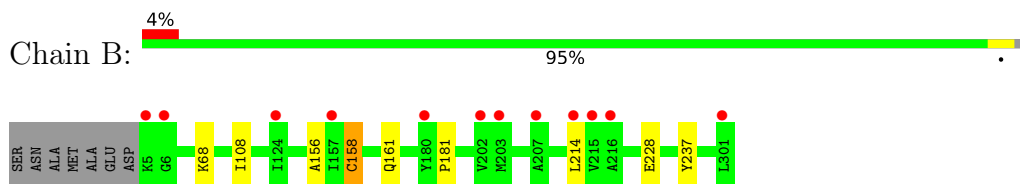
3 Residue-property plots [i](#)

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

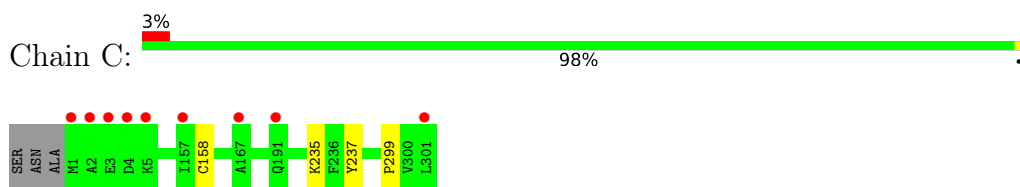
- Molecule 1: N-carbamoylputrescine amidohydrolase



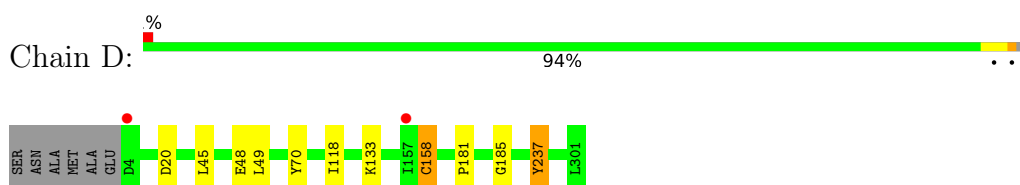
- Molecule 1: N-carbamoylputrescine amidohydrolase



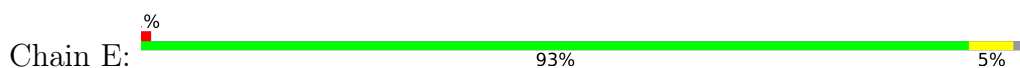
- Molecule 1: N-carbamoylputrescine amidohydrolase



- Molecule 1: N-carbamoylputrescine amidohydrolase

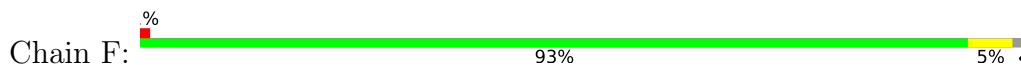


- Molecule 1: N-carbamoylputrescine amidohydrolase

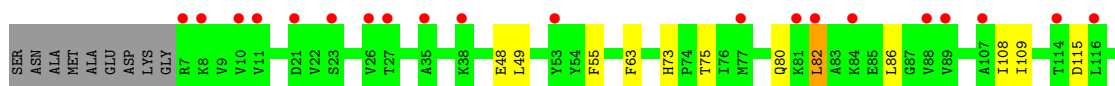
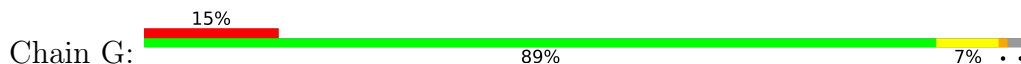




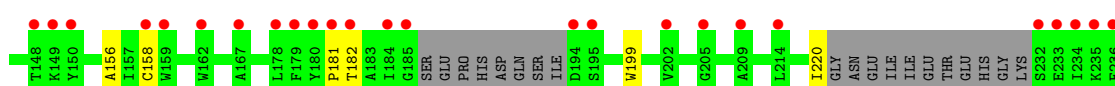
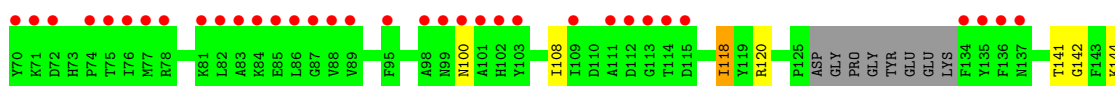
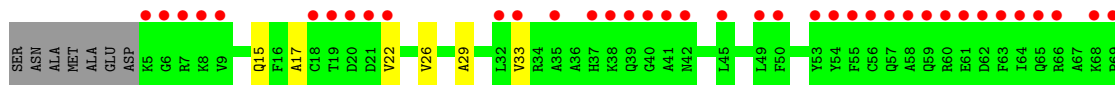
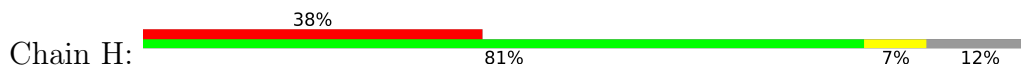
● Molecule 1: N-carbamoylputrescine amidohydrolase



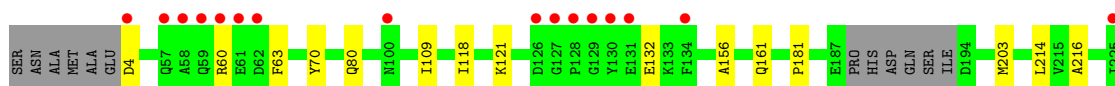
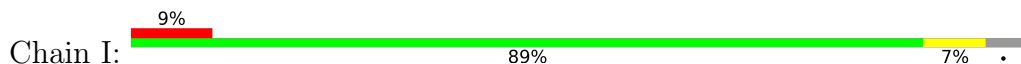
● Molecule 1: N-carbamoylputrescine amidohydrolase



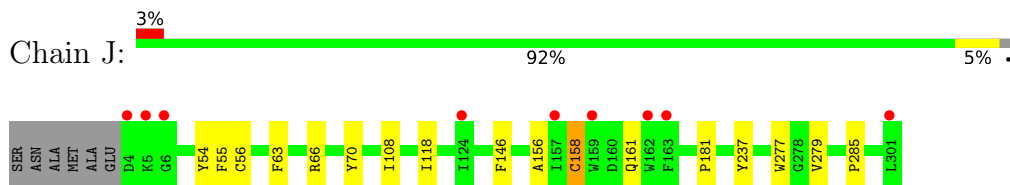
● Molecule 1: N-carbamoylputrescine amidohydrolase



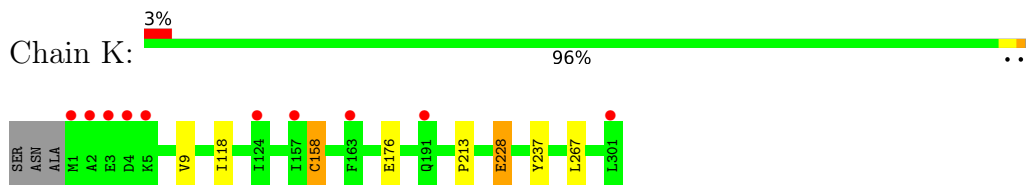
● Molecule 1: N-carbamoylputrescine amidohydrolase



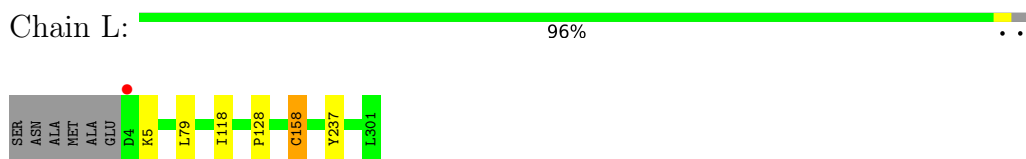
- Molecule 1: N-carbamoylputrescine amidohydrolase



