Full wwPDB X-ray Structure Validation Report ⓘ

Feb 9, 2026 – 04:43 PM JST

PDB ID	:	9LV3 / pdb_00009lv3
Title	:	Crystal structure of mutant H1 Haemagglutinin HN/18-HA FPP from Influenza A virus
Authors	:	Deng, G.; Wei, X.; Sun, H.
Deposited on	:	2025-02-11
Resolution	:	2.70 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:

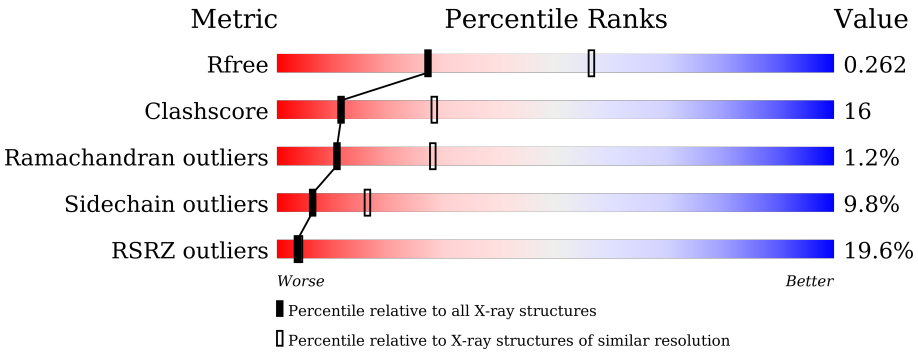
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48

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 2.70 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}	164625	3333 (2.70-2.70)
Clashscore	180529	3684 (2.70-2.70)
Ramachandran outliers	177936	3633 (2.70-2.70)
Sidechain outliers	177891	3633 (2.70-2.70)
RSRZ outliers	164620	3333 (2.70-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	321	15% 69% 27% ·
1	C	321	15% 75% 20% ·
1	E	321	11% 72% 26% ··
1	G	321	10% 70% 25% 5% ·
1	I	321	9% 75% 22% ·
1	K	321	12% 73% 22% 5%

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Mol	Chain	Length	Quality of chain
2	B	156	26% 67% 26% 6%
2	D	156	38% 62% 26% 10%
2	F	156	26% 71% 22% 6%
2	H	156	37% 56% 35% 7%
2	J	156	44% 62% 25% 10%
2	L	156	42% 67% 28%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	NAG	E	402	-	-	-	X

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 22926 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 Hemagglutinin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	G	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			
1	I	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			
1	K	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			
1	A	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			
1	C	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			
1	E	321	Total	C	N	O	S	0	0	0
			2515	1583	441	480	11			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	5	ILE	VAL	conflict	UNP A0A6G5UYK1
G	321	VAL	ILE	conflict	UNP A0A6G5UYK1
I	5	ILE	VAL	conflict	UNP A0A6G5UYK1
I	321	VAL	ILE	conflict	UNP A0A6G5UYK1
K	5	ILE	VAL	conflict	UNP A0A6G5UYK1
K	321	VAL	ILE	conflict	UNP A0A6G5UYK1
A	5	ILE	VAL	conflict	UNP A0A6G5UYK1
A	321	VAL	ILE	conflict	UNP A0A6G5UYK1
C	5	ILE	VAL	conflict	UNP A0A6G5UYK1
C	321	VAL	ILE	conflict	UNP A0A6G5UYK1
E	5	ILE	VAL	conflict	UNP A0A6G5UYK1
E	321	VAL	ILE	conflict	UNP A0A6G5UYK1

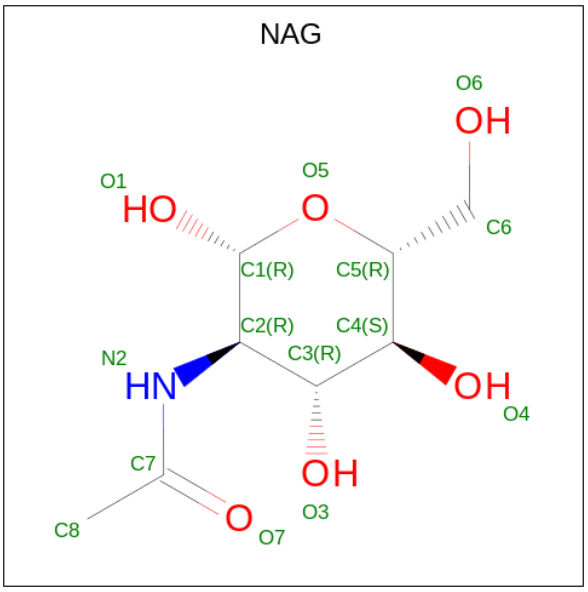
- Molecule 2 is a protein called Hemagglutinin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			
2	J	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			
2	L	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			
2	B	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			
2	D	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			
2	F	156	Total	C	N	O	S	0	0	0
			1250	786	212	245	7			

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
H	38	LEU	GLN	conflict	UNP A0A6G5UYL6
H	110	TYR	PHE	conflict	UNP A0A6G5UYL6
H	113	SER	LEU	conflict	UNP A0A6G5UYL6
J	38	LEU	GLN	conflict	UNP A0A6G5UYL6
J	110	TYR	PHE	conflict	UNP A0A6G5UYL6
J	113	SER	LEU	conflict	UNP A0A6G5UYL6
L	38	LEU	GLN	conflict	UNP A0A6G5UYL6
L	110	TYR	PHE	conflict	UNP A0A6G5UYL6
L	113	SER	LEU	conflict	UNP A0A6G5UYL6
B	38	LEU	GLN	conflict	UNP A0A6G5UYL6
B	110	TYR	PHE	conflict	UNP A0A6G5UYL6
B	113	SER	LEU	conflict	UNP A0A6G5UYL6
D	38	LEU	GLN	conflict	UNP A0A6G5UYL6
D	110	TYR	PHE	conflict	UNP A0A6G5UYL6
D	113	SER	LEU	conflict	UNP A0A6G5UYL6
F	38	LEU	GLN	conflict	UNP A0A6G5UYL6
F	110	TYR	PHE	conflict	UNP A0A6G5UYL6
F	113	SER	LEU	conflict	UNP A0A6G5UYL6

