



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 10, 2023 – 02:40 PM EDT

PDB ID : 4KPN
Title : Plant nucleoside hydrolase - PpNRh1 enzyme
Authors : Morera, S.; Vigouroux, A.; Kopecny, D.
Deposited on : 2013-05-14
Resolution : 3.35 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
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

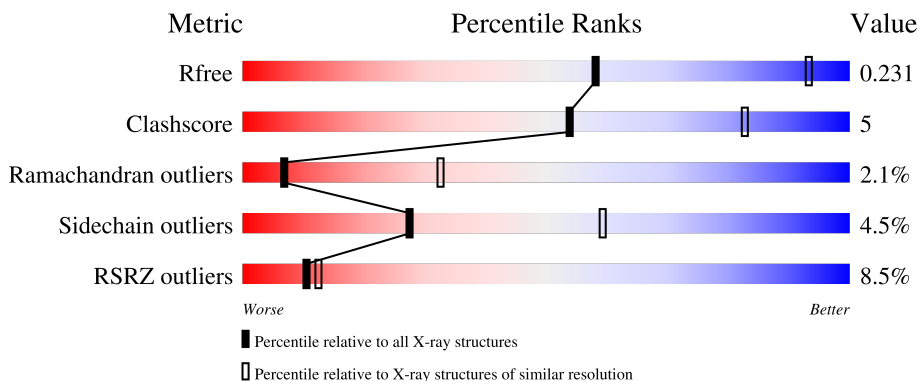
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.35 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.



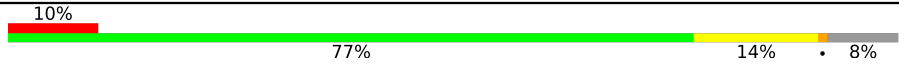


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1558 (3.42-3.30)
Clashscore	141614	1627 (3.42-3.30)
Ramachandran outliers	138981	1599 (3.42-3.30)
Sidechain outliers	138945	1598 (3.42-3.30)
RSRZ outliers	127900	1507 (3.42-3.30)

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	345	 76% 15% 8%
1	B	345	 75% 15% 8%
1	C	345	 76% 15% 8%
1	D	345	 2% 76% 14% 8%
1	E	345	 2% 78% 13% 8%

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Mol	Chain	Length	Quality of chain
1	F	345	 <p>10% 77% 14% • 8%</p>
1	G	345	 <p>13% 78% 13% • 8%</p>
1	H	345	 <p>36% 77% 14% • 8%</p>

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 19520 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 Nucleoside N-ribohydrolase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	318	2437	1561	405	464	7	0	0	0
1	B	318	2437	1561	405	464	7	0	0	0
1	C	318	2437	1561	405	464	7	0	0	0
1	D	318	2437	1561	405	464	7	0	0	0
1	E	318	2437	1561	405	464	7	0	0	0
1	F	318	2437	1561	405	464	7	0	0	0
1	G	318	2437	1561	405	464	7	0	0	0
1	H	318	2437	1561	405	464	7	0	0	0

There are 120 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-11	MET	-	expression tag	UNP M1FQT3
A	-10	GLY	-	expression tag	UNP M1FQT3
A	-9	SER	-	expression tag	UNP M1FQT3
A	-8	SER	-	expression tag	UNP M1FQT3
A	-7	HIS	-	expression tag	UNP M1FQT3
A	-6	HIS	-	expression tag	UNP M1FQT3
A	-5	HIS	-	expression tag	UNP M1FQT3
A	-4	HIS	-	expression tag	UNP M1FQT3
A	-3	HIS	-	expression tag	UNP M1FQT3
A	-2	HIS	-	expression tag	UNP M1FQT3
A	-1	SER	-	expression tag	UNP M1FQT3
A	0	GLN	-	expression tag	UNP M1FQT3
A	1	ASP	-	expression tag	UNP M1FQT3

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Chain	Residue	Modelled	Actual	Comment	Reference
A	2	PRO	-	expression tag	UNP M1FQT3
A	?	-	LYS	deletion	UNP M1FQT3
B	-11	MET	-	expression tag	UNP M1FQT3
B	-10	GLY	-	expression tag	UNP M1FQT3
B	-9	SER	-	expression tag	UNP M1FQT3
B	-8	SER	-	expression tag	UNP M1FQT3
B	-7	HIS	-	expression tag	UNP M1FQT3
B	-6	HIS	-	expression tag	UNP M1FQT3
B	-5	HIS	-	expression tag	UNP M1FQT3
B	-4	HIS	-	expression tag	UNP M1FQT3
B	-3	HIS	-	expression tag	UNP M1FQT3
B	-2	HIS	-	expression tag	UNP M1FQT3
B	-1	SER	-	expression tag	UNP M1FQT3
B	0	GLN	-	expression tag	UNP M1FQT3
B	1	ASP	-	expression tag	UNP M1FQT3
B	2	PRO	-	expression tag	UNP M1FQT3
B	?	-	LYS	deletion	UNP M1FQT3
C	-11	MET	-	expression tag	UNP M1FQT3
C	-10	GLY	-	expression tag	UNP M1FQT3
C	-9	SER	-	expression tag	UNP M1FQT3
C	-8	SER	-	expression tag	UNP M1FQT3
C	-7	HIS	-	expression tag	UNP M1FQT3
C	-6	HIS	-	expression tag	UNP M1FQT3
C	-5	HIS	-	expression tag	UNP M1FQT3
C	-4	HIS	-	expression tag	UNP M1FQT3
C	-3	HIS	-	expression tag	UNP M1FQT3
C	-2	HIS	-	expression tag	UNP M1FQT3
C	-1	SER	-	expression tag	UNP M1FQT3
C	0	GLN	-	expression tag	UNP M1FQT3
C	1	ASP	-	expression tag	UNP M1FQT3
C	2	PRO	-	expression tag	UNP M1FQT3
C	?	-	LYS	deletion	UNP M1FQT3
D	-11	MET	-	expression tag	UNP M1FQT3
D	-10	GLY	-	expression tag	UNP M1FQT3
D	-9	SER	-	expression tag	UNP M1FQT3
D	-8	SER	-	expression tag	UNP M1FQT3
D	-7	HIS	-	expression tag	UNP M1FQT3
D	-6	HIS	-	expression tag	UNP M1FQT3
D	-5	HIS	-	expression tag	UNP M1FQT3
D	-4	HIS	-	expression tag	UNP M1FQT3
D	-3	HIS	-	expression tag	UNP M1FQT3
D	-2	HIS	-	expression tag	UNP M1FQT3