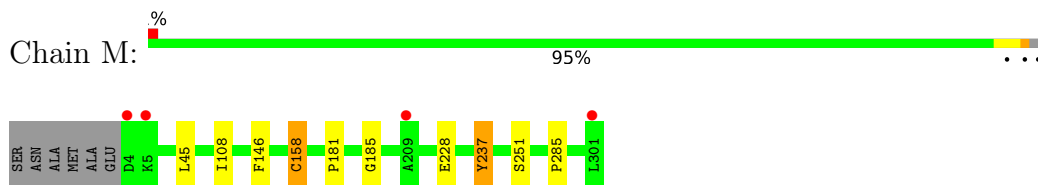
- Molecule 1: N-carbamoylputrescine amidohydrolase



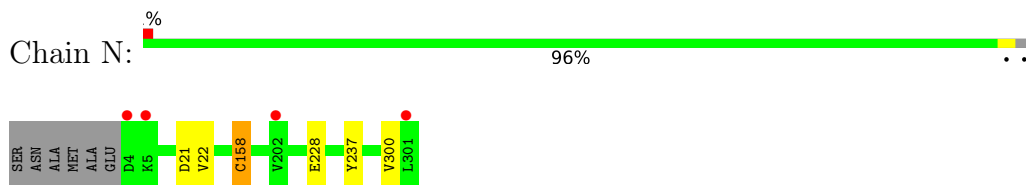
- Molecule 1: N-carbamoylputrescine amidohydrolase



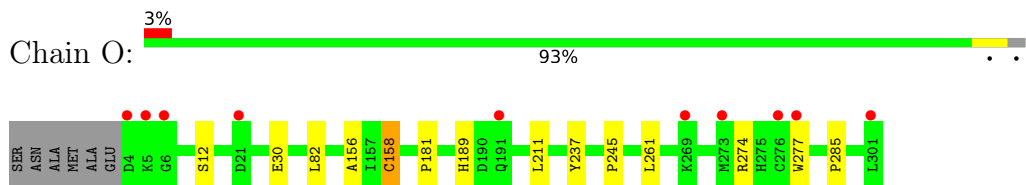
- Molecule 1: N-carbamoylputrescine amidohydrolase



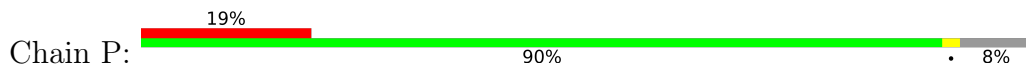
- Molecule 1: N-carbamoylputrescine amidohydrolase

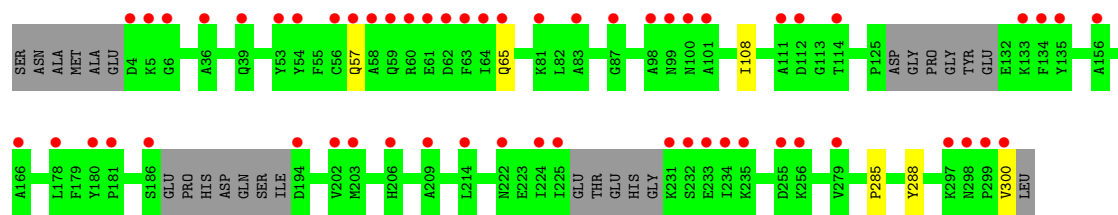


- Molecule 1: N-carbamoylputrescine amidohydrolase



- Molecule 1: N-carbamoylputrescine amidohydrolase





4 Data and refinement statistics i

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α , β , γ	152.27Å 211.04Å 208.82Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.56 – 2.19 39.56 – 2.19	Depositor EDS
% Data completeness (in resolution range)	99.1 (39.56-2.19) 99.1 (39.56-2.19)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.73 (at 2.20Å)	Xtrriage
Refinement program	REFMAC 5.8.0135	Depositor
R, R_{free}	0.171 , 0.211 0.181 , 0.217	Depositor DCC
R_{free} test set	3402 reflections (1.00%)	wwPDB-VP
Wilson B-factor (Å ²)	30.8	Xtrriage
Anisotropy	0.469	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 38.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	0.000 for -h,l,k	Xtrriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	41003	wwPDB-VP
Average B, all atoms (Å ²)	52.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 41.46 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 2.3540e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: PEG, PGE, N2P, EDO, GOL

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	0.84	0/2425	0.76	1/3281 (0.0%)
1	B	0.87	0/2413	0.75	0/3264
1	C	0.90	0/2449	0.77	0/3312
1	D	0.95	1/2447 (0.0%)	0.79	0/3310
1	E	0.85	0/2413	0.76	0/3264
1	F	0.81	0/2421	0.73	0/3275
1	G	0.92	0/2400	0.74	0/3248
1	H	0.84	0/2179	0.71	0/2944
1	I	0.90	0/2378	0.76	0/3213
1	J	0.90	0/2428	0.76	0/3285
1	K	0.89	0/2443	0.75	0/3304
1	L	0.92	0/2436	0.77	0/3295
1	M	0.87	0/2421	0.76	0/3275
1	N	0.88	0/2428	0.76	0/3285
1	O	0.91	0/2430	0.74	0/3287
1	P	0.78	0/2268	0.69	0/3063
All	All	0.88	1/38379 (0.0%)	0.75	1/51905 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	20	ASP	CB-CG	5.65	1.63	1.51

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	158	CYS	CA-CB-SG	5.55	124.00	114.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2360	0	2329	14	0
1	B	2357	0	2319	7	0
1	C	2390	0	2351	5	0
1	D	2382	0	2346	8	0
1	E	2357	0	2319	11	0
1	F	2365	0	2323	12	0
1	G	2344	0	2303	17	0
1	H	2131	0	2113	15	0
1	I	2322	0	2289	12	0
1	J	2369	0	2332	13	0
1	K	2387	0	2346	7	0
1	L	2374	0	2334	6	0
1	M	2365	0	2323	8	0
1	N	2369	0	2332	6	0
1	O	2371	0	2329	12	0
1	P	2217	0	2198	4	0
2	A	18	0	24	0	0
2	B	6	0	8	1	0
2	C	18	0	24	0	0
2	D	6	0	8	0	0
2	E	12	0	16	0	0
2	F	12	0	16	1	0
2	G	6	0	8	0	0
2	H	6	0	8	0	0
2	I	18	0	24	0	0
2	K	12	0	16	0	0
2	M	18	0	24	0	0
2	N	6	0	8	0	0
2	O	12	0	16	0	0
3	A	7	0	10	0	0
3	G	7	0	10	0	0
3	L	7	0	10	0	0
4	A	4	0	6	0	0
4	C	4	0	6	0	0
4	D	4	0	6	0	0
4	F	4	0	6	0	0
4	I	4	0	6	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	J	4	0	6	0	0
4	K	4	0	6	0	0
4	L	4	0	6	0	0
4	N	4	0	6	0	0
5	B	7	0	14	3	0
5	C	7	0	14	3	0
5	D	7	0	14	3	0
5	E	7	0	14	3	0
5	F	7	0	14	3	0
5	G	7	0	14	2	0
5	J	7	0	14	4	0
5	K	7	0	14	3	0
5	L	7	0	14	3	0
5	M	7	0	14	2	0
5	N	7	0	14	3	0
5	O	7	0	14	3	0
6	B	10	0	14	0	0
7	A	157	0	0	1	0
7	B	233	0	0	2	0
7	C	258	0	0	2	0
7	D	288	0	0	0	0
7	E	236	0	0	1	0
7	F	177	0	0	3	0
7	G	120	0	0	0	0
7	H	38	0	0	0	0
7	I	171	0	0	0	0
7	J	232	0	0	0	0
7	K	241	0	0	0	0
7	L	277	0	0	0	0
7	M	263	0	0	0	0
7	N	253	0	0	2	0
7	O	206	0	0	0	0
7	P	92	0	0	0	0
All	All	41003	0	37352	150	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 2.

