



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 17, 2026 – 11:55 PM UTC

PDB ID : 6ED7 / pdb_00006ed7
Title : Crystal structure of 7,8-diaminopelargonic acid synthase bound to inhibitor MAC13772
Authors : Brown, C.M.; Zlitni, S.; Chan, J.; Brown, E.D.; Junop, M.S.
Deposited on : 2018-08-08
Resolution : 2.43 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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

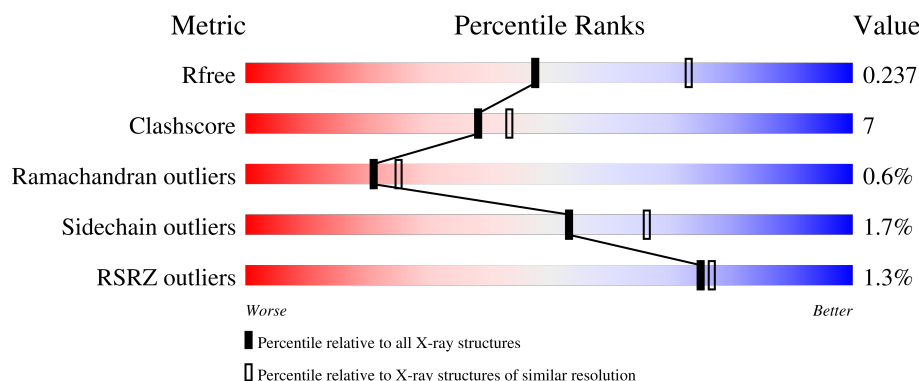
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

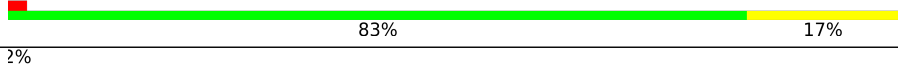
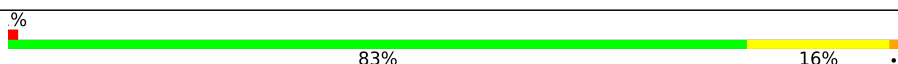
The reported resolution of this entry is 2.43 Å.

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}	180053	2340 (2.46-2.42)
Clashscore	190562	2400 (2.46-2.42)
Ramachandran outliers	187476	2379 (2.46-2.42)
Sidechain outliers	187428	2379 (2.46-2.42)
RSRZ outliers	180081	2340 (2.46-2.42)

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	429	
1	B	429	
1	C	429	
1	D	429	
1	E	429	

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Mol	Chain	Length	Quality of chain
1	F	429	% 84% 15%
1	G	429	2% 82% 17%
1	H	429	% 82% 17%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 27268 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.

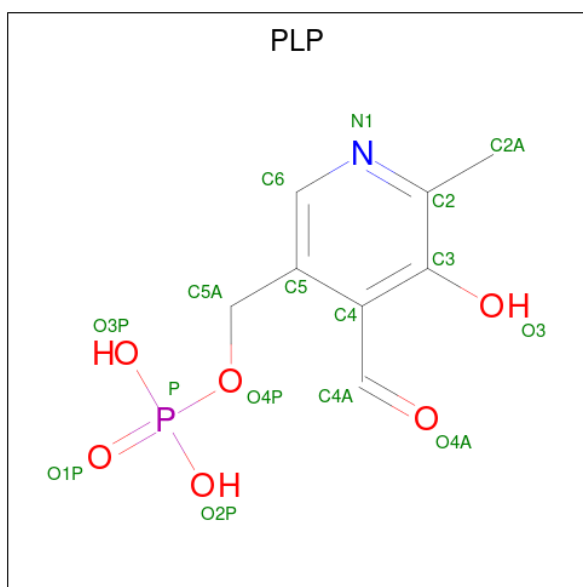
- Molecule 1 is a protein called 7,8-diamino-pelargonic acid aminotransferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	429	Total	C	N	O	S	0	0	0
			3272	2078	567	597	30			
1	B	429	Total	C	N	O	S	0	0	0
			3290	2088	574	597	31			
1	C	429	Total	C	N	O	S	0	0	0
			3236	2059	557	590	30			
1	D	429	Total	C	N	O	S	0	0	0
			3283	2084	572	596	31			
1	E	429	Total	C	N	O	S	0	0	0
			3254	2069	562	593	30			
1	F	429	Total	C	N	O	S	0	0	0
			3261	2071	567	593	30			
1	G	429	Total	C	N	O	S	0	0	0
			3218	2046	559	582	31			
1	H	429	Total	C	N	O	S	0	0	0
			3261	2072	565	593	31			

There are 8 discrepancies between the modelled and reference sequences:

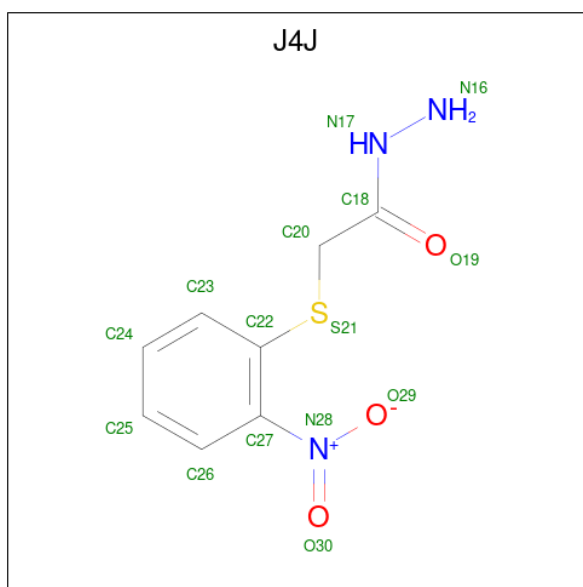
Chain	Residue	Modelled	Actual	Comment	Reference
A	1	ALA	-	expression tag	UNP A0A0A0GYM0
B	1	ALA	-	expression tag	UNP A0A0A0GYM0
C	1	ALA	-	expression tag	UNP A0A0A0GYM0
D	1	ALA	-	expression tag	UNP A0A0A0GYM0
E	1	ALA	-	expression tag	UNP A0A0A0GYM0
F	1	ALA	-	expression tag	UNP A0A0A0GYM0
G	1	ALA	-	expression tag	UNP A0A0A0GYM0
H	1	ALA	-	expression tag	UNP A0A0A0GYM0

- Molecule 2 is PYRIDOXAL-5'-PHOSPHATE (CCD ID: PLP) (formula: C₈H₁₀NO₆P).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	B	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	C	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	D	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	E	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	F	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	G	1	Total	C	N	O	P	0	0
			15	8	1	5	1		
2	H	1	Total	C	N	O	P	0	0
			15	8	1	5	1		

- Molecule 3 is 2-[(2-nitrophenyl)sulfanyl]acetohydrazide (CCD ID: J4J) (formula: $C_8H_9N_3O_3S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	A	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	B	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	B	1	Total	C	N	O	S	0	0
			14	8	3	2	1		
3	C	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	C	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	D	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	D	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	E	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	E	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	F	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	F	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	G	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	G	1	Total	C	N	O	S	0	0
			15	8	3	3	1		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	H	1	Total	C	N	O	S	0	0
			15	8	3	3	1		
3	H	1	Total	C	N	O	S	0	0
			15	8	3	3	1		

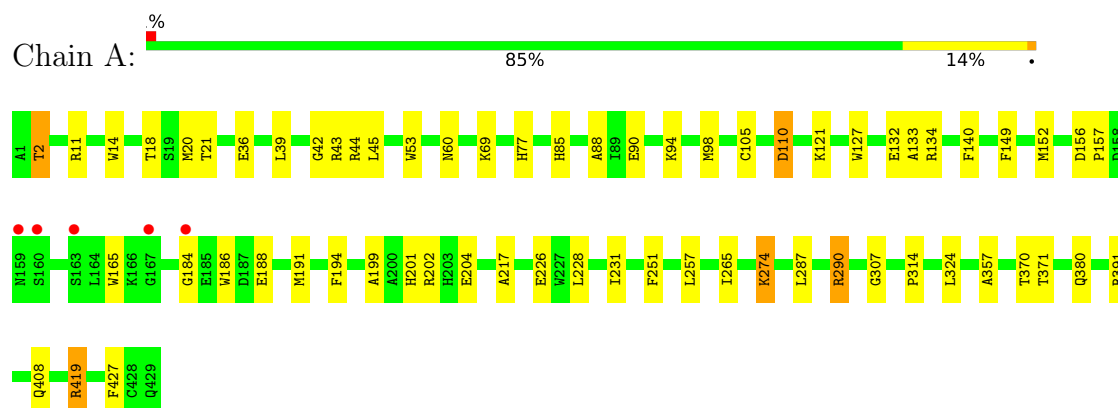
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	117	Total	O	0	0
			117	117		
4	B	145	Total	O	0	0
			145	145		
4	C	100	Total	O	0	0
			100	100		
4	D	127	Total	O	0	0
			127	127		
4	E	102	Total	O	0	0
			102	102		
4	F	97	Total	O	0	0
			97	97		
4	G	64	Total	O	0	0
			64	64		
4	H	82	Total	O	0	0
			82	82		