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-1	SER	-	expression tag	UNP M1FQT3
D	0	GLN	-	expression tag	UNP M1FQT3
D	1	ASP	-	expression tag	UNP M1FQT3
D	2	PRO	-	expression tag	UNP M1FQT3
D	?	-	LYS	deletion	UNP M1FQT3
E	-11	MET	-	expression tag	UNP M1FQT3
E	-10	GLY	-	expression tag	UNP M1FQT3
E	-9	SER	-	expression tag	UNP M1FQT3
E	-8	SER	-	expression tag	UNP M1FQT3
E	-7	HIS	-	expression tag	UNP M1FQT3
E	-6	HIS	-	expression tag	UNP M1FQT3
E	-5	HIS	-	expression tag	UNP M1FQT3
E	-4	HIS	-	expression tag	UNP M1FQT3
E	-3	HIS	-	expression tag	UNP M1FQT3
E	-2	HIS	-	expression tag	UNP M1FQT3
E	-1	SER	-	expression tag	UNP M1FQT3
E	0	GLN	-	expression tag	UNP M1FQT3
E	1	ASP	-	expression tag	UNP M1FQT3
E	2	PRO	-	expression tag	UNP M1FQT3
E	?	-	LYS	deletion	UNP M1FQT3
F	-11	MET	-	expression tag	UNP M1FQT3
F	-10	GLY	-	expression tag	UNP M1FQT3
F	-9	SER	-	expression tag	UNP M1FQT3
F	-8	SER	-	expression tag	UNP M1FQT3
F	-7	HIS	-	expression tag	UNP M1FQT3
F	-6	HIS	-	expression tag	UNP M1FQT3
F	-5	HIS	-	expression tag	UNP M1FQT3
F	-4	HIS	-	expression tag	UNP M1FQT3
F	-3	HIS	-	expression tag	UNP M1FQT3
F	-2	HIS	-	expression tag	UNP M1FQT3
F	-1	SER	-	expression tag	UNP M1FQT3
F	0	GLN	-	expression tag	UNP M1FQT3
F	1	ASP	-	expression tag	UNP M1FQT3
F	2	PRO	-	expression tag	UNP M1FQT3
F	?	-	LYS	deletion	UNP M1FQT3
G	-11	MET	-	expression tag	UNP M1FQT3
G	-10	GLY	-	expression tag	UNP M1FQT3
G	-9	SER	-	expression tag	UNP M1FQT3
G	-8	SER	-	expression tag	UNP M1FQT3
G	-7	HIS	-	expression tag	UNP M1FQT3
G	-6	HIS	-	expression tag	UNP M1FQT3
G	-5	HIS	-	expression tag	UNP M1FQT3

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-4	HIS	-	expression tag	UNP M1FQT3
G	-3	HIS	-	expression tag	UNP M1FQT3
G	-2	HIS	-	expression tag	UNP M1FQT3
G	-1	SER	-	expression tag	UNP M1FQT3
G	0	GLN	-	expression tag	UNP M1FQT3
G	1	ASP	-	expression tag	UNP M1FQT3
G	2	PRO	-	expression tag	UNP M1FQT3
G	?	-	LYS	deletion	UNP M1FQT3
H	-11	MET	-	expression tag	UNP M1FQT3
H	-10	GLY	-	expression tag	UNP M1FQT3
H	-9	SER	-	expression tag	UNP M1FQT3
H	-8	SER	-	expression tag	UNP M1FQT3
H	-7	HIS	-	expression tag	UNP M1FQT3
H	-6	HIS	-	expression tag	UNP M1FQT3
H	-5	HIS	-	expression tag	UNP M1FQT3
H	-4	HIS	-	expression tag	UNP M1FQT3
H	-3	HIS	-	expression tag	UNP M1FQT3
H	-2	HIS	-	expression tag	UNP M1FQT3
H	-1	SER	-	expression tag	UNP M1FQT3
H	0	GLN	-	expression tag	UNP M1FQT3
H	1	ASP	-	expression tag	UNP M1FQT3
H	2	PRO	-	expression tag	UNP M1FQT3
H	?	-	LYS	deletion	UNP M1FQT3

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca).

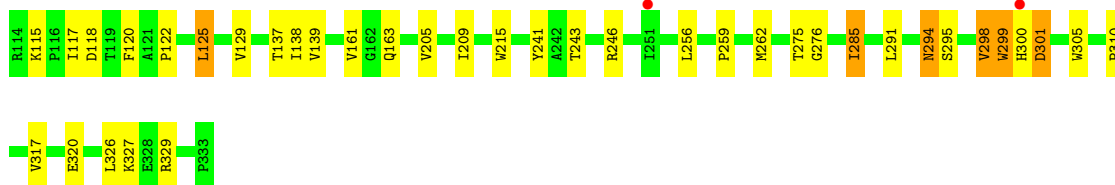
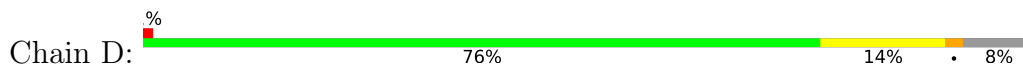
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Ca 1 1	0	0
2	B	1	Total Ca 1 1	0	0
2	C	1	Total Ca 1 1	0	0
2	D	1	Total Ca 1 1	0	0
2	E	1	Total Ca 1 1	0	0
2	F	1	Total Ca 1 1	0	0
2	G	1	Total Ca 1 1	0	0
2	H	1	Total Ca 1 1	0	0

- Molecule 3 is water.

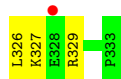
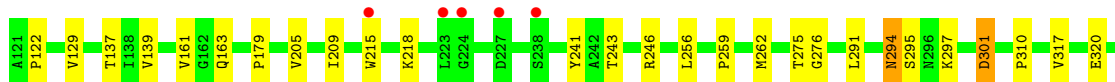
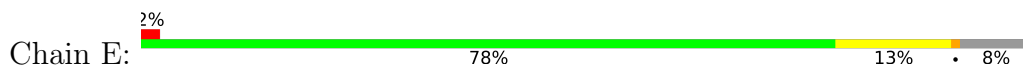
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	4	Total O 4 4	0	0
3	B	4	Total O 4 4	0	0
3	C	2	Total O 2 2	0	0
3	D	2	Total O 2 2	0	0
3	E	3	Total O 3 3	0	0
3	G	1	Total O 1 1	0	0



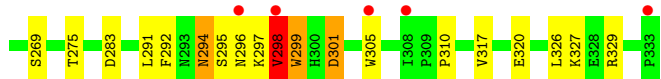
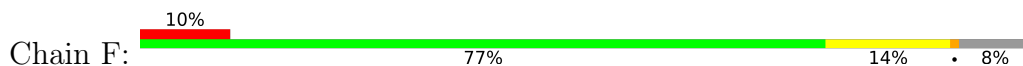
- Molecule 1: Nucleoside N-ribohydrolase 1