- Molecule 3 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	G	1	Total C N O 14 8 1 5	0	0
3	G	1	Total C N O 14 8 1 5	0	0
3	G	1	Total C N O 14 8 1 5	0	0
3	G	1	Total C N O 14 8 1 5	0	0
3	I	1	Total C N O 14 8 1 5	0	0
3	I	1	Total C N O 14 8 1 5	0	0
3	I	1	Total C N O 14 8 1 5	0	0
3	I	1	Total C N O 14 8 1 5	0	0
3	K	1	Total C N O 14 8 1 5	0	0
3	K	1	Total C N O 14 8 1 5	0	0
3	K	1	Total C N O 14 8 1 5	0	0
3	K	1	Total C N O 14 8 1 5	0	0
3	A	1	Total C N O 14 8 1 5	0	0
3	A	1	Total C N O 14 8 1 5	0	0

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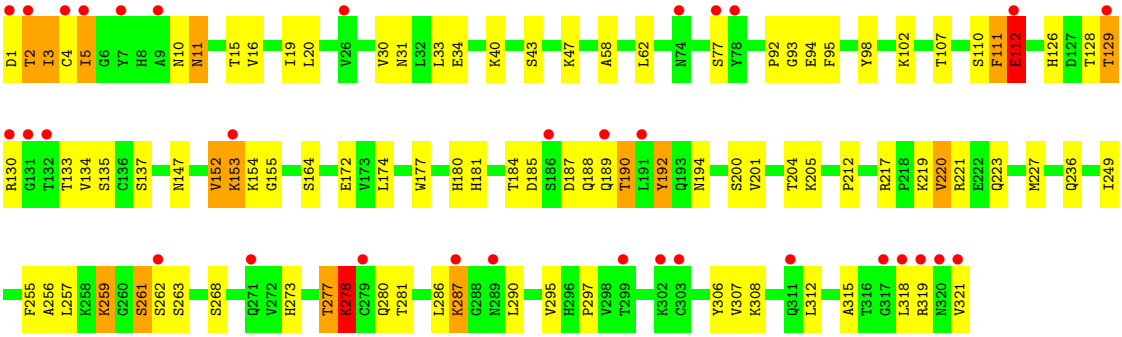
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	N	O	0	0
			14	8	1	5		
3	A	1	Total	C	N	O	0	0
			14	8	1	5		
3	C	1	Total	C	N	O	0	0
			14	8	1	5		
3	C	1	Total	C	N	O	0	0
			14	8	1	5		
3	C	1	Total	C	N	O	0	0
			14	8	1	5		
3	C	1	Total	C	N	O	0	0
			14	8	1	5		
3	E	1	Total	C	N	O	0	0
			14	8	1	5		
3	E	1	Total	C	N	O	0	0
			14	8	1	5		
3	E	1	Total	C	N	O	0	0
			14	8	1	5		
3	E	1	Total	C	N	O	0	0
			14	8	1	5		

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.

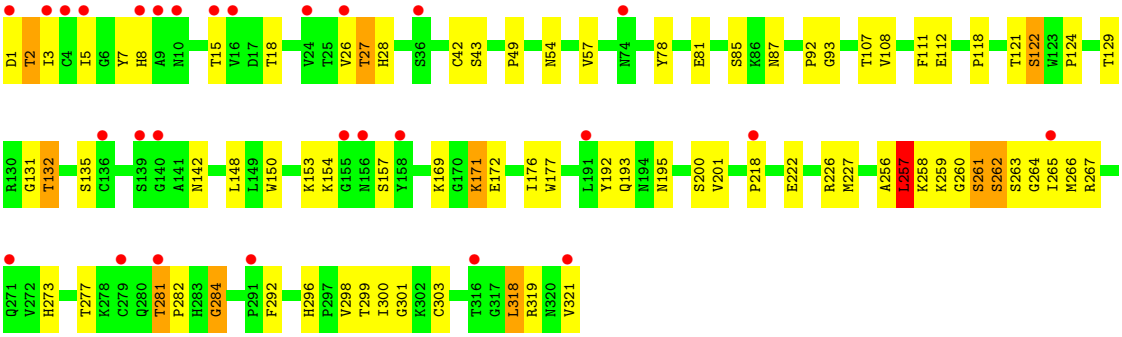
• Molecule 1: Hemagglutinin

Chain G:



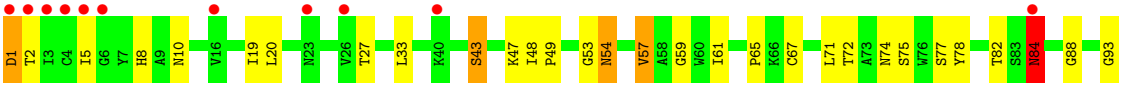
• Molecule 1: Hemagglutinin

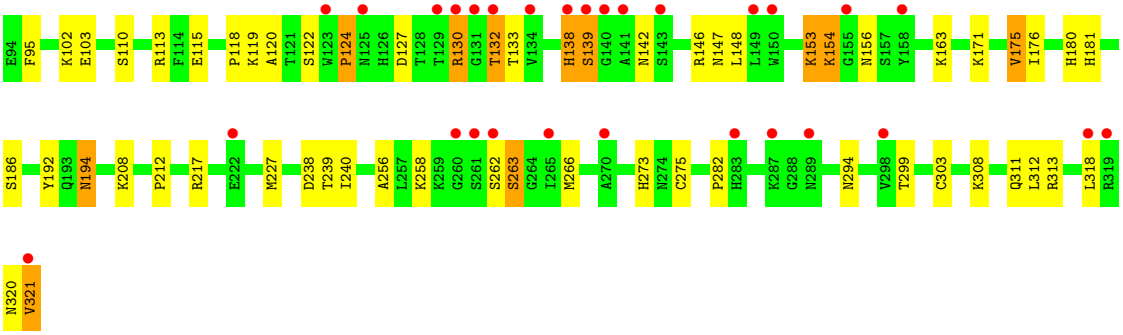
Chain I:



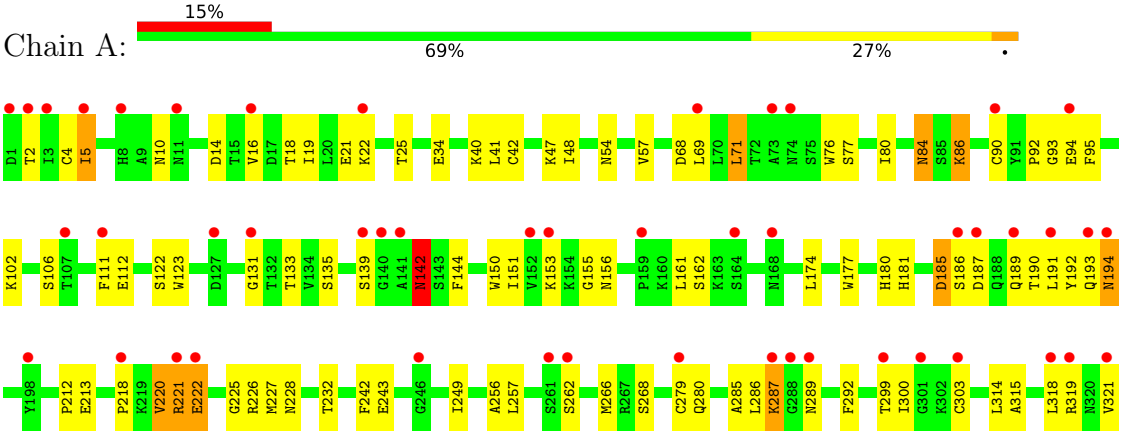
• Molecule 1: Hemagglutinin

Chain K:

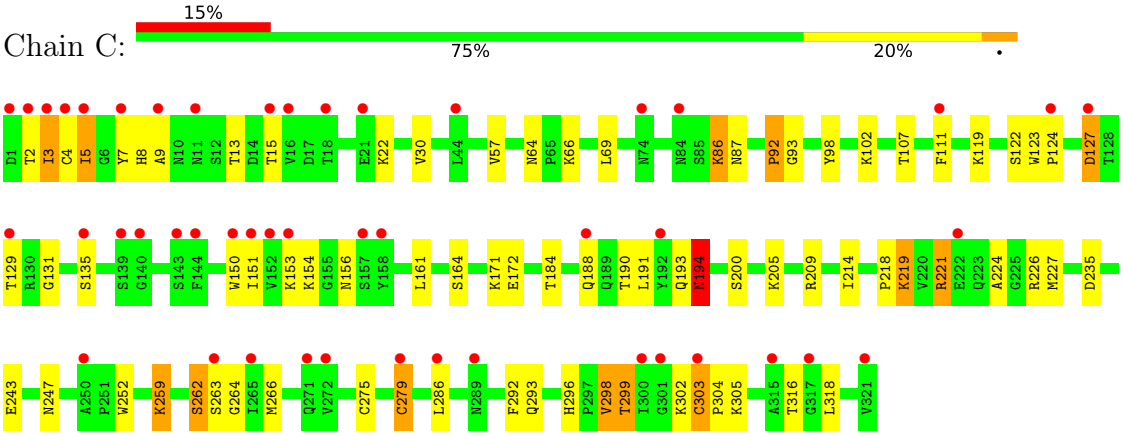




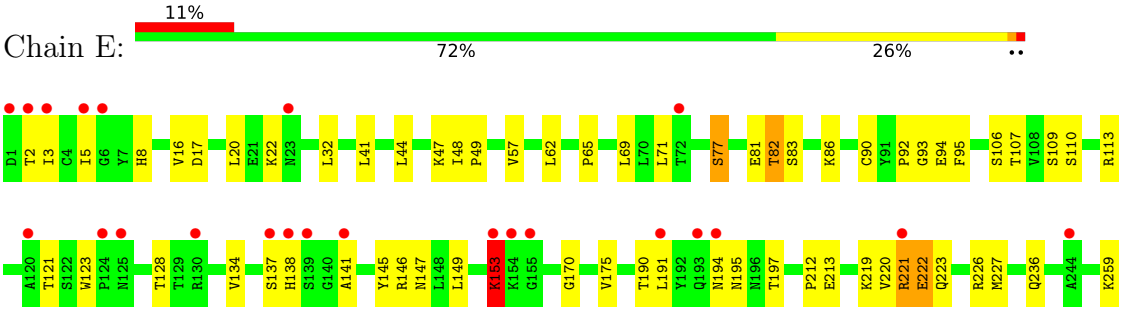
• Molecule 1: Hemagglutinin

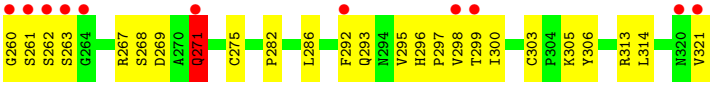


• Molecule 1: Hemagglutinin



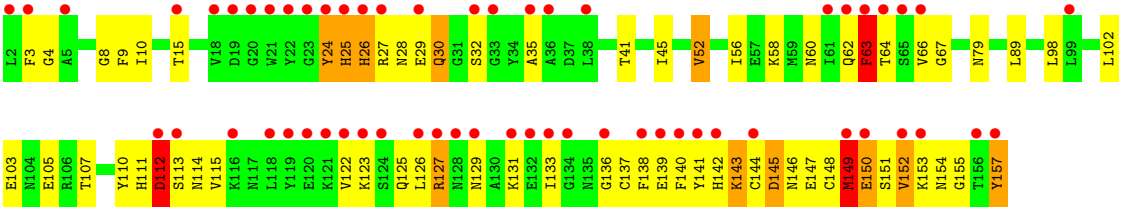
• Molecule 1: Hemagglutinin





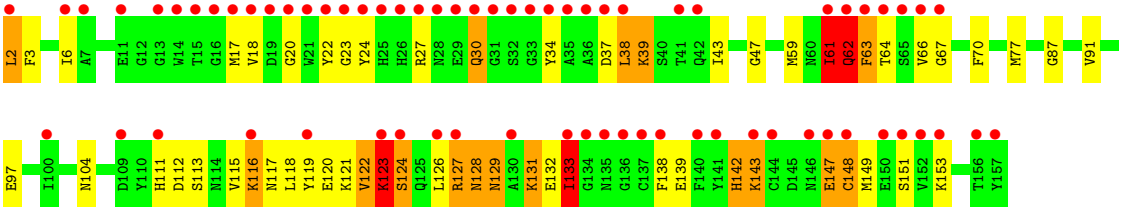
• Molecule 2: Hemagglutinin

Chain H:



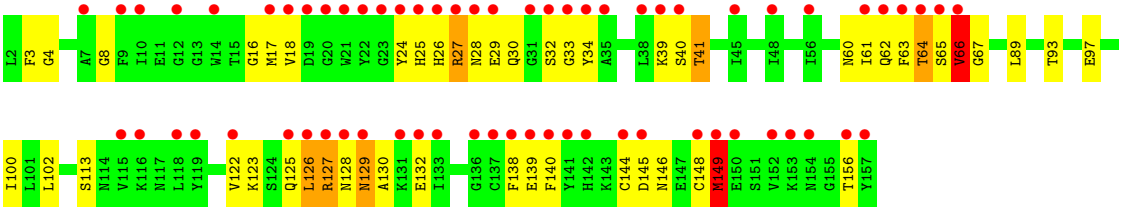
• Molecule 2: Hemagglutinin

Chain J:



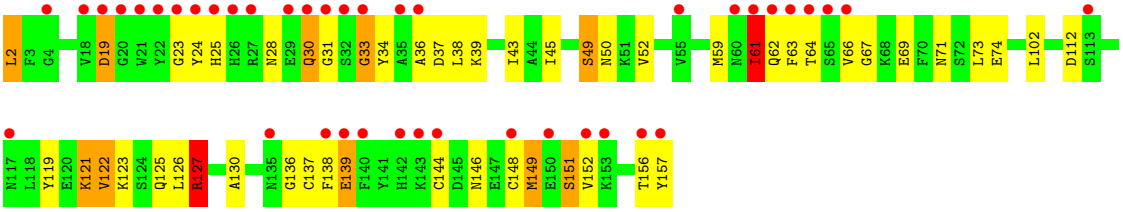
• Molecule 2: Hemagglutinin

Chain L:



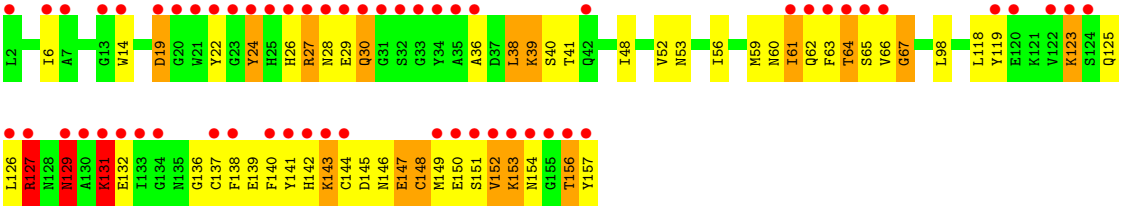
• Molecule 2: Hemagglutinin

Chain B:

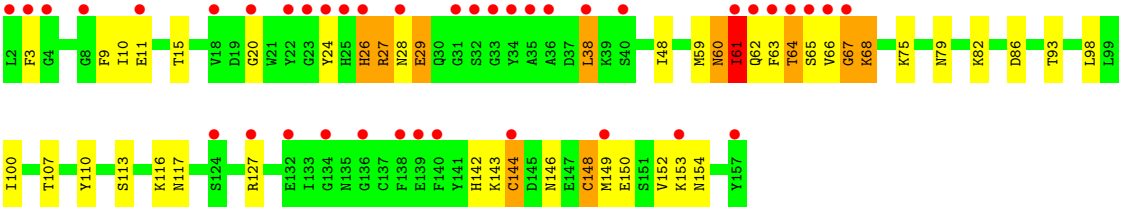


• Molecule 2: Hemagglutinin

Chain D:



• Molecule 2: Hemagglutinin



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	67.78Å 251.37Å 113.10Å 90.00° 90.50° 90.00°	Depositor
Resolution (Å)	43.61 – 2.70 43.61 – 2.70	Depositor EDS
% Data completeness (in resolution range)	86.4 (43.61-2.70) 87.0 (43.61-2.70)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.52 (at 2.69Å)	Xtriage
Refinement program	REFMAC 5.8.0218	Depositor
R, R_{free}	0.234 , 0.253 0.244 , 0.262	Depositor DCC
R_{free} test set	4557 reflections (4.36%)	wwPDB-VP
Wilson B-factor (Å^2)	47.3	Xtriage
Anisotropy	0.003	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 52.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.031 for h,-k,-l	Xtriage
F_o,F_c correlation	0.84	EDS
Total number of atoms	22926	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 67.01 % 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 5.5136e-06. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