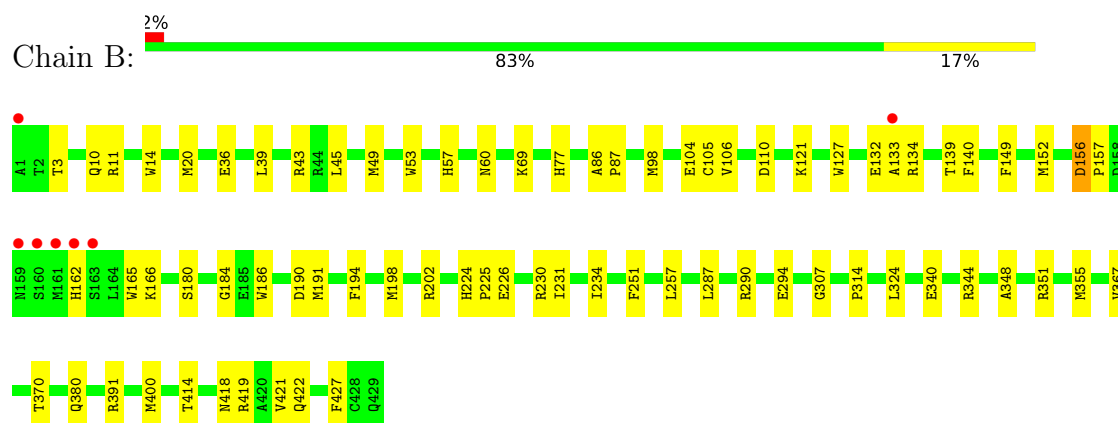
3 Residue-property plots [i](#)

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.

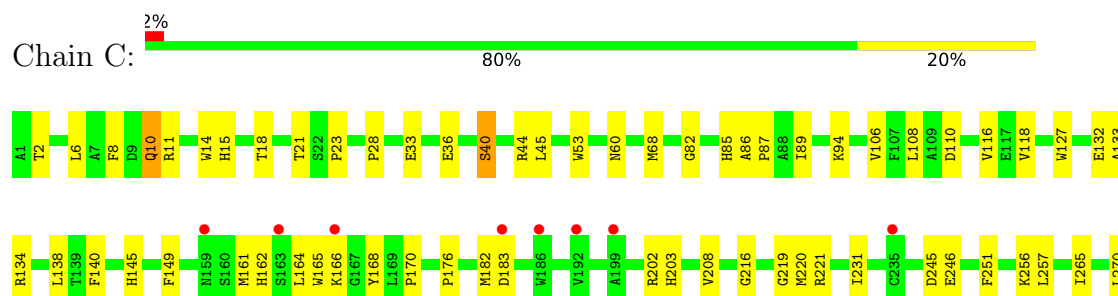
- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase



- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase

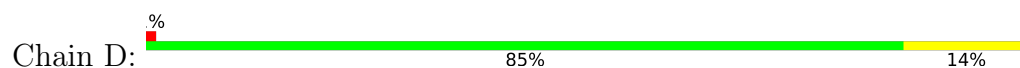


- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase

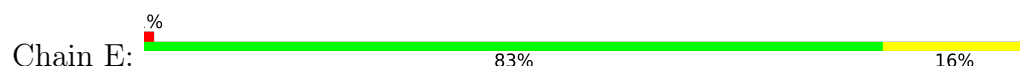




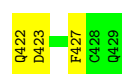
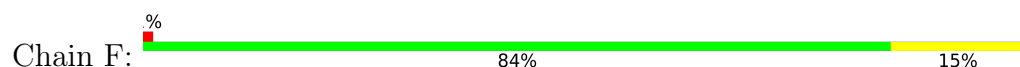
- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase



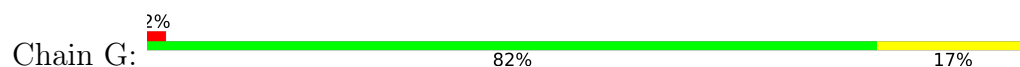
- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase

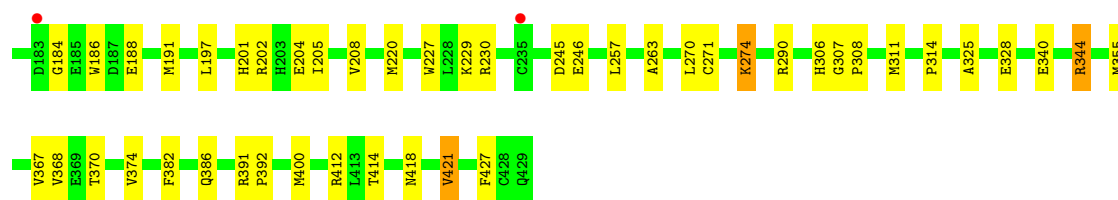


- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase

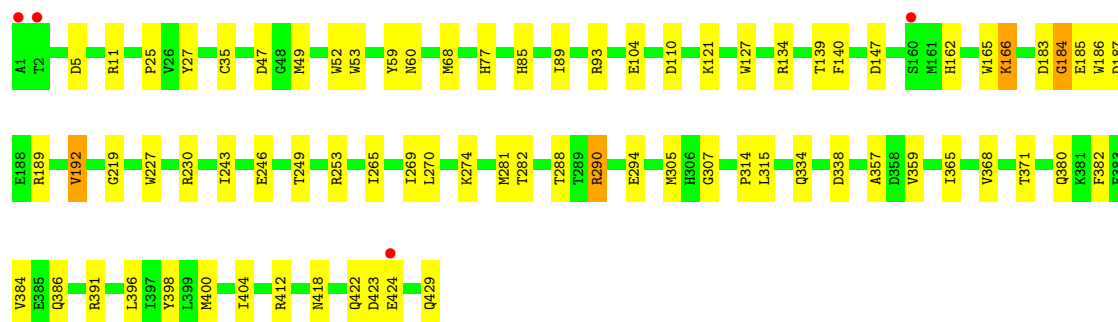
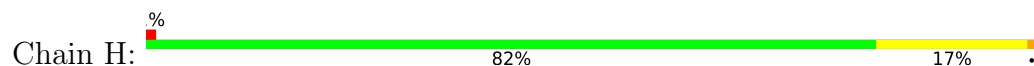


- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase





- Molecule 1: 7,8-diamino-pelargonic acid aminotransferase



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	122.43Å 111.57Å 136.12Å 90.00° 92.08° 90.00°	Depositor
Resolution (Å)	42.79 – 2.43 42.79 – 2.43	Depositor EDS
% Data completeness (in resolution range)	75.6 (42.79-2.43) 75.9 (42.79-2.43)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.64 (at 2.42Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.177 , 0.237 0.177 , 0.237	Depositor DCC
R_{free} test set	5308 reflections (3.83%)	wwPDB-VP
Wilson B-factor (Å ²)	32.8	Xtriage
Anisotropy	0.718	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 29.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.015 for h,-k,-l	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	27268	wwPDB-VP
Average B, all atoms (Å ²)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.34% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: J4J, PLP

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	0.64	0/3351	0.89	1/4558 (0.0%)
1	B	0.66	0/3369	0.92	3/4579 (0.1%)
1	C	0.57	0/3315	0.87	0/4516
1	D	0.59	0/3362	0.89	3/4570 (0.1%)
1	E	0.58	0/3333	0.90	3/4536 (0.1%)
1	F	0.57	0/3340	0.87	1/4543 (0.0%)
1	G	0.50	0/3296	0.89	1/4487 (0.0%)
1	H	0.52	0/3340	0.90	5/4542 (0.1%)
All	All	0.58	0/26706	0.89	17/36331 (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	A	0	1
1	B	0	1
1	G	0	1
1	H	0	1
All	All	0	4

There are no bond length outliers.

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	182	MET	N-CA-C	-6.53	104.89	112.92
1	H	185	GLU	N-CA-C	6.51	119.42	110.24
1	D	183	ASP	N-CA-C	-6.48	105.00	113.17
1	H	184	GLY	N-CA-C	6.36	120.34	112.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	156	ASP	CA-C-N	5.98	126.09	119.87
1	B	156	ASP	C-N-CA	5.98	126.09	119.87
1	H	183	ASP	CA-C-N	5.95	126.00	120.34
1	H	183	ASP	C-N-CA	5.95	126.00	120.34
1	A	2	THR	N-CA-C	-5.53	106.03	112.89
1	B	367	VAL	N-CA-C	5.39	115.63	107.75
1	H	183	ASP	N-CA-C	-5.37	106.77	113.38
1	G	344	ARG	NE-CZ-NH2	5.37	124.03	119.20
1	E	101	GLN	CA-C-N	-5.28	114.22	119.56
1	E	101	GLN	C-N-CA	-5.28	114.22	119.56
1	F	3	THR	N-CA-C	-5.28	106.80	113.18
1	D	13	ILE	N-CA-C	5.24	115.39	107.80
1	D	54	ALA	N-CA-C	5.16	116.99	111.36

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	184	GLY	Peptide
1	B	184	GLY	Peptide
1	G	184	GLY	Peptide
1	H	184	GLY	Peptide

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	3272	0	3190	45	0
1	B	3290	0	3222	46	0
1	C	3236	0	3125	58	0
1	D	3283	0	3213	43	0
1	E	3254	0	3160	51	0
1	F	3261	0	3163	51	0
1	G	3218	0	3113	56	0
1	H	3261	0	3174	48	0
2	A	15	0	7	1	0
2	B	15	0	6	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	15	0	6	0	0
2	D	15	0	6	1	0
2	E	15	0	6	2	0
2	F	15	0	7	0	0
2	G	15	0	6	0	0
2	H	15	0	7	0	0
3	A	30	0	0	3	0
3	B	29	0	0	0	0
3	C	30	0	0	1	0
3	D	30	0	0	2	0
3	E	30	0	0	3	0
3	F	30	0	0	2	0
3	G	30	0	0	2	0
3	H	30	0	0	3	0
4	A	117	0	0	7	0
4	B	145	0	0	2	0
4	C	100	0	0	10	0
4	D	127	0	0	4	0
4	E	102	0	0	4	0
4	F	97	0	0	4	0
4	G	64	0	0	2	0
4	H	82	0	0	3	0
All	All	27268	0	25411	359	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 7.