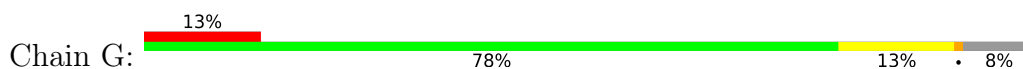
- Molecule 1: Nucleoside N-ribohydrolase 1

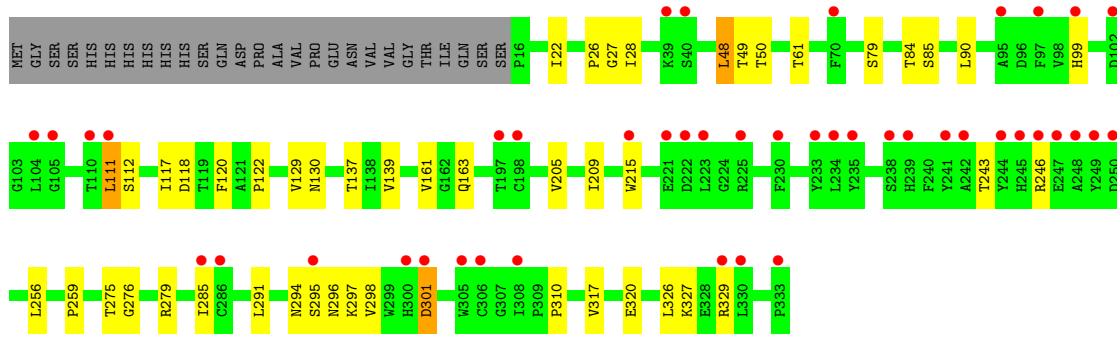


- Molecule 1: Nucleoside N-ribohydrolase 1

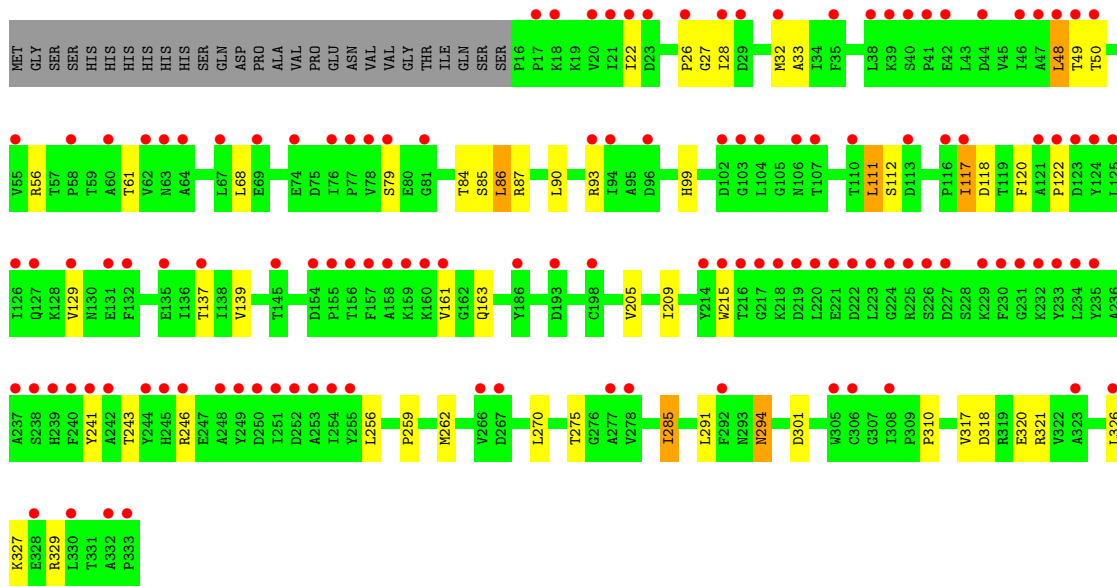
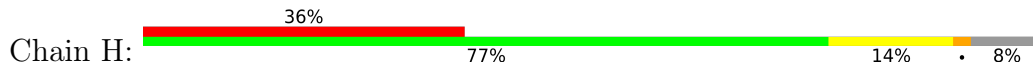


- Molecule 1: Nucleoside N-ribohydrolase 1





• Molecule 1: Nucleoside N-ribohydrolase 1



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	125.85Å 126.08Å 253.64Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	38.68 – 3.35 44.67 – 3.35	Depositor EDS
% Data completeness (in resolution range)	99.6 (38.68-3.35) 99.5 (44.67-3.35)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.13 (at 3.32Å)	Xtrriage
Refinement program	BUSTER 2.10.0	Depositor
R, R_{free}	0.203 , 0.213 0.219 , 0.231	Depositor DCC
R_{free} test set	2928 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	88.6	Xtrriage
Anisotropy	0.085	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 59.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtrriage
Estimated twinning fraction	0.024 for k,h,-l	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	19520	wwPDB-VP
Average B, all atoms (Å ²)	97.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.00% 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.

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:
CA

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	0.38	0/2494	0.69	2/3405 (0.1%)
1	B	0.38	0/2494	0.68	1/3405 (0.0%)
1	C	0.38	0/2494	0.66	0/3405
1	D	0.39	0/2494	0.68	0/3405
1	E	0.38	0/2494	0.68	1/3405 (0.0%)
1	F	0.39	0/2494	0.69	2/3405 (0.1%)
1	G	0.39	0/2494	0.69	2/3405 (0.1%)
1	H	0.39	0/2494	0.68	1/3405 (0.0%)
All	All	0.38	0/19952	0.68	9/27240 (0.0%)

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	F	0	1

There are no bond length outliers.

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	111	LEU	C-N-CA	8.95	144.08	121.70
1	A	111	LEU	C-N-CA	8.93	144.02	121.70
1	H	111	LEU	C-N-CA	8.90	143.96	121.70
1	G	111	LEU	C-N-CA	8.89	143.93	121.70
1	F	298	VAL	C-N-CA	8.66	143.36	121.70
1	B	298	VAL	C-N-CA	8.52	142.99	121.70
1	F	48	LEU	N-CA-CB	5.11	120.61	110.40
1	G	48	LEU	N-CA-CB	5.09	120.58	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	296	ASN	C-N-CA	5.09	134.42	121.70

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	F	283	ASP	Mainchain

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	2437	0	2418	28	0
1	B	2437	0	2418	32	0
1	C	2437	0	2418	34	0
1	D	2437	0	2418	25	0
1	E	2437	0	2418	23	0
1	F	2437	0	2418	28	0
1	G	2437	0	2418	24	0
1	H	2437	0	2418	26	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
3	A	4	0	0	0	0
3	B	4	0	0	1	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
3	E	3	0	0	0	0
3	G	1	0	0	0	0
All	All	19520	0	19344	204	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 5.