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	0.54	0/2577	0.73	6/3506 (0.2%)
1	C	0.51	2/2577 (0.1%)	0.73	8/3506 (0.2%)
1	E	0.47	0/2577	0.67	4/3506 (0.1%)
1	G	0.58	1/2577 (0.0%)	0.68	6/3506 (0.2%)
1	I	0.46	1/2577 (0.0%)	0.67	3/3506 (0.1%)
1	K	0.45	0/2577	0.64	4/3506 (0.1%)
2	B	0.69	1/1274 (0.1%)	0.88	8/1713 (0.5%)
2	D	0.51	0/1274	0.83	4/1713 (0.2%)
2	F	0.51	0/1274	0.74	2/1713 (0.1%)
2	H	0.63	0/1274	0.86	3/1713 (0.2%)
2	J	0.59	0/1274	0.79	5/1713 (0.3%)
2	L	0.56	0/1274	0.82	3/1713 (0.2%)
All	All	0.53	5/23106 (0.0%)	0.73	56/31314 (0.2%)

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	69	GLU	C-O	-5.70	1.16	1.24
1	C	259	LYS	CA-C	-5.67	1.47	1.53
1	I	284	GLY	C-O	-5.50	1.17	1.24
1	C	266	MET	C-O	-5.42	1.17	1.23
1	G	133	THR	C-O	-5.07	1.17	1.23

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	122	VAL	N-CA-C	-9.92	100.19	111.00
2	D	147	GLU	N-CA-C	-9.13	102.65	113.88
1	A	142	ASN	N-CA-C	9.03	121.97	110.24
1	C	86	LYS	N-CA-C	8.84	120.68	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L	41	THR	N-CA-C	-8.81	102.66	113.50
1	C	262	SER	N-CA-C	7.99	120.66	109.15
1	C	87	ASN	N-CA-C	7.88	120.50	109.15
1	K	124	PRO	CA-C-N	-7.73	109.83	122.65
1	K	124	PRO	C-N-CA	-7.73	109.83	122.65
1	E	194	ASN	N-CA-C	7.39	120.55	110.35
1	C	129	THR	N-CA-C	7.36	122.55	113.50
2	F	29	GLU	N-CA-C	-7.26	103.43	112.72
1	C	2	THR	N-CA-C	7.19	119.00	108.86
1	G	277	THR	N-CA-C	7.07	117.36	108.45
2	H	129	ASN	N-CA-C	-6.92	104.44	113.17
2	H	147	GLU	N-CA-C	-6.72	105.21	113.41
2	F	26	HIS	N-CA-C	6.72	120.46	109.85
2	L	148	CYS	N-CA-C	-6.71	105.23	113.41
2	B	151	SER	N-CA-C	-6.63	103.31	111.40
2	B	31	GLY	N-CA-C	6.40	119.83	110.80
1	E	153	LYS	N-CA-C	6.32	118.82	108.52
1	I	193	GLN	N-CA-C	6.29	118.14	111.28
2	D	131	LYS	CA-C-N	-6.12	114.03	122.30
2	D	131	LYS	C-N-CA	-6.12	114.03	122.30
1	G	111	PHE	CB-CA-C	-6.01	100.94	112.43
2	B	63	PHE	N-CA-C	5.98	121.87	113.56
1	G	10	ASN	N-CA-C	5.97	115.89	108.19
1	K	275	CYS	N-CA-C	5.89	118.15	110.43
2	H	24	TYR	N-CA-C	5.78	117.39	109.18
1	C	194	ASN	N-CA-C	5.77	117.97	110.53
2	J	128	ASN	N-CA-C	5.73	119.45	112.23
2	B	62	GLN	N-CA-C	5.66	118.01	107.99
2	B	149	MET	N-CA-C	-5.66	105.02	111.07
1	A	222	GLU	N-CA-CB	-5.58	105.44	113.65
2	B	33	GLY	N-CA-C	5.58	119.46	110.87
2	J	133	ILE	N-CA-C	5.56	115.76	110.53
2	D	129	ASN	N-CA-C	5.54	122.61	110.80
1	G	278	LYS	N-CA-C	-5.51	107.81	114.75
2	L	149	MET	N-CA-C	-5.51	105.28	111.28
1	C	275	CYS	N-CA-C	5.51	117.64	110.43
1	I	222	GLU	CA-CB-CG	-5.45	103.21	114.10
2	J	147	GLU	CB-CA-C	-5.41	102.39	110.88
1	K	84	ASN	CB-CG-ND2	-5.34	108.39	116.40
1	A	122	SER	N-CA-C	5.32	119.84	112.45
2	J	123	LYS	N-CA-C	-5.30	105.39	111.07
1	A	10	ASN	N-CA-C	5.23	114.93	108.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	84	ASN	CB-CG-ND2	-5.21	108.58	116.40
1	I	257	LEU	N-CA-C	5.19	118.47	110.42
1	G	129	THR	CB-CA-C	5.17	117.76	109.07
1	C	92	PRO	N-CA-C	5.13	119.25	111.19
1	E	271	GLN	N-CA-CB	5.13	117.56	110.17
1	A	190	THR	N-CA-C	5.13	116.95	111.36
1	E	275	CYS	N-CA-C	5.12	117.14	110.43
2	B	61	ILE	N-CA-C	-5.08	98.77	109.34
1	G	187	ASP	N-CA-C	-5.06	105.46	111.69
2	J	133	ILE	CB-CA-C	-5.01	105.45	112.02

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	2515	0	2454	73	0
1	C	2515	0	2452	65	0
1	E	2515	0	2452	74	0
1	G	2515	0	2452	69	0
1	I	2515	0	2452	54	0
1	K	2515	0	2452	70	0
2	B	1250	0	1188	68	0
2	D	1250	0	1190	64	0
2	F	1250	0	1188	64	0
2	H	1250	0	1190	81	0
2	J	1250	0	1188	77	0
2	L	1250	0	1190	77	0
3	A	56	0	52	4	0
3	C	56	0	52	0	0
3	E	56	0	52	0	0
3	G	56	0	52	0	0
3	I	56	0	52	1	0
3	K	56	0	52	1	0
All	All	22926	0	22160	709	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 16.