All (359) 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:G:340:GLU:HG2	1:G:344:ARG:HH12	1.26	0.97
1:A:11:ARG:O	1:B:290:ARG:NH1	2.03	0.91
1:C:161:MET:O	4:C:701:HOH:O	2.02	0.77
1:C:127:TRP:CD2	1:C:134:ARG:HD2	2.22	0.74
1:H:391:ARG:HH21	3:H:603:J4J:C25	2.00	0.73
1:G:340:GLU:HG2	1:G:344:ARG:NH1	2.04	0.72
1:C:391:ARG:HH21	3:C:603:J4J:C25	2.04	0.70
1:E:391:ARG:HH21	3:E:603:J4J:C25	2.05	0.69
1:A:391:ARG:HE	3:A:603:J4J:C25	2.05	0.69
1:G:134:ARG:NH1	1:G:202:ARG:O	2.25	0.69
1:C:256:LYS:O	4:C:702:HOH:O	2.12	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:391:ARG:HH21	3:G:602:J4J:C25	2.06	0.67
2:A:601:PLP:O1P	4:A:701:HOH:O	2.13	0.67
1:E:127:TRP:CD2	1:E:134:ARG:HD2	2.30	0.66
1:D:162:HIS:O	1:D:166:LYS:N	2.27	0.65
1:C:140:PHE:HZ	1:C:231:ILE:HD11	1.62	0.65
1:F:127:TRP:CD2	1:F:134:ARG:HD2	2.32	0.65
1:G:53:TRP:HB2	1:G:274:LYS:HD3	1.78	0.64
1:E:162:HIS:O	1:E:166:LYS:N	2.28	0.64
1:F:162:HIS:O	1:F:166:LYS:N	2.30	0.64
1:B:162:HIS:O	1:B:166:LYS:N	2.31	0.63
1:D:187:ASP:OD2	1:D:189:ARG:NH2	2.29	0.63
1:G:49:MET:HE2	1:G:391:ARG:HB3	1.80	0.62
1:D:77:HIS:HA	1:D:314:PRO:HD2	1.81	0.62
1:F:391:ARG:HE	3:F:603:J4J:C25	2.13	0.62
1:A:127:TRP:CD2	1:A:134:ARG:HD2	2.35	0.61
1:D:391:ARG:HH21	3:D:603:J4J:C25	2.12	0.61
1:E:85:HIS:CE1	1:E:314:PRO:HG3	2.35	0.61
1:A:140:PHE:HZ	1:A:231:ILE:HD11	1.64	0.61
1:G:414:THR:O	1:G:418:ASN:ND2	2.34	0.61
1:E:53:TRP:CZ2	1:E:400:MET:HE1	2.35	0.61
1:G:246:GLU:HG3	1:G:270:LEU:HD11	1.83	0.60
1:D:27:TYR:CE2	1:D:384:VAL:HG21	2.36	0.60
1:G:355:MET:HE2	1:G:427:PHE:CG	2.36	0.60
1:H:53:TRP:CD1	1:H:274:LYS:HZ3	2.18	0.60
1:G:340:GLU:CG	1:G:344:ARG:HH12	2.08	0.60
1:G:344:ARG:HG3	1:G:344:ARG:HH11	1.66	0.60
1:C:140:PHE:CZ	1:C:231:ILE:HD11	2.37	0.59
1:E:294:GLU:HG2	1:F:21:THR:HG22	1.82	0.59
1:A:53:TRP:CD1	1:A:274:LYS:HZ3	2.20	0.59
1:A:290:ARG:NH2	1:B:11:ARG:O	2.20	0.59
1:A:201:HIS:ND1	1:A:204:GLU:OE2	2.30	0.59
1:D:196:ARG:NH2	4:D:707:HOH:O	2.36	0.59
1:E:306:HIS:NE2	4:E:704:HOH:O	2.27	0.59
1:A:42:GLY:O	4:A:702:HOH:O	2.16	0.59
1:C:246:GLU:HG3	1:C:270:LEU:HD11	1.84	0.58
1:C:21:THR:HG22	1:D:294:GLU:HG2	1.85	0.58
1:E:184:GLY:HA2	1:E:185:GLU:CB	2.32	0.58
1:A:357:ALA:HB2	1:A:371:THR:HG22	1.86	0.58
1:F:53:TRP:HB2	1:F:274:LYS:HD3	1.84	0.58
1:H:380:GLN:OE1	1:H:391:ARG:HD2	2.04	0.58
1:C:89:ILE:HD13	1:D:5:ASP:HB3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:104:GLU:OE1	1:H:290:ARG:NH2	2.36	0.58
1:B:414:THR:O	1:B:418:ASN:ND2	2.37	0.57
1:H:189:ARG:O	1:H:192:VAL:HG13	2.05	0.57
1:E:112:GLY:HA3	2:E:601:PLP:H5A2	1.86	0.57
1:H:382:PHE:O	1:H:386:GLN:HG2	2.04	0.57
1:F:98:MET:HE3	1:F:257:LEU:HD21	1.86	0.57
1:G:21:THR:HG22	1:H:294:GLU:HG2	1.87	0.56
1:H:246:GLU:HG3	1:H:270:LEU:HD11	1.88	0.56
1:C:380:GLN:OE1	1:C:391:ARG:HD2	2.07	0.55
1:G:53:TRP:CZ2	1:G:400:MET:HE1	2.42	0.55
1:H:25:PRO:HG2	4:H:756:HOH:O	2.07	0.55
1:H:162:HIS:O	1:H:166:LYS:N	2.39	0.55
1:E:73:ASP:OD2	4:E:701:HOH:O	2.18	0.55
1:G:98:MET:HE3	1:G:257:LEU:HD21	1.88	0.55
1:C:361:VAL:HG22	1:C:366:GLY:HA2	1.89	0.55
1:C:386:GLN:NE2	4:C:707:HOH:O	2.39	0.55
1:G:344:ARG:NH1	1:G:344:ARG:HG3	2.22	0.55
1:G:53:TRP:CD1	1:G:274:LYS:HZ3	2.25	0.55
1:G:229:LYS:HG3	1:G:263:ALA:HB1	1.89	0.55
1:H:412:ARG:NH2	4:H:709:HOH:O	2.40	0.55
1:A:380:GLN:OE1	1:A:391:ARG:HD2	2.06	0.54
1:B:355:MET:HE2	1:B:427:PHE:CG	2.43	0.54
1:C:68:MET:HE1	1:D:76:SER:OG	2.08	0.54
1:A:110:ASP:OD2	1:A:110:ASP:N	2.41	0.53
1:F:246:GLU:HG3	1:F:270:LEU:HD11	1.88	0.53
1:A:98:MET:HE3	1:A:257:LEU:HD21	1.90	0.53
1:A:44:ARG:NH1	4:A:708:HOH:O	2.40	0.53
1:C:176:PRO:O	4:C:703:HOH:O	2.18	0.53
1:D:139:THR:OG1	1:D:140:PHE:N	2.41	0.53
1:C:138:LEU:HB3	1:C:208:VAL:HG22	1.90	0.53
1:C:11:ARG:O	1:D:290:ARG:NH1	2.28	0.53
1:E:53:TRP:CE2	1:E:400:MET:HE1	2.43	0.53
1:C:8:PHE:CZ	1:D:93:ARG:HA	2.44	0.53
1:E:53:TRP:HB2	1:E:274:LYS:HD3	1.91	0.53
1:B:162:HIS:HA	1:B:165:TRP:HD1	1.73	0.53
1:E:128:GLN:NE2	1:F:164:LEU:O	2.41	0.52
1:F:53:TRP:CD1	1:F:274:LYS:HZ3	2.27	0.52
1:C:168:TYR:O	4:C:704:HOH:O	2.18	0.52
1:C:162:HIS:O	1:C:166:LYS:N	2.37	0.52
1:H:139:THR:OG1	1:H:140:PHE:N	2.43	0.52
1:A:105:CYS:SG	1:B:20:MET:HE2	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:220:MET:HG2	1:F:396:LEU:HD13	1.92	0.52
1:A:85:HIS:CD2	1:A:88:ALA:H	2.27	0.52
1:E:89:ILE:HD13	1:F:5:ASP:HB3	1.92	0.52
1:A:85:HIS:HD2	1:A:88:ALA:H	1.56	0.52
1:A:391:ARG:HH21	3:A:603:J4J:C25	2.22	0.52
1:E:140:PHE:HZ	1:E:231:ILE:HD11	1.74	0.52
1:C:85:HIS:CE1	1:C:314:PRO:HG3	2.46	0.51
1:A:228:LEU:HB3	1:A:265:ILE:HG12	1.93	0.51
1:B:39:LEU:HD12	1:B:43:ARG:HD2	1.92	0.51
1:B:57:HIS:O	4:B:701:HOH:O	2.19	0.51
1:A:20:MET:HE2	1:B:105:CYS:SG	2.50	0.51
1:B:127:TRP:CD2	1:B:134:ARG:HD2	2.46	0.51
1:E:10:GLN:NE2	4:E:703:HOH:O	2.24	0.51
1:C:290:ARG:NH2	1:D:11:ARG:O	2.36	0.51
1:B:53:TRP:CZ2	1:B:400:MET:HE1	2.46	0.51
1:A:217:ALA:HB1	3:A:602:J4J:C25	2.41	0.50
1:F:395:LYS:NZ	4:F:710:HOH:O	2.44	0.50
1:G:220:MET:HB3	1:G:367:VAL:HG21	1.93	0.50
1:C:355:MET:HE2	1:C:427:PHE:CG	2.46	0.50
1:E:211:GLU:OE1	4:E:702:HOH:O	2.20	0.50
1:G:188:GLU:CD	1:G:230:ARG:HH12	2.18	0.50
1:C:10:GLN:HG3	1:C:23:PRO:HG2	1.94	0.50
1:B:104:GLU:OE1	1:B:290:ARG:NH2	2.44	0.50
1:H:187:ASP:OD2	1:H:189:ARG:NH2	2.41	0.50
1:F:140:PHE:CZ	1:F:231:ILE:HD11	2.47	0.49
1:B:419:ARG:O	1:B:422:GLN:HG2	2.12	0.49
1:C:170:PRO:HD3	4:C:704:HOH:O	2.12	0.49
1:B:77:HIS:HA	1:B:314:PRO:HD2	1.95	0.49
1:A:419:ARG:NH1	4:A:714:HOH:O	2.45	0.49
1:G:89:ILE:HD13	1:H:5:ASP:HB3	1.93	0.49
1:H:27:TYR:CE2	1:H:384:VAL:HG21	2.47	0.49
1:C:219:GLY:HA2	1:C:396:LEU:HD11	1.95	0.49
1:H:49:MET:HE1	1:H:398:TYR:CZ	2.48	0.49
1:E:149:PHE:CZ	1:F:121:LYS:HG3	2.47	0.49
1:F:140:PHE:HZ	1:F:231:ILE:HD11	1.76	0.49
1:F:355:MET:HE2	1:F:427:PHE:CG	2.47	0.49
1:G:77:HIS:HA	1:G:314:PRO:HD2	1.95	0.49
1:G:245:ASP:HA	1:G:271:CYS:HB2	1.95	0.49
1:A:191:MET:HE1	1:A:194:PHE:HD2	1.77	0.49
1:H:418:ASN:O	1:H:422:GLN:HG2	2.13	0.49
1:H:219:GLY:HA2	1:H:396:LEU:HD11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:THR:HG22	1:B:294:GLU:HG2	1.95	0.48
1:G:110:ASP:HB3	1:H:282:THR:HG21	1.95	0.48
1:E:85:HIS:CD2	1:E:88:ALA:H	2.32	0.48
1:E:85:HIS:HD2	1:E:88:ALA:H	1.61	0.48
1:F:217:ALA:HB1	3:F:602:J4J:C25	2.44	0.48
2:D:601:PLP:O3P	4:D:701:HOH:O	2.20	0.48
1:A:165:TRP:CH2	1:B:121:LYS:HG3	2.48	0.48
1:E:21:THR:HG22	1:F:294:GLU:HG2	1.95	0.48
1:A:85:HIS:HE1	4:A:732:HOH:O	1.96	0.48
1:G:306:HIS:HD2	1:G:308:PRO:HD3	1.78	0.48
1:F:85:HIS:CE1	1:F:314:PRO:HG3	2.49	0.48
1:G:8:PHE:CZ	1:H:93:ARG:HA	2.48	0.48
4:C:704:HOH:O	1:D:170:PRO:HD3	2.14	0.48
1:F:370:THR:HG21	1:F:427:PHE:CE1	2.49	0.48
1:D:184:GLY:O	1:D:224:HIS:HD2	1.96	0.47
1:B:348:ALA:HA	1:B:351:ARG:NH1	2.29	0.47
1:G:36:GLU:HA	1:G:45:LEU:O	2.14	0.47
1:D:355:MET:HE2	1:D:427:PHE:CG	2.48	0.47
1:G:149:PHE:CZ	1:H:121:LYS:HG3	2.49	0.47
1:A:53:TRP:HB2	1:A:274:LYS:HD3	1.96	0.47
1:B:86:ALA:HB3	1:B:87:PRO:HD3	1.96	0.47
1:E:20:MET:HE2	1:F:105:CYS:SG	2.55	0.47
1:G:290:ARG:NH1	1:H:11:ARG:O	2.47	0.47
1:A:69:LYS:HG2	1:B:69:LYS:HG2	1.97	0.47
1:B:139:THR:OG1	1:B:140:PHE:N	2.48	0.47
1:F:418:ASN:O	1:F:422:GLN:HG2	2.15	0.47
1:G:127:TRP:CD2	1:G:134:ARG:HD2	2.50	0.47
1:C:164:LEU:N	4:C:701:HOH:O	2.44	0.46
1:F:132:GLU:O	1:F:134:ARG:N	2.40	0.46
1:G:274:LYS:HZ1	3:G:603:J4J:C18	2.27	0.46
1:B:370:THR:HG21	1:B:427:PHE:CE1	2.49	0.46
1:F:312:GLY:O	1:F:313:ASN:C	2.58	0.46
1:B:198:MET:O	1:B:202:ARG:N	2.49	0.46
1:E:36:GLU:HA	1:E:45:LEU:O	2.15	0.46
1:A:251:PHE:CE1	1:A:324:LEU:HD21	2.51	0.46
1:G:127:TRP:CE2	1:G:134:ARG:HD2	2.50	0.46
1:E:139:THR:OG1	1:E:140:PHE:N	2.49	0.46
1:C:127:TRP:CE2	1:C:134:ARG:HD2	2.50	0.46
1:D:186:TRP:CE3	1:D:226:GLU:HB3	2.51	0.46
1:H:147:ASP:OD2	3:H:603:J4J:N16	2.48	0.46
1:B:49:MET:HE2	1:B:391:ARG:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:138:LEU:HB3	1:G:208:VAL:HG22	1.97	0.46
1:F:53:TRP:CE2	1:F:400:MET:HE1	2.51	0.45
1:E:400:MET:HE2	1:E:400:MET:HB3	1.68	0.45
1:F:2:THR:HG22	1:F:3:THR:H	1.81	0.45
1:C:202:ARG:HG3	1:C:203:HIS:CE1	2.52	0.45
1:F:370:THR:HG21	1:F:427:PHE:HE1	1.82	0.45
1:G:15:HIS:HB2	1:G:18:THR:HG21	1.99	0.45
1:A:188:GLU:HG3	4:A:733:HOH:O	2.16	0.45
1:G:53:TRP:CE2	1:G:400:MET:HE1	2.51	0.45
1:A:380:GLN:OE1	1:A:391:ARG:NH1	2.43	0.45