All (204) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:292:PHE:CE2	1:B:294:ASN:HB3	1.94	1.02
1:C:43:LEU:HD11	1:C:266:VAL:HG22	1.55	0.88
1:C:130:ASN:HB3	1:G:130:ASN:ND2	1.93	0.83
1:F:298:VAL:HA	1:F:299:TRP:CD1	2.15	0.81
1:F:292:PHE:CE2	1:F:294:ASN:HB3	2.16	0.80
1:B:22:ILE:HG22	1:B:139:VAL:HB	1.66	0.78
1:E:22:ILE:HG22	1:E:139:VAL:HB	1.66	0.78
1:F:22:ILE:HG22	1:F:139:VAL:HB	1.66	0.78
1:H:22:ILE:HG22	1:H:139:VAL:HB	1.66	0.77
1:A:22:ILE:HG22	1:A:139:VAL:HB	1.67	0.77
1:D:22:ILE:HG22	1:D:139:VAL:HB	1.67	0.77
1:B:298:VAL:HA	1:B:299:TRP:CD1	2.19	0.76
1:G:22:ILE:HG22	1:G:139:VAL:HB	1.66	0.76
1:C:22:ILE:HG22	1:C:139:VAL:HB	1.66	0.76
1:F:205:VAL:HG13	1:F:209:ILE:HD11	1.73	0.71
1:D:205:VAL:HG13	1:D:209:ILE:HD11	1.73	0.70
1:G:205:VAL:HG13	1:G:209:ILE:HD11	1.74	0.70
1:H:205:VAL:HG13	1:H:209:ILE:HD11	1.74	0.69
1:A:205:VAL:HG13	1:A:209:ILE:HD11	1.74	0.69
1:B:205:VAL:HG13	1:B:209:ILE:HD11	1.74	0.69
1:A:215:TRP:HZ2	1:A:326:LEU:O	1.77	0.68
1:C:205:VAL:HG13	1:C:209:ILE:HD11	1.75	0.68
1:B:251:ILE:HD11	3:B:501:HOH:O	1.94	0.68
1:D:215:TRP:HZ2	1:D:326:LEU:O	1.77	0.67
1:E:205:VAL:HG13	1:E:209:ILE:HD11	1.75	0.67
1:B:215:TRP:HZ2	1:B:326:LEU:O	1.77	0.67
1:E:215:TRP:HZ2	1:E:326:LEU:O	1.78	0.67
1:F:215:TRP:HZ2	1:F:326:LEU:O	1.77	0.67
1:H:215:TRP:HZ2	1:H:326:LEU:O	1.77	0.67
1:C:215:TRP:HZ2	1:C:326:LEU:O	1.77	0.66
1:E:179:PRO:HD2	1:F:305:TRP:CE3	2.30	0.66
1:G:215:TRP:HZ2	1:G:326:LEU:O	1.78	0.66
1:E:256:LEU:HB3	1:E:259:PRO:HG2	1.81	0.62
1:C:256:LEU:HB3	1:C:259:PRO:HG2	1.81	0.62
1:F:122:PRO:HB2	1:G:90:LEU:HD21	1.81	0.62
1:F:256:LEU:HB3	1:F:259:PRO:HG2	1.81	0.62
1:A:256:LEU:HB3	1:A:259:PRO:HG2	1.82	0.62
1:H:256:LEU:HB3	1:H:259:PRO:HG2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:256:LEU:HB3	1:B:259:PRO:HG2	1.82	0.62
1:G:256:LEU:HB3	1:G:259:PRO:HG2	1.82	0.62
1:D:256:LEU:HB3	1:D:259:PRO:HG2	1.82	0.61
1:H:86:LEU:HD12	1:H:87:ARG:NH1	2.16	0.60
1:C:43:LEU:CD1	1:C:266:VAL:HG22	2.29	0.59
1:D:28:ILE:H	1:D:99:HIS:CD2	2.22	0.57
1:F:292:PHE:CE2	1:F:294:ASN:CB	2.87	0.57
1:E:129:VAL:HG11	1:E:161:VAL:HG12	1.86	0.57
1:B:28:ILE:H	1:B:99:HIS:CD2	2.22	0.57
1:C:28:ILE:H	1:C:99:HIS:CD2	2.22	0.56
1:A:129:VAL:HG11	1:A:161:VAL:HG12	1.87	0.56
1:C:49:THR:HG22	1:C:79:SER:HB3	1.87	0.56
1:E:28:ILE:H	1:E:99:HIS:CD2	2.23	0.56
1:F:28:ILE:H	1:F:99:HIS:CD2	2.23	0.56
1:H:129:VAL:HG11	1:H:161:VAL:HG12	1.87	0.56
1:E:49:THR:HG22	1:E:79:SER:HB3	1.87	0.56
1:A:28:ILE:H	1:A:99:HIS:CD2	2.23	0.56
1:B:292:PHE:HE2	1:B:294:ASN:HB3	1.62	0.56
1:F:298:VAL:HA	1:F:299:TRP:CG	2.40	0.55
1:F:49:THR:HG22	1:F:79:SER:HB3	1.88	0.55
1:G:28:ILE:H	1:G:99:HIS:CD2	2.24	0.55
1:B:122:PRO:HB2	1:C:90:LEU:HD21	1.88	0.55
1:G:49:THR:HG22	1:G:79:SER:HB3	1.87	0.55
1:C:130:ASN:CB	1:G:130:ASN:ND2	2.68	0.55
1:H:28:ILE:H	1:H:99:HIS:CD2	2.24	0.55
1:H:49:THR:HG22	1:H:79:SER:HB3	1.88	0.55
1:A:49:THR:HG22	1:A:79:SER:HB3	1.88	0.55
1:B:49:THR:HG22	1:B:79:SER:HB3	1.88	0.55
1:D:49:THR:HG22	1:D:79:SER:HB3	1.88	0.55
1:B:298:VAL:HA	1:B:299:TRP:CG	2.41	0.54
1:D:28:ILE:H	1:D:99:HIS:HD2	1.56	0.54
1:C:28:ILE:H	1:C:99:HIS:HD2	1.56	0.54
1:E:28:ILE:H	1:E:99:HIS:HD2	1.56	0.53
1:F:28:ILE:H	1:F:99:HIS:HD2	1.57	0.53
1:F:153:CYS:HB2	1:G:90:LEU:HD13	1.89	0.53
1:H:270:LEU:HB3	1:H:318:ASP:OD2	2.09	0.53
1:F:215:TRP:CZ2	1:F:326:LEU:O	2.62	0.52
1:B:28:ILE:H	1:B:99:HIS:HD2	1.56	0.52
1:B:215:TRP:CZ2	1:B:326:LEU:O	2.62	0.52
1:D:22:ILE:HG13	1:D:48:LEU:HG	1.92	0.52
1:A:28:ILE:H	1:A:99:HIS:HD2	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:28:ILE:H	1:G:99:HIS:HD2	1.58	0.52
1:A:22:ILE:HG13	1:A:48:LEU:HG	1.92	0.51
1:E:22:ILE:HG13	1:E:48:LEU:HG	1.92	0.51
1:C:22:ILE:HG13	1:C:48:LEU:HG	1.92	0.51
1:C:130:ASN:HB3	1:G:130:ASN:HD22	1.73	0.51
1:B:22:ILE:HG13	1:B:48:LEU:HG	1.92	0.51
1:A:50:THR:HG21	1:A:61:THR:HA	1.93	0.50
1:H:22:ILE:HG13	1:H:48:LEU:HG	1.92	0.50
1:G:137:THR:HG23	1:G:163:GLN:HB3	1.93	0.50
1:A:215:TRP:CZ2	1:A:326:LEU:O	2.62	0.50
1:C:43:LEU:N	1:C:43:LEU:HD12	2.26	0.50
1:F:137:THR:HG23	1:F:163:GLN:HB3	1.93	0.50
1:D:137:THR:HG23	1:D:163:GLN:HB3	1.92	0.50
1:H:28:ILE:H	1:H:99:HIS:HD2	1.57	0.50
1:B:32:MET:HE2	1:B:259:PRO:HG3	1.94	0.50
1:C:42:GLU:HG2	1:C:43:LEU:HD12	1.92	0.50
1:E:137:THR:HG23	1:E:163:GLN:HB3	1.94	0.50
1:B:50:THR:HG21	1:B:61:THR:HA	1.94	0.50
1:C:50:THR:HG21	1:C:61:THR:HA	1.94	0.50
1:C:137:THR:HG23	1:C:163:GLN:HB3	1.94	0.50
1:C:32:MET:HE2	1:C:259:PRO:HG3	1.93	0.50
1:B:137:THR:HG23	1:B:163:GLN:HB3	1.94	0.49
1:B:243:THR:HG22	1:B:246:ARG:HH22	1.76	0.49
1:C:215:TRP:CZ2	1:C:326:LEU:O	2.62	0.49
1:D:215:TRP:CZ2	1:D:326:LEU:O	2.62	0.49
1:H:137:THR:HG23	1:H:163:GLN:HB3	1.93	0.49
1:A:137:THR:HG23	1:A:163:GLN:HB3	1.93	0.49
1:A:243:THR:HG22	1:A:246:ARG:HH22	1.78	0.49
1:H:50:THR:HG21	1:H:61:THR:HA	1.94	0.49