All (709) 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:C:279:CYS:SG	1:C:286:LEU:HB2	1.63	1.38
2:F:9:PHE:CE1	2:F:10:ILE:CD1	2.14	1.29
2:F:9:PHE:CE1	2:F:10:ILE:HD11	1.68	1.28
2:F:9:PHE:CD1	2:F:10:ILE:HD12	1.70	1.27
1:E:305:LYS:CE	2:F:61:ILE:HD11	1.64	1.25
1:K:2:THR:HG22	2:L:139:GLU:HA	1.25	1.14
1:I:5:ILE:CD1	2:J:119:TYR:HA	1.77	1.14
1:I:5:ILE:HD13	2:J:119:TYR:HA	1.20	1.13
1:E:305:LYS:HE2	2:F:61:ILE:HD11	1.23	1.07
2:D:29:GLU:C	2:D:30:GLN:OE1	1.99	1.05
2:F:9:PHE:CD1	2:F:10:ILE:CD1	2.37	1.05
2:B:144:CYS:SG	2:B:149:MET:CE	2.45	1.04
2:L:132:GLU:HG3	2:L:138:PHE:CE1	1.94	1.03
1:K:2:THR:HG22	2:L:139:GLU:CA	1.89	1.01
1:E:305:LYS:HE3	2:F:61:ILE:HD11	1.40	1.00
1:G:130:ARG:HB2	1:G:152:VAL:HG21	1.42	1.00
1:C:279:CYS:SG	1:C:286:LEU:CB	2.49	0.99
2:B:122:VAL:HG23	2:B:138:PHE:CE2	1.97	0.99
1:E:305:LYS:HE3	2:F:61:ILE:CD1	1.93	0.98
1:E:305:LYS:HE3	2:F:61:ILE:CG1	1.93	0.97
1:A:2:THR:HB	2:B:139:GLU:OE1	1.66	0.96
1:A:5:ILE:HD11	2:B:122:VAL:HG11	1.46	0.96
2:B:122:VAL:CG2	2:B:138:PHE:HE2	1.78	0.95
1:E:2:THR:HG22	2:F:27:ARG:HB2	1.46	0.95
2:H:142:HIS:CE1	2:H:143:LYS:HE3	2.02	0.95
1:E:5:ILE:CD1	2:F:24:TYR:CD2	2.51	0.94
1:E:305:LYS:CE	2:F:61:ILE:CD1	2.47	0.93
2:F:9:PHE:HE1	2:F:10:ILE:HD11	1.25	0.92
2:B:144:CYS:SG	2:B:149:MET:HE2	2.10	0.91
1:K:54:ASN:HA	1:K:84:ASN:O	1.72	0.90
2:H:149:MET:CG	2:H:150:GLU:N	2.35	0.90
1:G:130:ARG:HB2	1:G:152:VAL:CG2	2.02	0.90
1:I:5:ILE:HD13	2:J:119:TYR:CA	2.02	0.90
1:A:2:THR:CB	2:B:139:GLU:OE1	2.20	0.90
1:K:5:ILE:CD1	2:L:24:TYR:CD2	2.55	0.89
2:H:26:HIS:ND1	2:H:26:HIS:O	2.07	0.88
2:B:122:VAL:CG2	2:B:138:PHE:CE2	2.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:5:ILE:HD13	2:D:119:TYR:HA	1.56	0.88
1:C:303:CYS:O	2:D:61:ILE:HG12	1.75	0.87
1:E:153:LYS:HE2	1:E:190:THR:O	1.74	0.87
2:L:27:ARG:HG2	2:L:27:ARG:HH11	1.38	0.87
2:J:122:VAL:HG12	2:J:138:PHE:HE2	1.37	0.86
1:K:2:THR:HG22	2:L:139:GLU:CB	2.05	0.86
2:J:131:LYS:CD	2:J:139:GLU:HB3	2.04	0.86
2:D:30:GLN:OE1	2:D:30:GLN:N	2.08	0.85
1:K:5:ILE:HD13	2:L:24:TYR:CD2	2.12	0.85
2:H:149:MET:HG3	2:H:150:GLU:N	1.91	0.85
2:L:17:MET:O	2:L:18:VAL:HG12	1.77	0.84
1:A:153:LYS:HE2	1:A:155:GLY:O	1.77	0.84
2:H:144:CYS:SG	2:H:148:CYS:HB3	2.17	0.84
2:H:143:LYS:H	2:H:143:LYS:HD2	1.43	0.83
2:D:62:GLN:HG2	2:D:64:THR:HG23	1.60	0.83
2:L:26:HIS:CB	2:L:149:MET:HE3	2.07	0.83
2:D:126:LEU:O	2:D:127:ARG:O	1.97	0.83
1:I:303:CYS:O	2:J:61:ILE:HG12	1.79	0.82
2:L:132:GLU:CG	2:L:138:PHE:CE1	2.63	0.82
2:J:122:VAL:HG12	2:J:138:PHE:CE2	2.14	0.81
1:A:279:CYS:HG	1:A:303:CYS:HG	0.83	0.81
1:G:2:THR:HG22	2:H:139:GLU:HG3	1.61	0.81
1:A:2:THR:HB	2:B:139:GLU:CD	2.05	0.81
1:E:153:LYS:HG3	1:E:191:LEU:O	1.81	0.81
1:E:3:ILE:HB	2:F:149:MET:HE3	1.63	0.81
2:B:139:GLU:OE1	2:B:139:GLU:HA	1.80	0.81
1:E:2:THR:HG22	2:F:27:ARG:CB	2.10	0.80