1:B:180:SER:N	1:B:190:ASP:OD2	2.34	0.45
1:B:230:ARG:O	1:B:234:ILE:HG13	2.17	0.45
1:D:380:GLN:OE1	1:D:391:ARG:HD2	2.16	0.45
1:G:127:TRP:CE3	1:G:130:LYS:HD3	2.52	0.45
1:B:251:PHE:CE1	1:B:324:LEU:HD21	2.52	0.45
1:F:382:PHE:O	1:F:386:GLN:HG2	2.16	0.45
1:H:253:ARG:HG3	1:H:365:ILE:HD11	1.98	0.45
1:E:246:GLU:HG3	1:E:270:LEU:HD11	1.98	0.45
1:A:199:ALA:HA	1:A:202:ARG:HD3	1.98	0.45
1:C:53:TRP:CZ2	1:C:400:MET:HE1	2.53	0.45
1:C:221:ARG:NH2	4:C:715:HOH:O	2.49	0.45
1:F:127:TRP:CE2	1:F:134:ARG:HD2	2.52	0.45
1:C:28:PRO:HG2	1:C:40:SER:HB2	1.99	0.44
1:C:165:TRP:CD1	4:C:701:HOH:O	2.70	0.44
1:E:110:ASP:OD2	1:E:110:ASP:N	2.46	0.44
1:H:357:ALA:HB2	1:H:371:THR:HG22	2.00	0.44
1:A:186:TRP:CE3	1:A:226:GLU:HB3	2.53	0.44
1:H:52:TRP:CD2	3:H:602:J4J:S21	3.10	0.44
1:C:82:GLY:HA2	1:D:26:VAL:HG12	1.99	0.44
1:C:202:ARG:HG3	1:C:203:HIS:ND1	2.32	0.44
1:G:201:HIS:O	1:G:204:GLU:HG2	2.18	0.44
1:E:106:VAL:HG22	1:E:287:LEU:HG	2.00	0.44
1:F:423:ASP:HA	4:F:773:HOH:O	2.17	0.44
1:E:217:ALA:HB1	3:E:602:J4J:C25	2.48	0.44
1:E:391:ARG:HE	3:E:603:J4J:C25	2.30	0.44
1:H:186:TRP:HZ3	1:H:227:TRP:CD1	2.36	0.44
1:H:243:ILE:HG12	1:H:269:ILE:HB	1.98	0.44
1:G:13:ILE:HD11	1:H:89:ILE:HA	1.99	0.44
1:C:15:HIS:HB2	1:C:18:THR:HG21	2.00	0.44
1:F:139:THR:OG1	1:F:140:PHE:N	2.51	0.44
1:C:108:LEU:O	1:C:311:MET:HG3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:53:TRP:HB2	1:C:274:LYS:HD3	2.00	0.43
1:D:98:MET:HE3	1:D:257:LEU:HD21	1.99	0.43
2:E:601:PLP:O3P	1:F:308:PRO:HA	2.18	0.43
1:G:201:HIS:ND1	1:G:204:GLU:OE2	2.38	0.43
1:H:85:HIS:CE1	1:H:314:PRO:HG3	2.53	0.43
1:B:156:ASP:HA	1:B:157:PRO:HD3	1.69	0.43
1:D:132:GLU:O	1:D:134:ARG:N	2.45	0.43
1:D:219:GLY:HA2	1:D:396:LEU:HD11	2.01	0.43
1:D:423:ASP:CG	1:D:425:THR:HG1	2.26	0.43
1:G:186:TRP:HZ3	1:G:227:TRP:CD1	2.37	0.43
1:D:104:GLU:OE1	1:D:290:ARG:NH2	2.47	0.43
1:E:152:MET:HE1	1:E:165:TRP:CE2	2.53	0.43
1:E:340:GLU:HG2	1:E:344:ARG:NH1	2.33	0.43
1:G:121:LYS:HG3	1:H:165:TRP:CH2	2.54	0.43
1:A:408:GLN:HA	4:A:814:HOH:O	2.18	0.43
1:B:53:TRP:CE2	1:B:400:MET:HE1	2.53	0.43
1:C:118:VAL:HG13	1:C:304:PHE:CE2	2.54	0.43
1:D:102:PRO:O	1:D:289:THR:HA	2.19	0.43
1:F:246:GLU:HG3	1:F:270:LEU:CD1	2.49	0.43
1:C:149:PHE:HD2	1:D:150:GLY:HA3	1.84	0.43
1:C:182:MET:HG3	1:C:183:ASP:CB	2.48	0.43
1:C:182:MET:HA	1:C:183:ASP:HA	1.74	0.43
1:A:121:LYS:HG3	1:B:149:PHE:CZ	2.54	0.43
1:C:348:ALA:N	1:C:349:PRO:HD2	2.33	0.43
1:G:161:MET:HB2	1:H:305:MET:HE1	2.00	0.43
1:D:53:TRP:CE2	1:D:400:MET:HE1	2.54	0.43
1:E:19:SER:HB2	1:F:302:GLY:O	2.19	0.43
1:F:36:GLU:HA	1:F:45:LEU:O	2.18	0.43
1:F:380:GLN:OE1	1:F:391:ARG:HD2	2.18	0.43
1:G:134:ARG:HD3	1:G:205:ILE:O	2.19	0.43
1:H:334:GLN:NE2	1:H:338:ASP:OD1	2.47	0.43
1:B:140:PHE:CZ	1:B:231:ILE:HD11	2.53	0.43
1:C:245:ASP:HA	1:C:271:CYS:HB2	2.00	0.43
1:D:217:ALA:HB1	3:D:602:J4J:C25	2.48	0.43
1:A:77:HIS:HA	1:A:314:PRO:HD2	2.00	0.43
1:B:340:GLU:HG2	1:B:344:ARG:NH1	2.34	0.43
1:G:188:GLU:OE2	1:G:230:ARG:NH1	2.48	0.43
1:A:156:ASP:HA	1:A:157:PRO:HD3	1.90	0.42
1:A:90:GLU:OE2	1:A:94:LYS:NZ	2.52	0.42
1:C:116:VAL:HG21	1:C:145:HIS:HB3	2.00	0.42
1:E:24:LEU:HD21	1:H:429:GLN:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:33:GLU:OE2	1:E:44:ARG:NH2	2.45	0.42
1:E:245:ASP:HA	1:E:271:CYS:HB2	2.00	0.42
1:F:210:ILE:HA	4:F:751:HOH:O	2.19	0.42
1:H:359:VAL:HG22	1:H:368:VAL:HG22	2.01	0.42
1:C:10:GLN:HG3	1:C:23:PRO:CG	2.49	0.42
1:C:257:LEU:HA	1:C:257:LEU:HD12	1.76	0.42
1:D:80:PHE:HB2	1:D:311:MET:O	2.19	0.42
1:E:201:HIS:ND1	1:E:204:GLU:OE2	2.42	0.42
1:H:27:TYR:CD1	1:H:27:TYR:N	2.88	0.42
1:B:400:MET:HE2	1:B:400:MET:HB3	1.88	0.42
1:D:400:MET:HE2	1:D:400:MET:HB3	1.78	0.42
1:E:108:LEU:O	1:E:311:MET:HG3	2.20	0.42
1:F:2:THR:HG22	1:F:3:THR:N	2.35	0.42
1:B:194:PHE:N	4:B:707:HOH:O	2.40	0.42
1:E:312:GLY:O	1:E:313:ASN:C	2.62	0.42
1:F:108:LEU:O	1:F:311:MET:HG3	2.19	0.42
1:H:230:ARG:NH1	4:H:702:HOH:O	2.29	0.42
1:A:36:GLU:HA	1:A:45:LEU:O	2.19	0.42
1:F:9:ASP:HA	1:F:13:ILE:HD12	2.02	0.42
1:G:412:ARG:NH1	4:G:705:HOH:O	2.30	0.42
1:H:246:GLU:OE1	1:H:249:THR:OG1	2.24	0.42
1:H:400:MET:HE2	1:H:400:MET:HB3	1.83	0.42
1:B:36:GLU:HA	1:B:45:LEU:O	2.20	0.42
1:E:342:GLN:NE2	1:E:410:LEU:HB3	2.34	0.42
1:G:116:VAL:O	1:G:120:MET:HG3	2.20	0.42
1:E:156:ASP:HA	1:E:157:PRO:HD3	1.80	0.41
1:E:281:MET:HE1	1:E:315:LEU:HD23	2.02	0.41
1:A:149:PHE:HA	1:A:152:MET:HE3	2.03	0.41
1:A:191:MET:HE3	1:A:191:MET:HB3	1.78	0.41
1:E:98:MET:HE3	1:E:257:LEU:HD21	2.02	0.41
1:H:53:TRP:CE2	1:H:400:MET:HE1	2.54	0.41
1:A:105:CYS:O	1:A:287:LEU:HA	2.21	0.41
1:D:9:ASP:HA	1:D:13:ILE:HD12	2.02	0.41
1:E:10:GLN:HG3	1:E:23:PRO:HG2	2.02	0.41
1:G:382:PHE:O	1:G:386:GLN:HG2	2.20	0.41
1:D:53:TRP:HB2	1:D:274:LYS:HD3	2.01	0.41
1:E:109:ALA:O	1:E:283:LEU:HD12	2.20	0.41
1:F:183:ASP:OD2	1:F:184:GLY:N	2.50	0.41
1:G:108:LEU:O	1:G:311:MET:HG3	2.21	0.41
1:C:106:VAL:C	1:D:14:TRP:HD1	2.27	0.41
1:C:413:LEU:O	1:C:417:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:53:TRP:CZ2	1:D:400:MET:HE1	2.56	0.41
1:D:229:LYS:HG3	1:D:263:ALA:HB1	2.02	0.41
1:F:127:TRP:HB3	1:F:132:GLU:O	2.21	0.41
1:G:370:THR:HG21	1:G:427:PHE:HE1	1.84	0.41
1:B:152:MET:HE1	1:B:165:TRP:NE1	2.36	0.41
1:B:186:TRP:CE3	1:B:226:GLU:HB3	2.55	0.41
1:B:191:MET:HE3	1:B:191:MET:HB3	1.70	0.41
1:C:118:VAL:HG13	1:C:304:PHE:CZ	2.54	0.41
1:D:230:ARG:HD3	4:D:703:HOH:O	2.19	0.41
1:F:191:MET:HE3	1:F:191:MET:HB3	1.87	0.41
1:G:325:ALA:O	1:G:328:GLU:HB2	2.21	0.41
1:B:152:MET:HE1	1:B:165:TRP:CE2	2.56	0.41
1:F:14:TRP:CZ3	1:F:20:MET:HG2	2.55	0.41
1:F:344:ARG:HD2	4:F:789:HOH:O	2.21	0.41
1:B:132:GLU:O	1:B:134:ARG:N	2.48	0.41
1:B:224:HIS:HA	1:B:225:PRO:HD3	1.94	0.41
1:D:176:PRO:HB2	4:D:776:HOH:O	2.21	0.41
1:G:374:VAL:HG21	1:G:392:PRO:HB2	2.02	0.41
1:H:47:ASP:OD2	1:H:59:TYR:OH	2.28	0.41
1:B:127:TRP:HB3	1:B:132:GLU:O	2.20	0.41
1:C:149:PHE:CZ	1:D:121:LYS:HG3	2.55	0.41
1:C:251:PHE:CE1	1:C:324:LEU:HD21	2.56	0.41
1:D:191:MET:HE2	1:D:191:MET:HB2	1.92	0.41
1:E:5:ASP:HB3	1:F:89:ILE:HD13	2.03	0.41
1:E:14:TRP:HD1	1:F:106:VAL:C	2.29	0.41
1:G:76:SER:OG	1:H:68:MET:HE1	2.21	0.41
1:G:162:HIS:O	1:G:166:LYS:N	2.51	0.41
1:G:191:MET:HE3	1:G:191:MET:HB3	1.89	0.41
1:H:77:HIS:HA	1:H:314:PRO:HD2	2.02	0.41
1:H:281:MET:HE1	1:H:315:LEU:HG	2.03	0.41
1:A:127:TRP:CE2	1:A:134:ARG:HD2	2.55	0.41
1:E:302:GLY:O	1:F:19:SER:HB2	2.21	0.41
1:G:368:VAL:HG11	1:G:421:VAL:HG21	2.03	0.41
1:H:127:TRP:CD2	1:H:134:ARG:HD2	2.56	0.41
1:A:39:LEU:HD12	1:A:43:ARG:HD2	2.02	0.40
1:A:370:THR:HG21	1:A:427:PHE:CE1	2.56	0.40
1:B:380:GLN:OE1	1:B:391:ARG:HD2	2.22	0.40
1:C:132:GLU:O	1:C:134:ARG:N	2.47	0.40
1:C:220:MET:HB3	1:C:367:VAL:HG21	2.03	0.40
1:D:121:LYS:NZ	1:D:305:MET:O	2.50	0.40
1:D:123:ALA:HA	1:D:241:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:315:LEU:HD22	1:F:68:MET:HE1	2.02	0.40
1:F:156:ASP:HA	1:F:157:PRO:HD3	1.82	0.40
1:B:11:ARG:O	1:B:20:MET:HE1	2.22	0.40
1:C:36:GLU:HA	1:C:45:LEU:O	2.21	0.40
1:D:27:TYR:OH	1:D:381:LYS:HA	2.21	0.40
1:E:370:THR:HG21	1:E:427:PHE:CE1	2.56	0.40
1:B:98:MET:HE3	1:B:257:LEU:HD21	2.03	0.40
1:B:106:VAL:HG22	1:B:287:LEU:HG	2.04	0.40
1:C:33:GLU:OE2	1:C:44:ARG:NH2	2.55	0.40
1:C:94:LYS:HE3	1:C:328:GLU:OE2	2.20	0.40
1:E:160:SER:O	1:F:305:MET:HE1	2.21	0.40
1:G:11:ARG:HB3	1:G:12:HIS:CD2	2.56	0.40
1:H:35:CYS:SG	1:H:404:ILE:HG13	2.62	0.40
1:H:423:ASP:OD1	1:H:424:GLU:N	2.51	0.40
1:A:20:MET:HE3	1:A:20:MET:HB3	1.86	0.40
1:C:6:LEU:HA	1:C:6:LEU:HD23	1.91	0.40
1:C:86:ALA:HB3	1:C:87:PRO:HD3	2.02	0.40
1:D:27:TYR:CD1	1:D:27:TYR:N	2.90	0.40
1:G:197:LEU:HA	1:G:197:LEU:HD23	1.90	0.40
4:G:701:HOH:O	1:H:288:THR:HG22	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	427/429 (100%)	410 (96%)	14 (3%)	3 (1%)	18	21
1	B	427/429 (100%)	411 (96%)	14 (3%)	2 (0%)	24	29
1	C	427/429 (100%)	409 (96%)	15 (4%)	3 (1%)	18	21
1	D	427/429 (100%)	410 (96%)	15 (4%)	2 (0%)	24	29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	427/429 (100%)	408 (96%)	16 (4%)	3 (1%)	18	21
1	F	427/429 (100%)	410 (96%)	13 (3%)	4 (1%)	14	16
1	G	427/429 (100%)	412 (96%)	13 (3%)	2 (0%)	24	29
1	H	427/429 (100%)	413 (97%)	12 (3%)	2 (0%)	24	29
All	All	3416/3432 (100%)	3283 (96%)	112 (3%)	21 (1%)	21	25