1:A:32:MET:HE2	1:A:259:PRO:HG3	1.93	0.49
1:A:90:LEU:HD21	1:E:122:PRO:HB2	1.94	0.49
1:G:279:ARG:HB3	1:H:285:ILE:HD13	1.95	0.49
1:D:50:THR:HG21	1:D:61:THR:HA	1.94	0.49
1:E:243:THR:HG22	1:E:246:ARG:HH22	1.77	0.49
1:F:50:THR:HG21	1:F:61:THR:HA	1.94	0.48
1:F:32:MET:HE2	1:F:259:PRO:HG3	1.95	0.48
1:F:243:THR:HG22	1:F:246:ARG:HH22	1.78	0.48
1:D:243:THR:HG22	1:D:246:ARG:HH22	1.77	0.48
1:G:50:THR:HG21	1:G:61:THR:HA	1.94	0.48
1:G:243:THR:HG22	1:G:246:ARG:HH22	1.78	0.48
1:G:215:TRP:CZ2	1:G:326:LEU:O	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:50:THR:HG21	1:E:61:THR:HA	1.94	0.48
1:C:243:THR:HG22	1:C:246:ARG:HH22	1.78	0.48
1:E:215:TRP:CZ2	1:E:326:LEU:O	2.62	0.48
1:H:32:MET:HE2	1:H:259:PRO:HG3	1.94	0.48
1:H:243:THR:HG22	1:H:246:ARG:HH22	1.79	0.47
1:H:215:TRP:CZ2	1:H:326:LEU:O	2.62	0.47
1:A:134:GLY:HA3	1:H:56:ARG:HH21	1.79	0.47
1:C:26:PRO:HA	1:C:27:GLY:HA3	1.78	0.47
1:D:125:LEU:HD22	1:D:138:ILE:HD13	1.98	0.46
1:G:129:VAL:HG21	1:G:161:VAL:HG12	1.98	0.46
1:F:295:SER:C	1:F:297:LYS:H	2.20	0.46
1:D:26:PRO:HA	1:D:27:GLY:HA3	1.78	0.46
1:A:84:THR:HG22	1:A:90:LEU:HA	1.98	0.45
1:C:84:THR:HG22	1:C:90:LEU:HA	1.98	0.45
1:D:129:VAL:HG21	1:D:161:VAL:HG12	1.98	0.45
1:E:179:PRO:HG2	1:F:305:TRP:HB2	1.99	0.45
1:C:129:VAL:HG21	1:C:161:VAL:HG12	1.97	0.45
1:F:84:THR:HG22	1:F:90:LEU:HA	1.98	0.45
1:B:129:VAL:HG21	1:B:161:VAL:HG12	1.99	0.44
1:C:279:ARG:HB3	1:D:285:ILE:HD13	1.99	0.44
1:F:292:PHE:HE2	1:F:294:ASN:HB3	1.77	0.44
1:B:84:THR:HG22	1:B:90:LEU:HA	1.99	0.44
1:E:84:THR:HG22	1:E:90:LEU:HA	1.98	0.44
1:F:129:VAL:HG21	1:F:161:VAL:HG12	1.98	0.44
1:A:48:LEU:HD13	1:A:68:LEU:HD11	1.99	0.44
1:D:48:LEU:HD13	1:D:68:LEU:HD11	1.99	0.44
1:H:48:LEU:HD13	1:H:68:LEU:HD11	1.99	0.44
1:C:48:LEU:HD13	1:C:68:LEU:HD11	2.00	0.44
1:D:84:THR:HG22	1:D:90:LEU:HA	1.99	0.44
1:B:275:THR:HG22	1:B:310:PRO:HB2	1.99	0.44
1:H:84:THR:HG22	1:H:90:LEU:HA	1.99	0.44
1:B:48:LEU:HD13	1:B:68:LEU:HD11	2.00	0.43
1:E:48:LEU:HD13	1:E:68:LEU:HD11	1.99	0.43
1:G:84:THR:HG22	1:G:90:LEU:HA	1.99	0.43
1:B:77:PRO:HB2	1:B:117:ILE:HG12	2.00	0.43
1:B:295:SER:C	1:B:297:LYS:H	2.21	0.43
1:D:275:THR:HG22	1:D:310:PRO:HB2	1.99	0.43
1:H:26:PRO:HA	1:H:27:GLY:HA3	1.79	0.43
1:C:285:ILE:HG22	1:D:305:TRP:CH2	2.54	0.43
1:D:298:VAL:HG13	1:D:299:TRP:H	1.84	0.43
1:E:275:THR:HG22	1:E:310:PRO:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:275:THR:HG22	1:A:310:PRO:HB2	2.00	0.43
1:A:26:PRO:HA	1:A:27:GLY:HA3	1.79	0.43
1:A:77:PRO:HB2	1:A:117:ILE:HG12	2.00	0.43
1:C:120:PHE:CD2	1:C:122:PRO:HD2	2.54	0.43
1:H:275:THR:HG22	1:H:310:PRO:HB2	2.01	0.43
1:F:26:PRO:HA	1:F:27:GLY:HA3	1.78	0.42
1:A:179:PRO:HD2	1:B:305:TRP:CE3	2.54	0.42
1:D:120:PHE:CD2	1:D:122:PRO:HD2	2.54	0.42
1:D:33:ALA:HB1	1:D:262:MET:HE2	2.02	0.42
1:F:275:THR:HG22	1:F:310:PRO:HB2	2.01	0.42
1:B:26:PRO:HA	1:B:27:GLY:HA3	1.79	0.42
1:A:120:PHE:CD2	1:A:122:PRO:HD2	2.54	0.42
1:C:43:LEU:HD11	1:C:266:VAL:CG2	2.37	0.42
1:G:276:GLY:HA2	1:G:295:SER:HB2	2.02	0.42
1:C:275:THR:HG22	1:C:310:PRO:HB2	2.01	0.42
1:G:26:PRO:HA	1:G:27:GLY:HA3	1.80	0.42
1:H:120:PHE:CD2	1:H:122:PRO:HD2	2.55	0.42
1:C:77:PRO:HB2	1:C:117:ILE:HG12	2.01	0.42
1:B:33:ALA:HB1	1:B:262:MET:HE2	2.01	0.41
1:B:120:PHE:CD2	1:B:122:PRO:HD2	2.54	0.41
1:G:120:PHE:CD2	1:G:122:PRO:HD2	2.55	0.41
1:F:120:PHE:CD2	1:F:122:PRO:HD2	2.55	0.41
1:G:275:THR:HG22	1:G:310:PRO:HB2	2.01	0.41
1:E:120:PHE:CD2	1:E:122:PRO:HD2	2.54	0.41
1:E:33:ALA:HB1	1:E:262:MET:HE2	2.02	0.41
1:A:32:MET:HG2	1:A:234:LEU:HD13	2.03	0.41
1:C:276:GLY:HA2	1:C:295:SER:HB2	2.03	0.41
1:E:276:GLY:HA2	1:E:295:SER:HB2	2.02	0.41
1:A:55:VAL:HG11	1:A:103:GLY:HA3	2.02	0.41
1:E:28:ILE:HD13	1:E:241:TYR:HB2	2.03	0.41
1:D:276:GLY:HA2	1:D:295:SER:HB2	2.03	0.41
1:H:33:ALA:HB1	1:H:262:MET:HE2	2.03	0.41
1:A:300:HIS:O	1:A:301:ASP:HB2	2.21	0.40
1:A:298:VAL:HG13	1:B:248:ALA:O	2.21	0.40
1:B:28:ILE:HD13	1:B:241:TYR:HB2	2.03	0.40
1:D:28:ILE:HD13	1:D:241:TYR:HB2	2.03	0.40
1:C:28:ILE:HD13	1:C:241:TYR:HB2	2.03	0.40
1:H:270:LEU:HD13	1:H:321:ARG:HB3	2.04	0.40
1:B:294:ASN:CG	1:B:294:ASN:O	2.59	0.40
1:C:33:ALA:HB1	1:C:262:MET:HE2	2.03	0.40
1:F:149:ALA:HB1	1:G:90:LEU:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:ALA:HB1	1:A:262:MET:HE2	2.02	0.40
1:H:28:ILE:HD13	1:H:241:TYR:HB2	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	316/345 (92%)	289 (92%)	19 (6%)	8 (2%)	5	29
1	B	316/345 (92%)	290 (92%)	19 (6%)	7 (2%)	6	32
1	C	316/345 (92%)	291 (92%)	20 (6%)	5 (2%)	9	38
1	D	316/345 (92%)	286 (90%)	21 (7%)	9 (3%)	5	26
1	E	316/345 (92%)	291 (92%)	19 (6%)	6 (2%)	8	34
1	F	316/345 (92%)	289 (92%)	20 (6%)	7 (2%)	6	32
1	G	316/345 (92%)	291 (92%)	19 (6%)	6 (2%)	8	34
1	H	316/345 (92%)	291 (92%)	20 (6%)	5 (2%)	9	38
All	All	2528/2760 (92%)	2318 (92%)	157 (6%)	53 (2%)	7	32