1:K:153:LYS:HD2	1:K:156:ASN:HA	1.62	0.80
2:H:149:MET:HG2	2:H:150:GLU:HG2	1.64	0.80
1:G:19:ILE:HG23	1:G:20:LEU:HD22	1.64	0.79
2:B:122:VAL:HG21	2:B:138:PHE:HE2	1.46	0.79
2:J:117:ASN:O	2:J:121:LYS:HB2	1.83	0.79
2:D:28:ASN:HB3	2:D:30:GLN:H	1.48	0.78
1:E:221:ARG:O	1:E:222:GLU:HB2	1.80	0.77
1:G:34:GLU:HG3	1:G:290:LEU:HD12	1.67	0.77
1:A:41:LEU:HD13	1:A:80:ILE:HD13	1.67	0.77
1:C:172:GLU:OE2	1:C:259:LYS:HE3	1.85	0.77
2:B:130:ALA:HB1	2:B:139:GLU:O	1.85	0.76
2:H:28:ASN:HD21	2:H:145:ASP:HA	1.50	0.76
1:E:5:ILE:CD1	2:F:24:TYR:HD2	1.95	0.76
2:H:122:VAL:HG23	2:H:152:VAL:HG12	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:143:LYS:HD2	2:H:143:LYS:N	2.01	0.76
2:L:26:HIS:HB2	2:L:149:MET:HE3	1.69	0.75
1:C:127:ASP:OD1	1:C:154:LYS:HD3	1.85	0.75
2:B:127:ARG:NH1	2:B:127:ARG:HB3	2.02	0.75
1:C:188:GLN:HG3	1:C:214:ILE:HD11	1.67	0.75
1:A:94:GLU:OE1	1:A:228:ASN:ND2	2.20	0.75
1:G:135:SER:O	1:G:221:ARG:NH1	2.20	0.75
1:G:130:ARG:CB	1:G:152:VAL:HG21	2.14	0.74
2:H:142:HIS:ND1	2:H:143:LYS:HE3	2.02	0.74
1:E:303:CYS:O	2:F:61:ILE:HG21	1.86	0.74
1:I:172:GLU:OE2	1:I:259:LYS:HE3	1.87	0.74
2:B:119:TYR:O	2:B:122:VAL:HG22	1.87	0.74
1:E:2:THR:CG2	2:F:27:ARG:HB2	2.18	0.74
1:K:5:ILE:HD13	2:L:24:TYR:HD2	1.52	0.74
2:F:60:ASN:O	2:F:61:ILE:HG12	1.88	0.74
2:J:131:LYS:HD2	2:J:139:GLU:HB3	1.69	0.73
2:B:144:CYS:SG	2:B:149:MET:HE1	2.28	0.73
2:D:125:GLN:HE21	2:D:152:VAL:HG12	1.53	0.73
1:A:76:TRP:HH2	1:A:111:PHE:CE1	2.07	0.73
1:C:5:ILE:HD13	2:D:119:TYR:CA	2.20	0.72
2:J:133:ILE:N	2:J:133:ILE:HD12	2.05	0.71
2:H:142:HIS:CE1	2:H:143:LYS:CE	2.72	0.71
2:J:148:CYS:O	2:J:151:SER:HB3	1.89	0.71
2:H:144:CYS:SG	2:H:148:CYS:CB	2.78	0.71
2:H:142:HIS:ND1	2:H:143:LYS:HD2	2.05	0.71
2:L:26:HIS:HB3	2:L:149:MET:HE3	1.71	0.71
2:D:38:LEU:N	2:D:38:LEU:HD12	2.05	0.71
1:I:5:ILE:HD12	2:J:119:TYR:HD1	1.54	0.71
1:E:305:LYS:HE3	2:F:61:ILE:HG12	1.72	0.71
2:F:150:GLU:O	2:F:154:ASN:HB2	1.90	0.71
1:C:194:ASN:OD1	1:C:194:ASN:N	2.24	0.71
1:E:221:ARG:O	1:E:222:GLU:CB	2.36	0.71
2:L:127:ARG:O	2:L:129:ASN:N	2.20	0.70
1:C:293:GLN:CG	1:C:304:PRO:HB2	2.21	0.70
1:K:122:SER:HB3	1:K:163:LYS:HE3	1.74	0.70
2:H:149:MET:CG	2:H:150:GLU:HG2	2.21	0.70
1:K:194:ASN:N	1:K:194:ASN:OD1	2.25	0.70
1:E:5:ILE:HD13	2:F:24:TYR:CD2	2.25	0.69
2:H:142:HIS:CE1	2:H:143:LYS:CD	2.74	0.69
1:K:8:HIS:HE1	1:K:10:ASN:ND2	1.90	0.69
1:A:194:ASN:OD1	1:A:194:ASN:N	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:2:THR:CG2	2:L:139:GLU:HA	2.14	0.69
1:G:5:ILE:O	2:H:10:ILE:HD13	1.92	0.69
2:L:17:MET:O	2:L:18:VAL:CG1	2.41	0.69
2:B:148:CYS:O	2:B:151:SER:HB3	1.93	0.69
1:G:261:SER:HB3	2:H:63:PHE:HZ	1.57	0.69
1:C:4:CYS:O	2:D:14:TRP:HH2	1.76	0.69
1:A:187:ASP:O	1:A:191:LEU:HD23	1.92	0.69
2:J:131:LYS:CD	2:J:139:GLU:CB	2.70	0.69
1:K:5:ILE:CD1	2:L:24:TYR:CE2	2.77	0.68