All (21) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	133	ALA
1	B	133	ALA
1	C	133	ALA
1	D	133	ALA
1	E	184	GLY
1	F	133	ALA
1	F	184	GLY
1	F	274	LYS
1	H	166	LYS
1	A	274	LYS
1	E	274	LYS
1	G	274	LYS
1	D	166	LYS
1	A	307	GLY
1	G	307	GLY
1	B	307	GLY
1	C	216	GLY
1	C	307	GLY
1	E	307	GLY
1	F	307	GLY
1	H	307	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	334/344 (97%)	326 (98%)	8 (2%)	43	56
1	B	337/344 (98%)	331 (98%)	6 (2%)	51	64
1	C	325/344 (94%)	318 (98%)	7 (2%)	45	59
1	D	336/344 (98%)	333 (99%)	3 (1%)	70	80
1	E	329/344 (96%)	323 (98%)	6 (2%)	51	64
1	F	329/344 (96%)	325 (99%)	4 (1%)	63	74
1	G	321/344 (93%)	316 (98%)	5 (2%)	55	68
1	H	331/344 (96%)	326 (98%)	5 (2%)	57	69
All	All	2642/2752 (96%)	2598 (98%)	44 (2%)	53	66

All (44) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	THR
1	A	14	TRP
1	A	18	THR
1	A	60	ASN
1	A	110	ASP
1	A	132	GLU
1	A	290	ARG
1	A	419	ARG
1	B	3	THR
1	B	10	GLN
1	B	14	TRP
1	B	60	ASN
1	B	110	ASP
1	B	421	VAL
1	C	2	THR
1	C	10	GLN
1	C	14	TRP
1	C	40	SER
1	C	60	ASN
1	C	110	ASP
1	C	265	ILE
1	D	18	THR
1	D	60	ASN
1	D	110	ASP
1	E	2	THR
1	E	10	GLN
1	E	60	ASN