All (53) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	112	SER
1	A	118	ASP
1	A	297	LYS
1	A	301	ASP
1	B	118	ASP
1	B	298	VAL
1	C	118	ASP
1	C	294	ASN

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Mol	Chain	Res	Type
1	C	301	ASP
1	D	118	ASP
1	D	294	ASN
1	D	301	ASP
1	E	112	SER
1	E	294	ASN
1	E	301	ASP
1	F	118	ASP
1	F	298	VAL
1	F	301	ASP
1	G	112	SER
1	G	118	ASP
1	G	294	ASN
1	G	301	ASP
1	H	112	SER
1	H	118	ASP
1	H	294	ASN
1	A	117	ILE
1	A	294	ASN
1	A	327	LYS
1	B	117	ILE
1	B	299	TRP
1	B	327	LYS
1	C	117	ILE
1	C	327	LYS
1	D	117	ILE
1	D	298	VAL
1	D	300	HIS
1	D	327	LYS
1	E	117	ILE
1	E	118	ASP
1	E	327	LYS
1	F	117	ILE
1	F	299	TRP
1	F	327	LYS
1	G	117	ILE
1	G	327	LYS
1	H	117	ILE
1	H	327	LYS
1	A	295	SER
1	B	300	HIS
1	D	299	TRP