All (150) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:158:CYS:SG	5:M:401:N2P:H5C1	1.98	1.04
1:F:158:CYS:SG	5:F:402:N2P:H5C1	1.96	1.04
1:O:211:LEU:HD11	1:O:277:TRP:CE3	2.09	0.87
1:J:158:CYS:SG	5:J:401:N2P:H5C1	2.14	0.87
1:M:158:CYS:SG	5:M:401:N2P:C5	2.66	0.83
1:D:158:CYS:SG	5:D:401:N2P:H5C1	2.19	0.80
1:J:158:CYS:SG	5:J:401:N2P:C5	2.70	0.79
1:O:211:LEU:HD11	1:O:277:TRP:HE3	1.48	0.79
1:A:58:ALA:HB2	1:A:227:THR:HG22	1.65	0.79
1:C:158:CYS:SG	5:C:401:N2P:C5	2.72	0.78
1:B:158:CYS:SG	5:B:401:N2P:C5	2.73	0.77
1:E:158:CYS:SG	5:E:401:N2P:H5C1	2.25	0.77
1:O:211:LEU:HD13	1:O:274:ARG:HA	1.65	0.77
1:O:158:CYS:SG	5:O:401:N2P:H5C1	2.26	0.75
1:F:158:CYS:SG	5:F:402:N2P:C5	2.74	0.75
1:N:158:CYS:SG	5:N:401:N2P:H5C1	2.28	0.74
1:H:118:ILE:H	1:H:118:ILE:HD13	1.52	0.73
1:B:158:CYS:SG	5:B:401:N2P:H5C1	2.34	0.67
1:D:158:CYS:SG	5:D:401:N2P:C5	2.83	0.67
1:C:158:CYS:SG	5:C:401:N2P:H5C1	2.34	0.67
1:L:158:CYS:SG	5:L:401:N2P:H5C1	2.37	0.64
1:A:203[A]:MET:CE	1:A:216:ALA:HB2	2.29	0.61
1:A:55:PHE:HB2	1:A:63:PHE:CD2	2.36	0.60
1:G:158:CYS:SG	5:G:401:N2P:H5C1	2.41	0.60
1:E:158:CYS:SG	5:E:401:N2P:C5	2.91	0.59
1:I:203[B]:MET:CE	1:I:216:ALA:HB2	2.35	0.57
1:P:108:ILE:HD12	1:P:108:ILE:N	2.21	0.56
1:A:203[A]:MET:HE1	1:A:216:ALA:HB2	1.88	0.56
1:G:287:LEU:HD22	1:H:142:GLY:HA2	1.87	0.55
1:H:120:ARG:HD2	1:H:141:THR:HG23	1.88	0.55
1:C:158:CYS:SG	5:C:401:N2P:N1	2.80	0.55
1:H:118:ILE:HD13	1:H:118:ILE:N	2.21	0.54
1:K:9:VAL:HG21	1:K:267:LEU:HD11	1.89	0.54
1:N:158:CYS:SG	5:N:401:N2P:N1	2.80	0.54
1:L:158:CYS:SG	5:L:401:N2P:N1	2.80	0.54
1:G:109:ILE:HD13	1:G:115:ASP:HA	1.91	0.53
1:B:158:CYS:SG	5:B:401:N2P:N1	2.82	0.53
1:N:158:CYS:SG	5:N:401:N2P:C5	2.95	0.53
1:G:108:ILE:HG13	1:G:146:PHE:CD2	2.43	0.53
1:H:15:GLN:NE2	1:H:220:ILE:HD13	2.23	0.53
1:E:158:CYS:SG	5:E:401:N2P:N1	2.82	0.52
1:I:121:LYS:NZ	1:I:132:GLU:OE1	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:277:TRP:HD1	1:J:279:VAL:HG13	1.75	0.52
1:O:158:CYS:SG	5:O:401:N2P:C5	2.96	0.52
1:J:158:CYS:HG	5:J:401:N2P:H5C1	1.74	0.51
1:K:158:CYS:SG	5:K:401:N2P:N1	2.84	0.51
1:A:121:LYS:NZ	1:A:158:CYS:HB3	2.27	0.50
1:D:48:GLU:HG2	1:D:49:LEU:HG	1.93	0.50
1:F:158:CYS:SG	5:F:402:N2P:N1	2.85	0.50
1:I:156:ALA:O	1:I:181:PRO:HD2	2.12	0.50
1:L:158:CYS:SG	5:L:401:N2P:C5	3.00	0.50
1:O:158:CYS:SG	5:O:401:N2P:N1	2.85	0.49
1:G:185:GLY:HA2	1:G:237:TYR:CD2	2.47	0.49
1:H:29:ALA:O	1:H:33:VAL:HG23	2.12	0.49
1:D:158:CYS:SG	5:D:401:N2P:N1	2.85	0.49
1:J:55:PHE:HB2	1:J:63:PHE:CD2	2.47	0.49
1:I:203[B]:MET:CE	1:I:214:LEU:HD21	2.43	0.48
1:C:235:LYS:HE2	7:C:649:HOH:O	2.14	0.48
1:P:285:PRO:HA	1:P:288:TYR:CD2	2.49	0.48
2:F:401:GOL:H31	7:F:642:HOH:O	2.13	0.48
1:J:156:ALA:O	1:J:181:PRO:HD2	2.13	0.48
1:H:156:ALA:O	1:H:181:PRO:HD2	2.13	0.48
1:G:277:TRP:HD1	1:G:279:VAL:HG13	1.78	0.48
1:E:235:LYS:HE2	7:E:506:HOH:O	2.12	0.47
1:H:22:VAL:O	1:H:26:VAL:HG23	2.14	0.47
1:I:161:GLN:HB2	1:I:203[A]:MET:SD	2.54	0.47
1:H:220:ILE:HD11	1:H:255:ASP:C	2.33	0.47
1:B:156:ALA:O	1:B:181:PRO:HD2	2.14	0.47
1:E:48:GLU:HG2	1:E:49:LEU:HG	1.96	0.47
1:G:80:GLN:HG2	1:G:109:ILE:HD12	1.96	0.47
1:I:203[B]:MET:HE1	1:I:214:LEU:HD21	1.96	0.47
1:H:141:THR:HB	1:H:144:LYS:HE3	1.96	0.47
1:H:17:ALA:N	1:H:220:ILE:HG22	2.30	0.47
1:G:158:CYS:SG	5:G:401:N2P:N1	2.88	0.47
1:A:273:MET:HE3	7:A:648:HOH:O	2.14	0.46
1:A:161:GLN:HB2	1:A:203[B]:MET:SD	2.55	0.46
1:E:70:TYR:CZ	1:E:118:ILE:HG23	2.51	0.46
1:F:30:GLU:HG3	1:F:82:LEU:HD22	1.97	0.46
1:F:228:GLU:HG3	1:G:128:PRO:HG3	1.97	0.46
1:K:158:CYS:SG	5:K:401:N2P:C5	3.04	0.46
1:O:156:ALA:O	1:O:181:PRO:HD2	2.16	0.46
1:G:73:HIS:HD2	1:G:75:THR:H	1.64	0.45
1:D:45:LEU:HD11	1:D:181:PRO:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:228:GLU:H	1:M:228:GLU:CD	2.19	0.45
1:I:60:ARG:HB3	1:I:63:PHE:HD2	1.82	0.45
1:E:156:ALA:O	1:E:181:PRO:HD2	2.15	0.45
1:K:158:CYS:SG	5:K:401:N2P:H5C1	2.56	0.45
1:H:182:THR:HG21	1:H:199:TRP:CZ2	2.52	0.44
1:H:285:PRO:HA	1:H:288:TYR:CD2	2.53	0.44
1:F:289:LYS:NZ	7:F:505:HOH:O	2.50	0.44
1:I:80:GLN:HA	1:I:109:ILE:HG21	2.00	0.44
1:F:273:MET:HE1	7:F:677:HOH:O	2.16	0.44
1:O:285:PRO:HG2	1:P:300:VAL:HG21	1.99	0.44
1:F:285:PRO:HA	1:F:288:TYR:CD2	2.52	0.44
1:N:22:VAL:HG23	7:N:674:HOH:O	2.17	0.44
1:A:156:ALA:O	1:A:181:PRO:HD2	2.18	0.44
1:E:12:SER:HA	1:E:261:LEU:O	2.17	0.44
1:I:285:PRO:HA	1:I:288:TYR:CD2	2.53	0.43
1:J:108:ILE:HG13	1:J:146:PHE:CD1	2.52	0.43
1:J:158:CYS:SG	5:J:401:N2P:N1	2.92	0.43
1:J:63:PHE:O	1:J:66:ARG:HG3	2.18	0.43
1:K:176:GLU:O	1:K:213:PRO:HD2	2.18	0.43
1:A:70:TYR:CZ	1:A:118:ILE:HG23	2.53	0.43
1:M:285:PRO:HG2	1:N:300:VAL:HG11	2.00	0.43
1:J:108:ILE:HG13	1:J:146:PHE:CE1	2.53	0.43
1:J:70:TYR:CZ	1:J:118:ILE:HG23	2.54	0.43
1:O:189:HIS:H	1:O:189:HIS:CD2	2.37	0.43
1:F:45:LEU:HD11	1:F:181:PRO:HG3	2.00	0.43
1:B:68:LYS:NZ	7:B:503:HOH:O	2.52	0.43
1:I:70:TYR:CZ	1:I:118:ILE:HG23	2.54	0.42
1:P:108:ILE:N	1:P:108:ILE:CD1	2.82	0.42
1:K:228:GLU:H	1:K:228:GLU:CD	2.23	0.42
2:B:402:GOL:H32	7:B:502:HOH:O	2.18	0.42
1:L:79:LEU:HD23	1:L:79:LEU:HA	1.88	0.42
1:O:12:SER:HA	1:O:261:LEU:O	2.19	0.42
1:B:108:ILE:HD12	1:B:108:ILE:N	2.34	0.42
1:D:70:TYR:CZ	1:D:118[A]:ILE:HG23	2.54	0.42
1:A:285:PRO:HA	1:A:288:TYR:CD2	2.55	0.42
1:D:133:LYS:HB3	1:E:133:LYS:HD3	2.01	0.42
1:K:118:ILE:HD13	1:K:118:ILE:HG21	1.84	0.42
1:M:185:GLY:HA2	1:M:237:TYR:CD2	2.54	0.42
1:D:185:GLY:HA2	1:D:237:TYR:CD2	2.55	0.42
1:G:82:LEU:HD22	1:G:86:LEU:HD22	2.02	0.41
1:M:108:ILE:HG13	1:M:146:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:279:VAL:O	1:G:283:ARG:HG3	2.20	0.41
1:L:118:ILE:HG21	1:L:118:ILE:HD13	1.81	0.41
1:A:48:GLU:HG2	1:A:49:LEU:HG	2.02	0.41
1:F:55:PHE:HB2	1:F:63:PHE:CD2	2.54	0.41
1:G:211:LEU:HA	1:G:245:PRO:O	2.21	0.41
1:C:299:PRO:HB3	7:C:638:HOH:O	2.20	0.41
1:E:108:ILE:HG13	1:E:146:PHE:CD2	2.56	0.41
1:G:48:GLU:HG2	1:G:49:LEU:HG	2.03	0.41
1:B:214:LEU:C	1:B:214:LEU:HD23	2.42	0.41
1:G:55:PHE:HB2	1:G:63:PHE:CD2	2.56	0.41
1:H:108:ILE:HD12	1:H:108:ILE:N	2.36	0.41
1:O:30[A]:GLU:HG2	1:O:82:LEU:HD22	2.03	0.41
1:L:128:PRO:HG3	1:M:228:GLU:HG3	2.03	0.40
1:O:211:LEU:HA	1:O:245:PRO:O	2.21	0.40
1:A:158:CYS:HA	1:A:182[B]:THR:OG1	2.22	0.40
1:A:228:GLU:CD	1:A:228:GLU:H	2.25	0.40
1:F:61:GLU:HG3	1:H:276:CYS:HB2	2.03	0.40
1:G:80:GLN:HA	1:G:109:ILE:HG21	2.03	0.40
1:I:245:PRO:HB2	1:I:273:MET:HE1	2.03	0.40
1:J:54:TYR:CE2	1:J:56:CYS:HB2	2.55	0.40
1:A:203[A]:MET:HE3	1:A:216:ALA:HB2	2.02	0.40
1:E:285:PRO:HG2	1:F:300:VAL:HG11	2.04	0.40
1:G:288:TYR:HB3	1:G:291:LEU:HD12	2.03	0.40
1:I:300:VAL:HG21	1:J:285:PRO:HG2	2.04	0.40
1:M:45:LEU:HD11	1:M:181:PRO:HG3	2.02	0.40
1:N:21:ASP:HB2	7:N:713:HOH:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	297/304 (98%)	280 (94%)	16 (5%)	1 (0%)	41	46
1	B	295/304 (97%)	286 (97%)	8 (3%)	1 (0%)	41	46
1	C	300/304 (99%)	289 (96%)	11 (4%)	0	100	100
1	D	299/304 (98%)	292 (98%)	6 (2%)	1 (0%)	41	46
1	E	295/304 (97%)	284 (96%)	10 (3%)	1 (0%)	41	46
1	F	296/304 (97%)	287 (97%)	8 (3%)	1 (0%)	41	46
1	G	293/304 (96%)	281 (96%)	11 (4%)	1 (0%)	41	46
1	H	260/304 (86%)	245 (94%)	14 (5%)	1 (0%)	34	37
1	I	289/304 (95%)	279 (96%)	10 (4%)	0	100	100
1	J	297/304 (98%)	289 (97%)	7 (2%)	1 (0%)	41	46
1	K	299/304 (98%)	290 (97%)	8 (3%)	1 (0%)	41	46
1	L	298/304 (98%)	290 (97%)	7 (2%)	1 (0%)	41	46
1	M	296/304 (97%)	285 (96%)	10 (3%)	1 (0%)	41	46
1	N	297/304 (98%)	284 (96%)	12 (4%)	1 (0%)	41	46
1	O	297/304 (98%)	282 (95%)	14 (5%)	1 (0%)	41	46
1	P	272/304 (90%)	264 (97%)	8 (3%)	0	100	100
All	All	4680/4864 (96%)	4507 (96%)	160 (3%)	13 (0%)	41	46