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Mol	Chain	Res	Type
1	E	110	ASP
1	E	265	ILE
1	E	410	LEU
1	F	60	ASN
1	F	110	ASP
1	F	210	ILE
1	F	265	ILE
1	G	10	GLN
1	G	11	ARG
1	G	60	ASN
1	G	110	ASP
1	G	421	VAL
1	H	60	ASN
1	H	110	ASP
1	H	192	VAL
1	H	265	ILE
1	H	290	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	85	HIS
1	A	203	HIS
1	A	342	GLN
1	A	346	GLN
1	A	372	HIS
1	B	203	HIS
1	B	333	GLN
1	B	342	GLN
1	C	203	HIS
1	C	386	GLN
1	D	63	GLN
1	E	63	GLN
1	E	65	ASN
1	E	128	GLN
1	E	135	GLN
1	E	203	HIS
1	F	418	ASN
1	F	429	GLN
1	G	135	GLN
1	G	386	GLN
1	G	429	GLN

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Mol	Chain	Res	Type
1	H	135	GLN
1	H	342	GLN
1	H	372	HIS
1	H	418	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

24 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	$\# Z > 2$
3	J4J	B	602	2	15,15,15	2.12	3 (20%)	15,19,19	1.20	1 (6%)
2	PLP	A	601	3	15,15,16	0.80	0	21,22,23	1.14	1 (4%)
2	PLP	H	601	3	15,15,16	1.15	2 (13%)	21,22,23	1.14	2 (9%)
2	PLP	E	601	3	15,15,16	1.02	1 (6%)	21,22,23	1.59	4 (19%)
3	J4J	B	603	-	13,14,15	1.85	2 (15%)	14,17,19	2.27	6 (42%)
3	J4J	A	602	2	15,15,15	2.14	3 (20%)	15,19,19	1.56	2 (13%)
3	J4J	G	602	-	15,15,15	2.07	3 (20%)	15,19,19	1.36	3 (20%)
3	J4J	C	602	2	15,15,15	2.10	3 (20%)	15,19,19	1.13	1 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PLP	F	601	3	15,15,16	0.99	0	21,22,23	1.76	4 (19%)
3	J4J	E	602	2	15,15,15	2.39	3 (20%)	15,19,19	1.55	1 (6%)
3	J4J	A	603	-	15,15,15	2.04	3 (20%)	15,19,19	1.91	4 (26%)
3	J4J	H	602	2	15,15,15	2.32	4 (26%)	15,19,19	4.29	7 (46%)
3	J4J	H	603	-	15,15,15	2.00	2 (13%)	15,19,19	1.81	4 (26%)
3	J4J	D	602	2	15,15,15	2.23	3 (20%)	15,19,19	1.46	2 (13%)
3	J4J	F	602	2	15,15,15	2.18	3 (20%)	15,19,19	1.54	2 (13%)
3	J4J	D	603	-	15,15,15	1.96	2 (13%)	15,19,19	2.71	6 (40%)
2	PLP	G	601	3	15,15,16	1.06	2 (13%)	21,22,23	1.48	4 (19%)
3	J4J	C	603	-	15,15,15	2.12	2 (13%)	15,19,19	2.89	3 (20%)
3	J4J	E	603	-	15,15,15	2.02	3 (20%)	15,19,19	2.08	3 (20%)
2	PLP	D	601	3	15,15,16	1.08	1 (6%)	21,22,23	1.23	2 (9%)
2	PLP	B	601	3	15,15,16	1.01	1 (6%)	21,22,23	1.07	0
2	PLP	C	601	3	15,15,16	0.77	0	21,22,23	1.40	3 (14%)
3	J4J	F	603	-	15,15,15	2.25	2 (13%)	15,19,19	2.28	3 (20%)
3	J4J	G	603	2	15,15,15	2.13	3 (20%)	15,19,19	2.03	4 (26%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	J4J	B	602	2	-	4/9/11/11	0/1/1/1
2	PLP	A	601	3	-	0/6/6/8	0/1/1/1
2	PLP	H	601	3	-	0/6/6/8	0/1/1/1
2	PLP	E	601	3	-	2/6/6/8	0/1/1/1
3	J4J	B	603	-	-	2/8/9/11	0/1/1/1
3	J4J	A	602	2	-	2/9/11/11	0/1/1/1
3	J4J	G	602	-	-	4/9/11/11	0/1/1/1
3	J4J	C	602	2	-	4/9/11/11	0/1/1/1
2	PLP	F	601	3	-	0/6/6/8	0/1/1/1
3	J4J	E	602	2	-	3/9/11/11	0/1/1/1
3	J4J	A	603	-	-	3/9/11/11	0/1/1/1
3	J4J	H	602	2	-	4/9/11/11	0/1/1/1
3	J4J	H	603	-	-	3/9/11/11	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	J4J	D	602	2	-	4/9/11/11	0/1/1/1
3	J4J	F	602	2	-	2/9/11/11	0/1/1/1
3	J4J	D	603	-	-	1/9/11/11	0/1/1/1
2	PLP	G	601	3	-	0/6/6/8	0/1/1/1
3	J4J	C	603	-	-	2/9/11/11	0/1/1/1
3	J4J	E	603	-	-	4/9/11/11	0/1/1/1
2	PLP	D	601	3	-	0/6/6/8	0/1/1/1
2	PLP	B	601	3	-	0/6/6/8	0/1/1/1
2	PLP	C	601	3	-	0/6/6/8	0/1/1/1
3	J4J	F	603	-	-	2/9/11/11	0/1/1/1
3	J4J	G	603	2	-	2/9/11/11	0/1/1/1