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Mol	Chain	Res	Type
1	D	115	LYS
1	F	296	ASN
1	B	296	ASN

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	259/283 (92%)	249 (96%)	10 (4%)	32	62
1	B	259/283 (92%)	247 (95%)	12 (5%)	27	59
1	C	259/283 (92%)	247 (95%)	12 (5%)	27	59
1	D	259/283 (92%)	247 (95%)	12 (5%)	27	59
1	E	259/283 (92%)	247 (95%)	12 (5%)	27	59
1	F	259/283 (92%)	249 (96%)	10 (4%)	32	62
1	G	259/283 (92%)	247 (95%)	12 (5%)	27	59
1	H	259/283 (92%)	246 (95%)	13 (5%)	24	56
All	All	2072/2264 (92%)	1979 (96%)	93 (4%)	27	59

All (93) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	48	LEU
1	A	85	SER
1	A	111	LEU
1	A	113	ASP
1	A	291	LEU
1	A	296	ASN
1	A	301	ASP
1	A	317	VAL
1	A	320	GLU
1	A	329	ARG
1	B	48	LEU
1	B	85	SER

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Mol	Chain	Res	Type
1	B	111	LEU
1	B	218	LYS
1	B	285	ILE
1	B	291	LEU
1	B	294	ASN
1	B	300	HIS
1	B	301	ASP
1	B	317	VAL
1	B	320	GLU
1	B	329	ARG
1	C	43	LEU
1	C	48	LEU
1	C	85	SER
1	C	93	ARG
1	C	111	LEU
1	C	113	ASP
1	C	291	LEU
1	C	294	ASN
1	C	297	LYS
1	C	301	ASP
1	C	320	GLU
1	C	329	ARG
1	D	48	LEU
1	D	85	SER
1	D	111	LEU
1	D	113	ASP
1	D	125	LEU
1	D	285	ILE
1	D	291	LEU
1	D	294	ASN
1	D	301	ASP
1	D	317	VAL
1	D	320	GLU
1	D	329	ARG
1	E	48	LEU
1	E	85	SER
1	E	111	LEU
1	E	113	ASP
1	E	218	LYS
1	E	291	LEU
1	E	294	ASN
1	E	297	LYS

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Mol	Chain	Res	Type
1	E	301	ASP
1	E	317	VAL
1	E	320	GLU
1	E	329	ARG
1	F	48	LEU
1	F	85	SER
1	F	111	LEU
1	F	269	SER
1	F	291	LEU
1	F	294	ASN
1	F	301	ASP
1	F	317	VAL
1	F	320	GLU
1	F	329	ARG
1	G	48	LEU
1	G	85	SER
1	G	111	LEU
1	G	285	ILE
1	G	291	LEU
1	G	296	ASN
1	G	297	LYS
1	G	298	VAL
1	G	301	ASP
1	G	317	VAL
1	G	320	GLU
1	G	329	ARG
1	H	48	LEU
1	H	85	SER
1	H	86	LEU
1	H	93	ARG
1	H	111	LEU
1	H	117	ILE
1	H	285	ILE
1	H	291	LEU
1	H	294	ASN
1	H	301	ASP
1	H	317	VAL
1	H	320	GLU
1	H	329	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (28) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	99	HIS
1	A	174	ASN
1	A	208	ASN
1	B	99	HIS
1	B	172	GLN
1	B	174	ASN
1	B	208	ASN
1	C	99	HIS
1	C	174	ASN
1	C	208	ASN
1	D	99	HIS
1	D	172	GLN
1	D	174	ASN
1	D	208	ASN
1	E	99	HIS
1	E	172	GLN
1	E	174	ASN
1	E	208	ASN
1	F	99	HIS
1	F	172	GLN
1	F	208	ASN
1	G	99	HIS
1	G	172	GLN
1	G	208	ASN
1	G	294	ASN
1	H	99	HIS
1	H	174	ASN
1	H	208	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](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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	318/345 (92%)	-0.10	1 (0%) 94 95	52, 68, 91, 126	0
1	B	318/345 (92%)	-0.09	1 (0%) 94 95	48, 69, 94, 111	0
1	C	318/345 (92%)	-0.13	1 (0%) 94 95	50, 69, 99, 124	0
1	D	318/345 (92%)	0.14	5 (1%) 72 74	56, 84, 112, 128	0
1	E	318/345 (92%)	0.08	6 (1%) 66 70	51, 79, 113, 140	0
1	F	318/345 (92%)	0.61	33 (10%) 6 7	64, 104, 154, 175	0
1	G	318/345 (92%)	0.60	44 (13%) 2 3	81, 102, 138, 172	0
1	H	318/345 (92%)	1.83	124 (38%) 0 0	111, 173, 210, 224	0
All	All	2544/2760 (92%)	0.37	215 (8%) 10 12	48, 86, 180, 224	0

All (215) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	47	ALA	11.0
1	H	158	ALA	8.7
1	H	224	GLY	6.8
1	H	241	TYR	6.7
1	H	29	ASP	6.5
1	F	244	TYR	6.4
1	H	223	LEU	6.2
1	H	79	SER	6.1
1	H	76	ILE	5.8
1	H	222	ASP	5.7
1	H	48	LEU	5.5
1	H	77	PRO	5.3
1	H	28	ILE	5.2
1	G	248	ALA	5.2
1	H	32	MET	5.2
1	H	220	LEU	5.1