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	158	CYS
1	N	158	CYS
1	E	158	CYS
1	F	158	CYS
1	G	158	CYS
1	K	158	CYS
1	M	158	CYS
1	O	158	CYS
1	A	158	CYS
1	B	158	CYS
1	D	158	CYS
1	J	158	CYS
1	L	158	CYS

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	249/252 (99%)	244 (98%)	5 (2%)	55	69
1	B	247/252 (98%)	244 (99%)	3 (1%)	71	83
1	C	251/252 (100%)	250 (100%)	1 (0%)	91	96
1	D	251/252 (100%)	250 (100%)	1 (0%)	91	96
1	E	247/252 (98%)	246 (100%)	1 (0%)	91	96
1	F	248/252 (98%)	247 (100%)	1 (0%)	91	96
1	G	246/252 (98%)	244 (99%)	2 (1%)	81	90
1	H	222/252 (88%)	220 (99%)	2 (1%)	78	88
1	I	243/252 (96%)	241 (99%)	2 (1%)	81	90
1	J	249/252 (99%)	247 (99%)	2 (1%)	81	90
1	K	250/252 (99%)	248 (99%)	2 (1%)	81	90
1	L	250/252 (99%)	248 (99%)	2 (1%)	81	90
1	M	248/252 (98%)	246 (99%)	2 (1%)	81	90
1	N	249/252 (99%)	247 (99%)	2 (1%)	81	90
1	O	249/252 (99%)	248 (100%)	1 (0%)	91	96
1	P	232/252 (92%)	230 (99%)	2 (1%)	78	88
All	All	3931/4032 (98%)	3900 (99%)	31 (1%)	81	90