All (51) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	F	603	J4J	N16-N17	-6.94	1.31	1.41
3	E	602	J4J	N16-N17	-6.88	1.31	1.41
3	H	602	J4J	N16-N17	-6.83	1.31	1.41
3	F	602	J4J	N16-N17	-6.59	1.32	1.41
3	A	602	J4J	N16-N17	-6.36	1.32	1.41
3	D	602	J4J	N16-N17	-6.33	1.32	1.41
3	H	603	J4J	N16-N17	-6.24	1.32	1.41
3	A	603	J4J	N16-N17	-6.22	1.32	1.41
3	C	603	J4J	N16-N17	-6.20	1.32	1.41
3	G	603	J4J	N16-N17	-6.20	1.32	1.41
3	G	602	J4J	N16-N17	-6.01	1.33	1.41
3	D	603	J4J	N16-N17	-5.98	1.33	1.41
3	B	603	J4J	N16-N17	-5.97	1.33	1.41
3	E	603	J4J	N16-N17	-5.76	1.33	1.41
3	C	602	J4J	N16-N17	-5.58	1.33	1.41
3	B	602	J4J	N16-N17	-5.52	1.33	1.41
3	E	602	J4J	C22-S21	-5.13	1.69	1.77
3	B	602	J4J	C22-S21	-4.68	1.70	1.77
3	C	603	J4J	C22-S21	-4.61	1.70	1.77
3	D	602	J4J	C22-S21	-4.61	1.70	1.77
3	F	603	J4J	C22-S21	-4.54	1.70	1.77
3	G	603	J4J	C22-S21	-4.40	1.70	1.77
3	G	602	J4J	C22-S21	-4.24	1.70	1.77
3	H	602	J4J	C22-S21	-4.20	1.70	1.77
3	F	602	J4J	C22-S21	-4.12	1.71	1.77
3	H	603	J4J	C22-S21	-4.05	1.71	1.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	603	J4J	C22-S21	-4.00	1.71	1.77
3	A	602	J4J	C22-S21	-3.94	1.71	1.77
3	A	603	J4J	C22-S21	-3.84	1.71	1.77
3	C	602	J4J	C22-S21	-3.68	1.71	1.77
3	C	602	J4J	C27-N28	-3.58	1.39	1.45
3	D	603	J4J	C22-S21	-3.46	1.72	1.77
3	B	602	J4J	C27-N28	-3.09	1.40	1.45
2	H	601	PLP	C3-C2	-3.06	1.37	1.41
3	A	602	J4J	C27-N28	-2.93	1.40	1.45
2	D	601	PLP	C3-C2	-2.92	1.37	1.41
3	D	602	J4J	C27-N28	-2.78	1.40	1.45
2	E	601	PLP	C3-C2	-2.74	1.38	1.41
3	E	603	J4J	C27-N28	-2.71	1.40	1.45
3	G	602	J4J	C27-N28	-2.67	1.40	1.45
3	E	602	J4J	C27-N28	-2.65	1.40	1.45
3	H	602	J4J	C27-N28	-2.59	1.41	1.45
2	G	601	PLP	C3-C2	-2.58	1.38	1.41
3	B	603	J4J	C22-S21	-2.44	1.73	1.77
3	A	603	J4J	C27-N28	-2.35	1.41	1.45
3	F	602	J4J	C27-N28	-2.23	1.41	1.45
2	B	601	PLP	C3-C2	-2.22	1.38	1.41
2	H	601	PLP	C4A-C4	-2.16	1.47	1.51
3	G	603	J4J	C27-N28	-2.11	1.41	1.45
2	G	601	PLP	C4A-C4	-2.06	1.47	1.51
3	H	602	J4J	C20-S21	-2.01	1.76	1.80

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	H	602	J4J	C20-S21-C22	13.90	126.07	102.27
3	C	603	J4J	C20-S21-C22	9.54	118.60	102.27
3	F	603	J4J	C20-S21-C22	7.73	115.51	102.27
3	D	603	J4J	C20-S21-C22	7.60	115.29	102.27
3	E	603	J4J	C20-S21-C22	6.78	113.89	102.27
3	G	603	J4J	C20-S21-C22	5.77	112.16	102.27
3	A	603	J4J	C20-S21-C22	5.49	111.67	102.27
3	B	603	J4J	C20-S21-C22	5.49	111.67	102.27
3	E	602	J4J	C20-S21-C22	5.10	111.00	102.27
3	H	602	J4J	C23-C22-S21	-5.00	109.38	121.48
3	H	602	J4J	C27-C22-S21	4.73	130.86	120.59
3	F	602	J4J	C20-S21-C22	4.60	110.15	102.27
3	H	603	J4J	C20-S21-C22	4.41	109.81	102.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	602	J4J	C20-S21-C22	4.35	109.72	102.27
3	D	602	J4J	C20-S21-C22	4.27	109.58	102.27
2	F	601	PLP	C4A-C4-C5	-3.94	116.88	120.94
3	B	602	J4J	C20-S21-C22	3.76	108.72	102.27
3	G	603	J4J	C26-C27-N28	3.65	120.38	116.47
2	E	601	PLP	O4P-C5A-C5	3.62	116.14	109.36
3	D	603	J4J	C18-N17-N16	-3.60	114.84	122.12
3	C	603	J4J	C23-C22-S21	-3.50	113.00	121.48
3	A	602	J4J	C26-C27-N28	3.31	120.01	116.47
3	H	602	J4J	C26-C27-N28	-3.28	112.97	116.47
3	G	602	J4J	C20-S21-C22	3.22	107.79	102.27
2	F	601	PLP	C6-C5-C4	3.18	120.70	118.10
2	C	601	PLP	C6-C5-C4	3.16	120.69	118.10
3	B	603	J4J	C18-N17-N16	-3.12	115.83	122.12
2	F	601	PLP	C5-C6-N1	-3.10	118.79	123.83
3	D	603	J4J	C26-C27-N28	-3.04	113.23	116.47
2	G	601	PLP	O4P-C5A-C5	3.00	114.98	109.36
2	C	601	PLP	O2P-P-O4P	-2.93	99.03	106.67
3	D	603	J4J	C23-C22-S21	-2.93	114.39	121.48
3	D	602	J4J	C26-C27-N28	2.89	119.56	116.47
3	C	603	J4J	C27-C22-S21	2.85	126.77	120.59
2	E	601	PLP	O3P-P-O4P	-2.84	99.27	106.67
2	G	601	PLP	C4A-C4-C5	-2.76	118.09	120.94
3	H	603	J4J	C18-N17-N16	-2.71	116.66	122.12
3	H	602	J4J	C25-C24-C23	-2.67	116.94	120.24
3	B	603	J4J	C23-C22-C27	-2.67	116.76	119.53
3	B	603	J4J	C22-C27-N28	2.63	122.19	120.07
3	D	603	J4J	C27-C22-S21	2.59	126.21	120.59
3	F	602	J4J	C26-C27-N28	2.46	119.10	116.47
3	C	602	J4J	C26-C27-N28	2.45	119.09	116.47
2	D	601	PLP	O3P-P-O4P	-2.32	100.61	106.67
3	G	602	J4J	C23-C22-S21	-2.29	115.94	121.48
2	H	601	PLP	O3P-P-O2P	2.27	116.31	107.80
2	G	601	PLP	C5-C6-N1	-2.26	120.16	123.83
2	G	601	PLP	O2P-P-O4P	-2.25	100.80	106.67
3	H	602	J4J	C24-C25-C26	2.25	123.01	120.24
3	B	603	J4J	C24-C23-C22	2.24	123.33	119.57
3	F	603	J4J	C26-C27-N28	2.24	118.87	116.47
3	F	603	J4J	C18-N17-N16	-2.24	117.60	122.12
3	A	603	J4J	C27-C22-S21	2.20	125.38	120.59
3	H	603	J4J	C26-C27-N28	2.17	118.79	116.47
3	A	603	J4J	C23-C22-S21	-2.17	116.24	121.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	601	PLP	C2A-C2-N1	2.16	121.71	117.64
2	A	601	PLP	O3P-P-O2P	2.14	115.84	107.80
3	G	603	J4J	C18-C20-S21	-2.13	107.50	113.43
3	G	602	J4J	C27-C22-S21	2.13	125.21	120.59
3	E	603	J4J	C23-C22-S21	-2.12	116.35	121.48
2	F	601	PLP	C5A-C5-C4	-2.11	118.47	122.64
2	E	601	PLP	C5A-C5-C6	-2.10	115.94	119.36
2	D	601	PLP	C5-C6-N1	-2.10	120.42	123.83
3	H	603	J4J	C23-C22-S21	-2.09	116.41	121.48
2	C	601	PLP	O3P-P-O2P	2.09	115.64	107.80
2	H	601	PLP	O3P-P-O4P	-2.08	101.26	106.67
3	E	603	J4J	C18-N17-N16	-2.07	117.94	122.12
3	B	603	J4J	C27-C22-S21	2.06	123.49	120.44
3	D	603	J4J	C25-C26-C27	2.06	121.98	118.60
3	G	603	J4J	C18-N17-N16	2.04	126.24	122.12
3	A	603	J4J	C25-C26-C27	2.01	121.90	118.60
3	H	602	J4J	C18-N17-N16	2.00	126.16	122.12