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Mol	Chain	Res	Type	RSRZ
1	H	49	THR	5.1
1	F	99	HIS	5.1
1	F	238	SER	5.0
1	F	249	TYR	5.0
1	H	326	LEU	4.9
1	H	64	ALA	4.8
1	G	245	HIS	4.8
1	H	125	LEU	4.7
1	H	245	HIS	4.6
1	H	216	THR	4.6
1	H	107	THR	4.6
1	H	124	TYR	4.6
1	H	215	TRP	4.5
1	F	245	HIS	4.5
1	H	267	ASP	4.5
1	H	238	SER	4.5
1	H	127	GLN	4.4
1	H	62	VAL	4.3
1	F	250	ASP	4.3
1	H	20	VAL	4.3
1	G	244	TYR	4.3
1	H	218	LYS	4.2
1	H	266	VAL	4.1
1	H	333	PRO	4.1
1	H	96	ASP	4.1
1	H	154	ASP	4.0
1	H	214	TYR	4.0
1	H	157	PHE	4.0
1	F	305	TRP	4.0
1	H	60	ALA	4.0
1	H	102	ASP	4.0
1	F	240	PHE	4.0
1	H	103	GLY	4.0
1	H	156	THR	3.9
1	H	234	LEU	3.9
1	F	241	TYR	3.9
1	G	241	TYR	3.9
1	H	235	TYR	3.8
1	H	113	ASP	3.8
1	H	225	ARG	3.8
1	H	78	VAL	3.8
1	D	92	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
1	H	104	LEU	3.7
1	H	246	ARG	3.7
1	H	93	ARG	3.7
1	H	67	LEU	3.6
1	F	248	ALA	3.6
1	H	129	VAL	3.5
1	H	231	GLY	3.4
1	H	277	ALA	3.4
1	H	330	LEU	3.4
1	G	249	TYR	3.3
1	G	333	PRO	3.3
1	H	230	PHE	3.3
1	H	217	GLY	3.3
1	H	132	PHE	3.3
1	H	219	ASP	3.3
1	H	69	GLU	3.3
1	H	221	GLU	3.2
1	G	250	ASP	3.2
1	H	35	PHE	3.2
1	F	333	PRO	3.2
1	F	251	ILE	3.2
1	H	248	ALA	3.2
1	H	155	PRO	3.2
1	H	137	THR	3.2
1	H	227	ASP	3.2
1	H	38	LEU	3.1
1	H	253	ALA	3.1
1	H	22	ILE	3.1
1	G	300	HIS	3.1
1	H	198	CYS	3.1
1	H	232	LYS	3.0
1	F	215	TRP	3.0
1	H	328	GLU	3.0
1	H	242	ALA	2.9
1	H	251	ILE	2.9
1	H	233	TYR	2.9
1	G	301	ASP	2.9
1	F	247	GLU	2.9
1	H	159	LYS	2.9
1	H	308	ILE	2.8
1	G	286	CYS	2.8
1	H	135	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
1	G	102	ASP	2.8
1	H	63	ASN	2.8
1	H	254	ILE	2.8
1	H	252	ASP	2.8
1	F	252	ASP	2.8
1	G	105	GLY	2.8
1	H	131	GLU	2.8
1	G	222	ASP	2.8
1	C	294	ASN	2.7
1	F	216	THR	2.7
1	H	255	TYR	2.7
1	G	247	GLU	2.7
1	H	26	PRO	2.7
1	F	242	ALA	2.7
1	H	39	LYS	2.7
1	H	46	ILE	2.7
1	H	332	ALA	2.7
1	H	122	PRO	2.7
1	H	110	THR	2.7
1	F	98	VAL	2.7
1	F	71	ALA	2.7
1	H	21	ILE	2.7
1	H	106	ASN	2.7
1	G	215	TRP	2.6
1	H	123	ASP	2.6
1	F	253	ALA	2.6
1	F	234	LEU	2.6
1	E	227	ASP	2.6
1	F	296	ASN	2.6
1	G	40	SER	2.5
1	E	215	TRP	2.5
1	H	244	TYR	2.5
1	G	223	LEU	2.5
1	H	117	ILE	2.5
1	F	95	ALA	2.5
1	H	41	PRO	2.5
1	H	121	ALA	2.5
1	G	97	PHE	2.5
1	H	249	TYR	2.5
1	H	23	ASP	2.5
1	D	84	THR	2.5
1	G	225	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
1	F	223	LEU	2.4
1	G	235	TYR	2.4
1	D	251	ILE	2.4
1	G	221	GLU	2.4
1	H	226	SER	2.4
1	G	305	TRP	2.4
1	F	222	ASP	2.4
1	G	111	LEU	2.4
1	H	145	THR	2.4
1	D	300	HIS	2.4
1	H	193	ASP	2.4
1	G	285	ILE	2.4
1	G	329	ARG	2.3
1	G	239	HIS	2.3
1	H	305	TRP	2.3
1	H	44	ASP	2.3
1	G	238	SER	2.3
1	H	40	SER	2.3
1	G	70	PHE	2.3
1	G	99	HIS	2.3
1	E	238	SER	2.3
1	D	83	ARG	2.3
1	H	229	LYS	2.3
1	H	237	ALA	2.3
1	H	186	TYR	2.3
1	H	18	LYS	2.3
1	H	81	GLY	2.3
1	G	246	ARG	2.3
1	F	298	VAL	2.3
1	G	230	PHE	2.2
1	H	42	GLU	2.2
1	G	95	ALA	2.2
1	G	197	THR	2.2
1	F	246	ARG	2.2
1	H	292	PHE	2.2
1	H	50	THR	2.2
1	H	58	PRO	2.2
1	F	110	THR	2.2
1	B	298	VAL	2.2
1	H	161	VAL	2.2
1	G	104	LEU	2.2
1	G	242	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
1	H	250	ASP	2.2
1	H	74	GLU	2.2
1	E	224	GLY	2.2
1	H	160	LYS	2.2
1	H	240	PHE	2.1
1	G	306	CYS	2.1
1	F	196	PHE	2.1
1	E	223	LEU	2.1
1	H	239	HIS	2.1
1	G	234	LEU	2.1
1	H	17	PRO	2.1
1	F	308	ILE	2.1
1	G	233	TYR	2.1
1	G	308	ILE	2.1
1	G	39	LYS	2.1
1	H	306	CYS	2.1
1	E	328	GLU	2.0
1	A	294	ASN	2.0
1	F	148	ALA	2.0
1	H	55	VAL	2.0
1	H	278	VAL	2.0
1	G	198	CYS	2.0
1	F	105	GLY	2.0
1	G	330	LEU	2.0
1	H	94	ILE	2.0
1	H	116	PRO	2.0
1	G	295	SER	2.0
1	H	126	ILE	2.0
1	H	323	ALA	2.0
1	G	110	THR	2.0
1	F	159	LYS	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
2	CA	H	400	1/1	0.68	0.10	146,146,146,146	0
2	CA	E	400	1/1	0.91	0.24	77,77,77,77	0
2	CA	D	400	1/1	0.94	0.27	64,64,64,64	0
2	CA	C	400	1/1	0.95	0.24	62,62,62,62	0
2	CA	G	400	1/1	0.95	0.13	86,86,86,86	0
2	CA	A	400	1/1	0.95	0.20	62,62,62,62	0
2	CA	F	400	1/1	0.96	0.09	85,85,85,85	0
2	CA	B	400	1/1	0.97	0.32	65,65,65,65	0

6.5 Other polymers [i](#)

There are no such residues in this entry.