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	126	ASP
1	A	182[A]	THR
1	A	182[B]	THR
1	A	226	GLU
1	A	237	TYR
1	B	161	GLN
1	B	228	GLU
1	B	237	TYR

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Mol	Chain	Res	Type
1	C	237	TYR
1	D	237	TYR
1	E	237	TYR
1	F	237	TYR
1	G	82	LEU
1	G	237	TYR
1	H	100	ASN
1	H	118	ILE
1	I	4	ASP
1	I	237	TYR
1	J	161	GLN
1	J	237	TYR
1	K	228	GLU
1	K	237	TYR
1	L	5	LYS
1	L	237	TYR
1	M	237	TYR
1	M	251	SER
1	N	228	GLU
1	N	237	TYR
1	O	237	TYR
1	P	57	GLN
1	P	65	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (26) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	65	GLN
1	C	65	GLN
1	D	65	GLN
1	E	65	GLN
1	F	65	GLN
1	F	102	HIS
1	G	65	GLN
1	G	73	HIS
1	G	102	HIS
1	G	189	HIS
1	H	99	ASN
1	H	100	ASN
1	H	239	ASN
1	I	161	GLN
1	J	65	GLN

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Mol	Chain	Res	Type
1	K	65	GLN
1	L	65	GLN
1	L	102	HIS
1	M	65	GLN
1	N	65	GLN
1	O	65	GLN
1	O	102	HIS
1	O	189	HIS
1	P	65	GLN
1	P	100	ASN
1	P	298	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

50 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
4	EDO	K	404	-	3,3,3	0.55	0	2,2,2	0.16	0
3	PEG	L	402	-	6,6,6	0.60	0	5,5,5	0.25	0
2	GOL	B	402	-	5,5,5	0.49	0	5,5,5	0.43	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PEG	A	403	-	6,6,6	0.63	0	5,5,5	0.27	0
2	GOL	E	402	-	5,5,5	0.52	0	5,5,5	0.34	0
4	EDO	A	405	-	3,3,3	0.73	0	2,2,2	0.14	0
5	N2P	M	401	-	6,6,6	0.43	0	5,5,5	0.99	0
2	GOL	K	402	-	5,5,5	0.23	0	5,5,5	0.18	0
5	N2P	K	401	-	6,6,6	0.31	0	5,5,5	0.89	0
2	GOL	F	403	-	5,5,5	0.48	0	5,5,5	0.22	0
2	GOL	M	402	-	5,5,5	0.36	0	5,5,5	0.28	0
5	N2P	J	401	-	6,6,6	0.24	0	5,5,5	0.81	0
2	GOL	C	402	-	5,5,5	0.55	0	5,5,5	0.26	0
5	N2P	L	401	-	6,6,6	0.27	0	5,5,5	0.55	0
4	EDO	N	403	-	3,3,3	0.57	0	2,2,2	0.11	0
4	EDO	J	402	-	3,3,3	0.44	0	2,2,2	0.40	0
5	N2P	C	401	-	6,6,6	0.21	0	5,5,5	0.89	0
2	GOL	G	403	-	5,5,5	0.32	0	5,5,5	0.57	0
4	EDO	F	404	-	3,3,3	0.61	0	2,2,2	0.16	0
2	GOL	O	403	-	5,5,5	0.45	0	5,5,5	0.11	0
2	GOL	C	404	-	5,5,5	0.51	0	5,5,5	0.23	0
5	N2P	G	401	-	6,6,6	0.35	0	5,5,5	0.77	0
4	EDO	D	403	-	3,3,3	0.63	0	2,2,2	0.15	0
3	PEG	G	402	-	6,6,6	0.62	0	5,5,5	0.37	0
4	EDO	L	403	-	3,3,3	0.75	0	2,2,2	0.03	0
2	GOL	A	401	-	5,5,5	0.73	0	5,5,5	0.42	0
2	GOL	M	404	-	5,5,5	0.41	0	5,5,5	0.11	0
2	GOL	K	403	-	5,5,5	1.00	0	5,5,5	0.86	0
2	GOL	A	402	-	5,5,5	0.39	0	5,5,5	0.45	0
2	GOL	I	401	-	5,5,5	0.37	0	5,5,5	0.30	0
2	GOL	I	402	-	5,5,5	0.50	0	5,5,5	0.35	0
4	EDO	I	404	-	3,3,3	0.57	0	2,2,2	0.20	0
2	GOL	I	403	-	5,5,5	0.46	0	5,5,5	0.24	0
5	N2P	O	401	-	6,6,6	0.53	0	5,5,5	0.76	0
2	GOL	E	403	-	5,5,5	0.36	0	5,5,5	0.26	0
2	GOL	N	402	-	5,5,5	0.48	0	5,5,5	0.24	0
4	EDO	C	405	-	3,3,3	0.62	0	2,2,2	0.12	0
5	N2P	E	401	-	6,6,6	0.25	0	5,5,5	0.37	0
2	GOL	D	402	-	5,5,5	0.79	0	5,5,5	0.49	0
5	N2P	N	401	-	6,6,6	0.47	0	5,5,5	0.36	0
2	GOL	M	403	-	5,5,5	1.28	0	5,5,5	0.74	0
6	PGE	B	403	-	9,9,9	0.58	0	8,8,8	0.28	0
2	GOL	O	402	-	5,5,5	0.18	0	5,5,5	0.69	0
2	GOL	H	401	-	5,5,5	0.65	0	5,5,5	0.55	0
2	GOL	A	404	-	5,5,5	0.54	0	5,5,5	0.36	0
5	N2P	B	401	-	6,6,6	0.24	0	5,5,5	1.00	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	N2P	F	402	-	6,6,6	0.48	0	5,5,5	0.66	0
5	N2P	D	401	-	6,6,6	0.30	0	5,5,5	0.45	0
2	GOL	C	403	-	5,5,5	0.43	0	5,5,5	0.27	0
2	GOL	F	401	-	5,5,5	0.29	0	5,5,5	0.46	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
4	EDO	K	404	-	-	1/1/1/1	-
3	PEG	L	402	-	-	0/4/4/4	-
2	GOL	B	402	-	-	2/4/4/4	-
3	PEG	A	403	-	-	3/4/4/4	-
2	GOL	E	402	-	-	4/4/4/4	-
4	EDO	A	405	-	-	1/1/1/1	-
5	N2P	M	401	-	-	0/4/4/4	-
2	GOL	K	402	-	-	2/4/4/4	-
5	N2P	K	401	-	-	0/4/4/4	-
2	GOL	F	403	-	-	2/4/4/4	-
2	GOL	M	402	-	-	2/4/4/4	-
5	N2P	J	401	-	-	0/4/4/4	-
2	GOL	C	402	-	-	2/4/4/4	-
5	N2P	L	401	-	-	1/4/4/4	-
4	EDO	N	403	-	-	1/1/1/1	-
4	EDO	J	402	-	-	1/1/1/1	-
5	N2P	C	401	-	-	0/4/4/4	-
2	GOL	G	403	-	-	1/4/4/4	-
4	EDO	F	404	-	-	1/1/1/1	-
2	GOL	O	403	-	-	1/4/4/4	-
2	GOL	C	404	-	-	4/4/4/4	-
5	N2P	G	401	-	-	1/4/4/4	-
4	EDO	D	403	-	-	0/1/1/1	-
3	PEG	G	402	-	-	2/4/4/4	-
4	EDO	L	403	-	-	1/1/1/1	-
2	GOL	A	401	-	-	2/4/4/4	-
2	GOL	M	404	-	-	4/4/4/4	-
2	GOL	K	403	-	-	2/4/4/4	-
2	GOL	A	402	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GOL	I	401	-	-	2/4/4/4	-
2	GOL	I	402	-	-	0/4/4/4	-
4	EDO	I	404	-	-	1/1/1/1	-
2	GOL	I	403	-	-	3/4/4/4	-
5	N2P	O	401	-	-	1/4/4/4	-
2	GOL	E	403	-	-	2/4/4/4	-
2	GOL	N	402	-	-	2/4/4/4	-
4	EDO	C	405	-	-	1/1/1/1	-
5	N2P	E	401	-	-	0/4/4/4	-
2	GOL	D	402	-	-	2/4/4/4	-
5	N2P	N	401	-	-	0/4/4/4	-
2	GOL	M	403	-	-	4/4/4/4	-
6	PGE	B	403	-	-	4/7/7/7	-
2	GOL	O	402	-	-	2/4/4/4	-
2	GOL	H	401	-	-	2/4/4/4	-
2	GOL	A	404	-	-	2/4/4/4	-
5	N2P	B	401	-	-	0/4/4/4	-
5	N2P	F	402	-	-	1/4/4/4	-
5	N2P	D	401	-	-	0/4/4/4	-
2	GOL	C	403	-	-	2/4/4/4	-
2	GOL	F	401	-	-	2/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (76) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	402	GOL	O1-C1-C2-O2
2	A	404	GOL	O2-C2-C3-O3
2	B	402	GOL	C1-C2-C3-O3
2	C	404	GOL	O1-C1-C2-O2
2	C	404	GOL	O1-C1-C2-C3
2	D	402	GOL	O1-C1-C2-C3
2	H	401	GOL	O1-C1-C2-O2
2	K	402	GOL	C1-C2-C3-O3
2	K	403	GOL	O1-C1-C2-C3
2	M	403	GOL	O1-C1-C2-C3