There are no chirality outliers.

All (48) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	601	PLP	C4-C5-C5A-O4P
2	E	601	PLP	C6-C5-C5A-O4P
3	A	602	J4J	C26-C27-N28-O30
3	A	602	J4J	C22-C27-N28-O30
3	A	603	J4J	C26-C27-N28-O30
3	A	603	J4J	C22-C27-N28-O30
3	B	603	J4J	C26-C27-N28-O29
3	B	603	J4J	C18-C20-S21-C22
3	C	602	J4J	C20-C18-N17-N16
3	C	602	J4J	O19-C18-N17-N16
3	C	603	J4J	C26-C27-N28-O30
3	C	603	J4J	C22-C27-N28-O30
3	D	602	J4J	C26-C27-N28-O30
3	E	602	J4J	C26-C27-N28-O30
3	E	602	J4J	C22-C27-N28-O30
3	E	603	J4J	C26-C27-N28-O30
3	E	603	J4J	C22-C27-N28-O30
3	F	602	J4J	C26-C27-N28-O30
3	F	602	J4J	C22-C27-N28-O30
3	F	603	J4J	C26-C27-N28-O30

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Mol	Chain	Res	Type	Atoms
3	F	603	J4J	C22-C27-N28-O30
3	G	602	J4J	C26-C27-N28-O30
3	G	602	J4J	C22-C27-N28-O30
3	G	602	J4J	C18-C20-S21-C22
3	H	602	J4J	C27-C22-S21-C20
3	H	602	J4J	C23-C22-S21-C20
3	B	602	J4J	O19-C18-N17-N16
3	H	602	J4J	O19-C18-N17-N16
3	D	602	J4J	C20-C18-N17-N16
3	E	602	J4J	C20-C18-N17-N16
3	B	602	J4J	C26-C27-N28-O30
3	C	602	J4J	C26-C27-N28-O30
3	G	603	J4J	C26-C27-N28-O30
3	H	603	J4J	C26-C27-N28-O30
3	D	602	J4J	O19-C18-N17-N16
3	B	602	J4J	C22-C27-N28-O30
3	C	602	J4J	C22-C27-N28-O30
3	D	602	J4J	C22-C27-N28-O30
3	G	603	J4J	C22-C27-N28-O30
3	H	603	J4J	C22-C27-N28-O30
3	B	602	J4J	C20-C18-N17-N16
3	H	602	J4J	C20-C18-N17-N16
3	E	603	J4J	C27-C22-S21-C20
3	D	603	J4J	C18-C20-S21-C22
3	E	603	J4J	C18-C20-S21-C22
3	G	602	J4J	C27-C22-S21-C20
3	A	603	J4J	C27-C22-S21-C20
3	H	603	J4J	C27-C22-S21-C20

There are no ring outliers.

16 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	601	PLP	1	0
2	E	601	PLP	2	0
3	A	602	J4J	1	0
3	G	602	J4J	1	0
3	E	602	J4J	1	0
3	A	603	J4J	2	0
3	H	602	J4J	1	0
3	H	603	J4J	2	0
3	D	602	J4J	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	602	J4J	1	0
3	D	603	J4J	1	0
3	C	603	J4J	1	0
3	E	603	J4J	2	0
2	D	601	PLP	1	0
3	F	603	J4J	1	0
3	G	603	J4J	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	429/429 (100%)	-0.42	5 (1%) 76 78	10, 24, 49, 79	0
1	B	429/429 (100%)	-0.47	7 (1%) 70 72	10, 22, 46, 78	0
1	C	429/429 (100%)	-0.02	9 (2%) 63 64	15, 33, 67, 87	0
1	D	429/429 (100%)	-0.42	3 (0%) 84 85	13, 26, 51, 81	0
1	E	429/429 (100%)	-0.39	4 (0%) 81 82	13, 27, 49, 77	0
1	F	429/429 (100%)	-0.36	5 (1%) 76 78	15, 29, 50, 81	0
1	G	429/429 (100%)	0.23	8 (1%) 66 67	23, 44, 70, 87	0
1	H	429/429 (100%)	-0.20	4 (0%) 81 82	17, 34, 61, 83	0
All	All	3432/3432 (100%)	-0.26	45 (1%) 75 77	10, 30, 60, 87	0

All (45) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	1	ALA	4.2
1	H	1	ALA	4.0
1	D	1	ALA	3.8
1	C	235	CYS	3.5
1	B	160	SER	3.5
1	G	163	SER	3.4
1	H	2	THR	3.3
1	C	159	ASN	3.3
1	B	163	SER	3.2
1	G	183	ASP	3.1
1	A	160	SER	2.9
1	B	1	ALA	2.9
1	B	133	ALA	2.7
1	E	160	SER	2.7
1	G	159	ASN	2.6
1	D	162	HIS	2.6

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Mol	Chain	Res	Type	RSRZ
1	C	199	ALA	2.6
1	E	429	GLN	2.6
1	D	163	SER	2.6
1	G	160	SER	2.6
1	G	2	THR	2.6
1	C	300	GLU	2.4
1	F	1	ALA	2.4
1	B	159	ASN	2.4
1	A	163	SER	2.3
1	C	163	SER	2.3
1	F	2	THR	2.3
1	B	161	MET	2.3
1	F	168	TYR	2.3
1	H	160	SER	2.3
1	F	164	LEU	2.3
1	G	235	CYS	2.3
1	B	162	HIS	2.2
1	E	166	LYS	2.2
1	E	159	ASN	2.2
1	A	184	GLY	2.1
1	G	164	LEU	2.1
1	C	166	LYS	2.1
1	H	424	GLU	2.1
1	C	183	ASP	2.1
1	C	192	VAL	2.1
1	A	159	ASN	2.1
1	A	167	GLY	2.1
1	C	186	TRP	2.0
1	F	160	SER	2.0

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

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

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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	J4J	C	603	15/15	0.75	0.15	33,47,55,84	0
3	J4J	D	603	15/15	0.75	0.14	29,36,56,62	0
3	J4J	H	603	15/15	0.77	0.14	35,45,54,62	0
3	J4J	F	603	15/15	0.79	0.14	27,43,56,68	0
3	J4J	G	602	15/15	0.80	0.14	32,48,58,61	0
3	J4J	E	603	15/15	0.81	0.13	30,40,50,65	0
3	J4J	B	603	14/15	0.82	0.14	27,34,45,50	0
3	J4J	A	603	15/15	0.83	0.12	27,42,47,58	0
3	J4J	H	602	15/15	0.91	0.10	24,38,43,44	0
3	J4J	C	602	15/15	0.93	0.10	27,40,47,55	0
3	J4J	G	603	15/15	0.93	0.08	32,42,47,47	0
3	J4J	E	602	15/15	0.96	0.06	18,27,32,36	0
2	PLP	G	601	15/16	0.96	0.07	24,31,35,37	0
3	J4J	F	602	15/15	0.96	0.07	22,30,35,36	0
3	J4J	B	602	15/15	0.96	0.05	15,20,35,38	0
3	J4J	A	602	15/15	0.97	0.06	15,27,33,33	0
2	PLP	C	601	15/16	0.97	0.06	19,23,27,28	0
3	J4J	D	602	15/15	0.97	0.06	15,26,34,37	0
2	PLP	A	601	15/16	0.98	0.06	11,15,17,18	0
2	PLP	H	601	15/16	0.98	0.05	16,20,26,26	0
2	PLP	E	601	15/16	0.98	0.06	15,20,23,28	0
2	PLP	D	601	15/16	0.99	0.05	13,15,17,18	0
2	PLP	B	601	15/16	0.99	0.04	9,12,15,21	0
2	PLP	F	601	15/16	0.99	0.04	12,18,23,24	0

6.5 Other polymers ⓘ

There are no such residues in this entry.