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Mol	Chain	Res	Type	Atoms
2	M	403	GOL	C1-C2-C3-O3
2	M	403	GOL	O2-C2-C3-O3
2	M	404	GOL	O1-C1-C2-O2
2	M	404	GOL	O1-C1-C2-C3
2	O	402	GOL	O1-C1-C2-O2
2	O	402	GOL	O1-C1-C2-C3
2	D	402	GOL	O1-C1-C2-O2
2	E	402	GOL	O2-C2-C3-O3
2	K	402	GOL	O2-C2-C3-O3
2	N	402	GOL	O2-C2-C3-O3
3	A	403	PEG	O2-C3-C4-O4
3	A	403	PEG	O1-C1-C2-O2
3	G	402	PEG	O2-C3-C4-O4
2	A	402	GOL	O1-C1-C2-C3
2	A	404	GOL	C1-C2-C3-O3
2	C	402	GOL	O1-C1-C2-C3
2	C	403	GOL	O1-C1-C2-C3
2	C	404	GOL	C1-C2-C3-O3
2	E	402	GOL	O1-C1-C2-C3
2	E	402	GOL	C1-C2-C3-O3
2	E	403	GOL	O1-C1-C2-C3
2	F	401	GOL	O1-C1-C2-C3
2	F	403	GOL	O1-C1-C2-C3
2	H	401	GOL	O1-C1-C2-C3
2	I	401	GOL	C1-C2-C3-O3
2	M	402	GOL	C1-C2-C3-O3
2	M	404	GOL	C1-C2-C3-O3
2	N	402	GOL	C1-C2-C3-O3
2	B	402	GOL	O2-C2-C3-O3
2	C	402	GOL	O1-C1-C2-O2
2	F	401	GOL	O1-C1-C2-O2
2	F	403	GOL	O1-C1-C2-O2
2	I	401	GOL	O2-C2-C3-O3
2	K	403	GOL	O1-C1-C2-O2
2	M	402	GOL	O2-C2-C3-O3
2	M	403	GOL	O1-C1-C2-O2
4	I	404	EDO	O1-C1-C2-O2
4	K	404	EDO	O1-C1-C2-O2
6	B	403	PGE	O2-C3-C4-O3
2	E	402	GOL	O1-C1-C2-O2
4	A	405	EDO	O1-C1-C2-O2
4	N	403	EDO	O1-C1-C2-O2

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Mol	Chain	Res	Type	Atoms
5	L	401	N2P	C2-C3-C4-C5
5	O	401	N2P	C2-C3-C4-C5
2	A	401	GOL	O2-C2-C3-O3
2	I	403	GOL	O2-C2-C3-O3
2	M	404	GOL	O2-C2-C3-O3
4	C	405	EDO	O1-C1-C2-O2
4	F	404	EDO	O1-C1-C2-O2
4	L	403	EDO	O1-C1-C2-O2
6	B	403	PGE	C6-C5-O3-C4
6	B	403	PGE	C1-C2-O2-C3
2	A	401	GOL	C1-C2-C3-O3
2	C	403	GOL	O1-C1-C2-O2
5	G	401	N2P	C2-C3-C4-C5
3	G	402	PEG	O1-C1-C2-O2
2	I	403	GOL	O1-C1-C2-C3
2	C	404	GOL	O2-C2-C3-O3
2	E	403	GOL	O1-C1-C2-O2
5	F	402	N2P	C2-C3-C4-C5
4	J	402	EDO	O1-C1-C2-O2
3	A	403	PEG	C4-C3-O2-C2
2	I	403	GOL	C1-C2-C3-O3
2	O	403	GOL	O1-C1-C2-C3
6	B	403	PGE	O1-C1-C2-O2
2	G	403	GOL	O2-C2-C3-O3

There are no ring outliers.

14 monomers are involved in 37 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	402	GOL	1	0
5	M	401	N2P	2	0
5	K	401	N2P	3	0
5	J	401	N2P	4	0
5	L	401	N2P	3	0
5	C	401	N2P	3	0
5	G	401	N2P	2	0
5	O	401	N2P	3	0
5	E	401	N2P	3	0
5	N	401	N2P	3	0
5	B	401	N2P	3	0
5	F	402	N2P	3	0
5	D	401	N2P	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	401	GOL	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

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	296/304 (97%)	0.30	30 (10%) 7 6	34, 55, 98, 126	0
1	B	297/304 (97%)	-0.06	12 (4%) 38 36	29, 41, 61, 93	0
1	C	301/304 (99%)	-0.17	9 (2%) 50 48	28, 40, 57, 109	0
1	D	298/304 (98%)	-0.29	2 (0%) 87 86	28, 37, 49, 85	0
1	E	297/304 (97%)	-0.20	3 (1%) 82 81	29, 41, 56, 83	0
1	F	298/304 (98%)	-0.24	4 (1%) 77 75	30, 51, 71, 92	0
1	G	295/304 (97%)	0.79	46 (15%) 2 1	52, 76, 101, 114	0
1	H	268/304 (88%)	2.02	115 (42%) 0 0	59, 97, 136, 155	0
1	I	292/304 (96%)	0.16	27 (9%) 9 7	33, 49, 101, 126	0
1	J	298/304 (98%)	-0.08	9 (3%) 50 48	29, 41, 59, 113	0
1	K	301/304 (99%)	-0.13	10 (3%) 46 44	28, 42, 60, 116	0
1	L	298/304 (98%)	-0.33	1 (0%) 94 93	28, 38, 52, 100	0
1	M	298/304 (98%)	-0.20	4 (1%) 77 75	28, 38, 54, 92	0
1	N	298/304 (98%)	-0.32	4 (1%) 77 75	29, 40, 55, 92	0
1	O	298/304 (98%)	-0.05	10 (3%) 45 43	36, 52, 73, 121	0
1	P	279/304 (91%)	0.98	57 (20%) 1 1	41, 69, 116, 140	0
All	All	4712/4864 (96%)	0.12	343 (7%) 15 14	28, 46, 98, 155	0

All (343) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	58	ALA	12.6
1	I	301	LEU	10.8
1	I	128	PRO	9.5
1	P	225	ILE	8.4
1	P	63	PHE	7.6

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Mol	Chain	Res	Type	RSRZ
1	H	57	GLN	7.2
1	O	4	ASP	7.2
1	P	134	PHE	7.2
1	H	63	PHE	7.1
1	I	229	HIS	7.1
1	H	135	TYR	6.7
1	A	193	ILE	6.7
1	F	301	LEU	6.6
1	H	59	GLN	6.6
1	P	58	ALA	6.6
1	H	87	GLY	6.5
1	H	102	HIS	6.5
1	J	4	ASP	6.5
1	I	228	GLU	6.0
1	A	230	GLY	6.0
1	H	256	LYS	5.9
1	H	56	CYS	5.9
1	I	4	ASP	5.9
1	H	82	LEU	5.9
1	P	4	ASP	5.9
1	P	62	ASP	5.8
1	H	194	ASP	5.7
1	A	188	PRO	5.7
1	I	130	TYR	5.7
1	O	5	LYS	5.7
1	H	86	LEU	5.6
1	A	227	THR	5.6
1	H	180	TYR	5.5
1	A	128	PRO	5.5
1	H	53	TYR	5.5
1	H	232	SER	5.5
1	P	224	ILE	5.4
1	M	4	ASP	5.4
1	A	129	GLY	5.4
1	A	190	ASP	5.4
1	H	40	GLY	5.3
1	P	186	SER	5.3
1	A	229	HIS	5.2
1	H	101	ALA	5.2
1	H	178	LEU	5.2
1	G	276	CYS	5.1
1	H	134	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
1	P	65	GLN	5.1
1	A	189	HIS	5.1
1	H	20	ASP	5.1
1	I	227	THR	5.1
1	H	60	ARG	5.1
1	I	230	GLY	5.1
1	P	57	GLN	5.0
1	K	1	MET	5.0
1	I	300	VAL	5.0
1	P	232	SER	4.9
1	H	62	ASP	4.9
1	P	99	ASN	4.9
1	P	135	TYR	4.9
1	H	185	GLY	4.9
1	P	5	LYS	4.8
1	A	228	GLU	4.8
1	H	77	MET	4.8
1	P	59	GLN	4.7
1	P	300	VAL	4.7
1	H	236	PHE	4.7
1	A	231	LYS	4.6
1	P	60	ARG	4.6
1	P	56	CYS	4.6
1	O	301	LEU	4.6
1	O	6	GLY	4.6
1	H	83	ALA	4.6
1	O	276	CYS	4.5
1	I	131	GLU	4.5
1	K	2	ALA	4.5
1	H	298	ASN	4.4
1	A	226	GLU	4.4
1	A	299	PRO	4.4
1	H	159	TRP	4.4
1	G	38	LYS	4.4
1	H	70	TYR	4.4
1	A	126	ASP	4.3
1	I	127	GLY	4.3
1	H	71	LYS	4.3
1	G	301	LEU	4.3
1	C	3	GLU	4.3
1	H	38	LYS	4.3
1	C	2	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
1	F	4	ASP	4.3
1	H	61	GLU	4.2
1	P	100	ASN	4.2
1	P	233	GLU	4.2
1	A	192	SER	4.2
1	J	5	LYS	4.2
1	O	277	TRP	4.2
1	H	253	ALA	4.1
1	K	3	GLU	4.1
1	P	299	PRO	4.1
1	L	4	ASP	4.1
1	H	98	ALA	4.1
1	G	269	LYS	4.1
1	H	55	PHE	4.1
1	P	133	LYS	4.0
1	A	57	GLN	4.0
1	I	57	GLN	3.9
1	H	75	THR	3.9
1	N	301	LEU	3.9
1	H	137	ASN	3.9
1	H	22	VAL	3.9
1	H	234	ILE	3.9
1	N	4	ASP	3.9
1	H	235	LYS	3.9
1	G	273	MET	3.8
1	H	6	GLY	3.8
1	H	100	ASN	3.8
1	P	298	ASN	3.8
1	H	41	ALA	3.8
1	H	111	ALA	3.8
1	G	277	TRP	3.7
1	H	195	SER	3.7
1	G	272	SER	3.7
1	H	39	GLN	3.7
1	P	234	ILE	3.7
1	H	45	LEU	3.7
1	H	254	ASP	3.6
1	H	297	LYS	3.6
1	H	88	VAL	3.6
1	A	58	ALA	3.6
1	B	5	LYS	3.6
1	P	178	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
1	H	35	ALA	3.5
1	A	61	GLU	3.5
1	H	262	ILE	3.5
1	G	190	ASP	3.5
1	H	99	ASN	3.5
1	G	81	LYS	3.5
1	G	202	VAL	3.5
1	P	61	GLU	3.5
1	G	35	ALA	3.5
1	G	27	THR	3.5
1	H	255	ASP	3.4
1	K	4	ASP	3.4
1	E	301	LEU	3.4
1	G	7	ARG	3.4
1	H	21	ASP	3.4
1	H	64	ILE	3.4
1	P	194	ASP	3.4
1	H	74	PRO	3.4
1	H	214	LEU	3.4
1	P	231	LYS	3.4
1	H	66	ARG	3.3
1	G	8	LYS	3.3
1	H	5	LYS	3.3
1	M	301	LEU	3.3
1	H	252	ILE	3.3
1	C	301	LEU	3.3
1	K	301	LEU	3.3
1	H	81	LYS	3.3
1	H	113	GLY	3.3
1	A	134	PHE	3.3
1	H	257	GLU	3.3
1	H	167	ALA	3.3
1	H	209	ALA	3.3
1	P	156	ALA	3.3
1	H	65	GLN	3.2
1	I	134	PHE	3.2
1	P	180	TYR	3.2
1	A	225	ILE	3.2
1	J	157	ILE	3.2
1	M	5	LYS	3.2
1	H	184	ILE	3.2
1	H	85	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
1	H	299	PRO	3.2
1	H	237	TYR	3.2
1	G	151	ALA	3.2
1	H	72	ASP	3.2
1	A	127	GLY	3.2
1	P	222	ASN	3.2
1	B	301	LEU	3.2
1	I	299	PRO	3.1
1	H	112	ASP	3.1
1	G	278	GLY	3.1
1	C	1	MET	3.1
1	B	215	VAL	3.1
1	H	89	VAL	3.1
1	B	6	GLY	3.1
1	H	150	TYR	3.1
1	I	61	GLU	3.0
1	I	226	GLU	3.0
1	G	266	ASN	3.0
1	I	225	ILE	3.0
1	E	5	LYS	3.0
1	B	157	ILE	3.0
1	H	114	THR	3.0
1	H	32	LEU	3.0
1	P	6	GLY	2.9
1	I	298	ASN	2.9
1	H	264	GLU	2.9
1	H	19	THR	2.9
1	J	301	LEU	2.9
1	H	84	LYS	2.9
1	C	4	ASP	2.9
1	G	10	VAL	2.8
1	A	191	GLN	2.8
1	P	64	ILE	2.8
1	A	59	GLN	2.8
1	G	191	GLN	2.8
1	H	18	CYS	2.8
1	H	181	PRO	2.8
1	A	202	VAL	2.8
1	G	114	THR	2.8
1	I	231	LYS	2.8
1	H	263	ALA	2.7
1	H	103	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
1	O	21	ASP	2.7
1	G	250	VAL	2.7
1	G	268	ASP	2.7
1	F	5	LYS	2.7
1	G	88	VAL	2.7
1	G	157	ILE	2.7
1	H	42	ASN	2.7
1	P	256	LYS	2.6
1	G	21	ASP	2.6
1	H	136	PHE	2.6
1	K	191	GLN	2.6
1	H	295	ASP	2.6
1	P	255	ASP	2.6
1	P	54	TYR	2.6
1	G	270	ILE	2.6
1	K	157	ILE	2.6
1	G	275	HIS	2.6
1	H	7	ARG	2.6
1	H	266	ASN	2.6
1	P	111	ALA	2.6
1	H	158	CYS	2.6
1	P	235	LYS	2.6
1	B	214	LEU	2.6
1	G	53	TYR	2.6
1	G	23	SER	2.6
1	H	109	ILE	2.6
1	P	214	LEU	2.6
1	A	133	LYS	2.5
1	H	148	THR	2.5
1	I	60	ARG	2.5
1	B	124	ILE	2.5
1	H	76	ILE	2.5
1	J	124	ILE	2.5
1	M	209	ALA	2.5
1	D	4	ASP	2.5
1	G	271	LYS	2.5
1	H	267	LEU	2.5
1	H	294	LEU	2.5
1	H	69	PRO	2.5
1	O	191	GLN	2.5
1	I	62	ASP	2.5
1	H	78	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	298	ASN	2.4
1	H	182	THR	2.4
1	P	203[A]	MET	2.4
1	G	26	VAL	2.4
1	I	232	SER	2.4
1	H	8	LYS	2.4
1	I	129	GLY	2.4
1	A	65	GLN	2.4
1	H	202	VAL	2.4
1	N	5	LYS	2.4
1	C	157	ILE	2.4
1	G	230	GLY	2.4
1	G	84	LYS	2.4
1	A	62	ASP	2.4
1	G	222	ASN	2.4
1	C	167	ALA	2.4
1	K	5	LYS	2.3
1	G	77	MET	2.3
1	P	166	ALA	2.3
1	H	149	LYS	2.3
1	P	297	LYS	2.3
1	G	82	LEU	2.3
1	H	50	PHE	2.3
1	P	206	HIS	2.3
1	P	279	VAL	2.3
1	H	37	HIS	2.3
1	H	115	ASP	2.3
1	I	58	ALA	2.3
1	P	101	ALA	2.2
1	H	179	PHE	2.2
1	K	163	PHE	2.2
1	H	251	SER	2.2
1	B	180	TYR	2.2
1	H	162	TRP	2.2
1	J	162	TRP	2.2
1	B	207	ALA	2.2
1	I	59	GLN	2.2
1	H	54	TYR	2.2
1	J	6	GLY	2.2
1	J	159	TRP	2.2
1	G	267	LEU	2.2
1	G	11	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	163	PHE	2.2
1	H	95	PHE	2.2
1	P	53	TYR	2.2
1	I	100	ASN	2.2
1	P	36	ALA	2.2
1	P	98	ALA	2.2
1	K	124	ILE	2.2
1	H	68	LYS	2.2
1	D	157	ILE	2.1
1	G	116	LEU	2.1
1	G	89	VAL	2.1
1	N	202	VAL	2.1
1	C	5	LYS	2.1
1	B	216	ALA	2.1
1	C	191	GLN	2.1
1	H	233	GLU	2.1
1	P	202	VAL	2.1
1	J	163	PHE	2.1
1	A	130	TYR	2.1
1	G	156	ALA	2.1
1	P	114	THR	2.1
1	P	39	GLN	2.1
1	A	187	GLU	2.1
1	H	205	GLY	2.1
1	P	87	GLY	2.1
1	B	203	MET	2.1
1	P	181	PRO	2.1
1	I	126	ASP	2.1
1	E	214	LEU	2.1
1	P	83	ALA	2.1
1	H	49	LEU	2.1
1	H	9	VAL	2.1
1	H	33	VAL	2.1
1	P	112	ASP	2.0
1	G	285	PRO	2.0
1	O	273	MET	2.0
1	B	202	VAL	2.0
1	G	107	ALA	2.0
1	G	300	VAL	2.0
1	O	269	LYS	2.0
1	P	209	ALA	2.0
1	P	81	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
1	G	227	THR	2.0
1	F	300	VAL	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	PEG	A	403	7/7	0.69	0.32	81,85,92,92	0
3	PEG	L	402	7/7	0.72	0.39	75,83,90,90	0
2	GOL	F	403	6/6	0.75	0.25	67,80,81,83	0
4	EDO	F	404	4/4	0.75	0.30	74,77,77,78	0
2	GOL	H	401	6/6	0.76	0.21	94,97,99,101	0
4	EDO	L	403	4/4	0.77	0.27	59,61,61,66	0
4	EDO	D	403	4/4	0.79	0.27	74,75,78,79	0
2	GOL	A	404	6/6	0.80	0.20	69,74,76,77	0
2	GOL	M	403	6/6	0.80	0.18	54,60,61,62	0
4	EDO	A	405	4/4	0.80	0.22	60,60,61,62	0
4	EDO	K	404	4/4	0.81	0.23	65,66,70,74	0
3	PEG	G	402	7/7	0.82	0.13	72,76,84,86	0
2	GOL	O	403	6/6	0.82	0.22	66,71,75,75	0
2	GOL	I	403	6/6	0.82	0.26	69,74,82,84	0
4	EDO	C	405	4/4	0.82	0.27	68,68,72,73	0
2	GOL	C	404	6/6	0.84	0.19	72,78,80,81	0
4	EDO	I	404	4/4	0.85	0.27	64,64,65,69	0
2	GOL	B	402	6/6	0.86	0.19	62,68,71,78	0
6	PGE	B	403	10/10	0.86	0.14	63,78,88,94	0
4	EDO	N	403	4/4	0.87	0.28	73,74,75,75	0
2	GOL	A	401	6/6	0.87	0.17	80,83,85,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	GOL	N	402	6/6	0.88	0.23	54,65,68,68	0
2	GOL	E	402	6/6	0.89	0.20	70,78,83,89	0
2	GOL	A	402	6/6	0.89	0.17	58,62,68,72	0
2	GOL	M	402	6/6	0.89	0.14	54,59,64,67	0
2	GOL	K	403	6/6	0.90	0.13	53,58,61,61	0
4	EDO	J	402	4/4	0.90	0.14	68,68,69,70	0
5	N2P	F	402	7/7	0.90	0.27	61,61,63,63	0
2	GOL	I	401	6/6	0.90	0.11	49,53,57,60	0
2	GOL	C	403	6/6	0.91	0.24	58,66,71,71	0
2	GOL	D	402	6/6	0.92	0.13	55,57,62,65	0
5	N2P	G	401	7/7	0.92	0.24	71,73,74,75	0
2	GOL	I	402	6/6	0.92	0.18	58,64,67,69	0
2	GOL	O	402	6/6	0.93	0.10	62,63,63,64	0
2	GOL	F	401	6/6	0.93	0.09	56,63,66,66	0
5	N2P	B	401	7/7	0.93	0.27	42,42,43,44	0
2	GOL	K	402	6/6	0.94	0.19	59,66,69,72	0
2	GOL	M	404	6/6	0.94	0.18	59,65,67,79	0
5	N2P	J	401	7/7	0.94	0.38	45,46,47,48	0
5	N2P	M	401	7/7	0.94	0.34	39,40,41,43	0
5	N2P	N	401	7/7	0.94	0.33	45,45,46,46	0
5	N2P	C	401	7/7	0.94	0.36	41,41,43,43	0
5	N2P	K	401	7/7	0.95	0.29	45,45,47,48	0
2	GOL	E	403	6/6	0.95	0.28	54,59,61,63	0
2	GOL	G	403	6/6	0.96	0.15	60,64,66,67	0
5	N2P	D	401	7/7	0.96	0.35	42,43,44,44	0
5	N2P	O	401	7/7	0.96	0.20	50,50,51,52	0
2	GOL	C	402	6/6	0.96	0.14	52,57,64,67	0
5	N2P	E	401	7/7	0.97	0.34	42,42,43,44	0
5	N2P	L	401	7/7	0.97	0.30	42,42,43,43	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.