2:H:149:MET:CG	2:H:150:GLU:H	2.06	0.68
2:L:17:MET:C	2:L:18:VAL:HG12	2.18	0.68
2:F:142:HIS:HE1	2:F:144:CYS:SG	2.16	0.68
1:G:126:HIS:HA	1:G:154:LYS:HB2	1.74	0.67
2:L:65:SER:C	2:L:66:VAL:HG22	2.19	0.67
2:D:24:TYR:CE1	2:D:153:LYS:HD2	2.29	0.67
2:J:113:SER:O	2:J:117:ASN:ND2	2.27	0.67
2:L:27:ARG:HG2	2:L:27:ARG:NH1	2.04	0.67
1:C:5:ILE:CD1	2:D:119:TYR:N	2.57	0.67
2:H:112:ASP:O	2:H:113:SER:C	2.37	0.67
1:C:127:ASP:OD1	1:C:154:LYS:CD	2.42	0.67
2:H:122:VAL:HG23	2:H:152:VAL:CG1	2.25	0.67
2:D:145:ASP:CG	2:D:146:ASN:H	2.02	0.67
2:L:27:ARG:HG3	2:L:27:ARG:O	1.92	0.67
1:E:86:LYS:HE3	1:E:86:LYS:HA	1.76	0.67
2:F:82:LYS:NZ	2:F:86:ASP:OD2	2.27	0.67
2:J:131:LYS:HD3	2:J:139:GLU:CB	2.25	0.67
1:A:21:GLU:OE2	1:A:319:ARG:NH2	2.28	0.67
2:D:38:LEU:HD12	2:D:38:LEU:H	1.59	0.67
1:G:308:LYS:HE3	2:H:89:LEU:HD21	1.76	0.66
1:K:308:LYS:HD2	2:L:89:LEU:HD21	1.77	0.66
2:J:131:LYS:HD3	2:J:139:GLU:HB3	1.78	0.66
2:B:149:MET:HE2	2:B:149:MET:HA	1.77	0.66
1:E:271:GLN:HA	1:E:271:GLN:OE1	1.96	0.66
1:G:2:THR:CG2	2:H:139:GLU:HG3	2.26	0.66
2:H:24:TYR:CD2	2:H:153:LYS:HE2	2.30	0.66
2:J:123:LYS:HG2	2:J:124:SER:N	2.11	0.65
2:J:123:LYS:HB2	2:J:138:PHE:CZ	2.31	0.65
1:I:108:VAL:HG21	1:I:257:LEU:HD22	1.77	0.65
1:E:303:CYS:O	2:F:61:ILE:CG2	2.44	0.65
2:D:19:ASP:HB3	2:D:36:ALA:HB3	1.79	0.65
1:K:266:MET:HG3	1:K:282:PRO:HG3	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:116:LYS:HD2	2:J:120:GLU:HG3	1.79	0.65
2:H:27:ARG:HG3	2:H:32:SER:OG	1.96	0.65
2:H:35:ALA:HB3	2:H:153:LYS:NZ	2.12	0.65
1:A:47:LYS:HB3	1:A:77:SER:HB3	1.79	0.65
1:C:5:ILE:HD11	2:D:119:TYR:HB2	1.77	0.65
1:G:184:THR:HG22	1:G:185:ASP:N	2.12	0.64
1:I:112:GLU:HB3	1:I:256:ALA:HB3	1.80	0.64
1:I:131:GLY:HA3	1:I:150:TRP:HB3	1.79	0.64
1:C:5:ILE:CD1	2:D:119:TYR:CA	2.74	0.64
2:H:52:VAL:O	2:H:56:ILE:HD12	1.97	0.64
2:H:149:MET:HG2	2:H:150:GLU:H	1.63	0.64
2:L:132:GLU:CG	2:L:138:PHE:HE1	2.09	0.64
1:K:5:ILE:CD1	2:L:24:TYR:HD2	2.03	0.64
1:G:204:THR:HG22	1:G:205:LYS:HD2	1.79	0.64
1:I:262:SER:HA	2:J:63:PHE:HZ	1.63	0.64
2:L:28:ASN:HD21	2:L:145:ASP:HA	1.63	0.64
1:A:292:PHE:CZ	2:B:59:MET:HE3	2.33	0.63
2:H:151:SER:OG	2:H:157:TYR:C	2.41	0.63
1:A:279:CYS:HG	1:A:303:CYS:CB	2.10	0.63
2:J:133:ILE:HD12	2:J:133:ILE:H	1.61	0.63
2:B:122:VAL:HG23	2:B:123:LYS:N	2.13	0.63
1:I:107:THR:HG23	1:I:259:LYS:HD2	1.78	0.63
1:C:3:ILE:HD13	2:D:26:HIS:HB3	1.81	0.63
1:I:8:HIS:CE1	2:J:18:VAL:HA	2.33	0.63
1:G:11:ASN:OD1	1:G:11:ASN:N	2.32	0.63
2:D:29:GLU:HB3	2:D:30:GLN:OE1	1.99	0.63
1:E:113:ARG:NH1	1:E:147:ASN:OD1	2.31	0.63
2:L:126:LEU:N	2:L:126:LEU:HD23	2.14	0.63
1:K:238:ASP:OD1	1:K:239:THR:N	2.32	0.62
1:E:5:ILE:HD11	2:F:24:TYR:CD2	2.35	0.62
1:I:27:THR:C	1:I:28:HIS:HD1	2.07	0.62
1:I:262:SER:HA	2:J:63:PHE:CZ	2.34	0.62
2:J:129:ASN:N	2:J:129:ASN:OD1	2.28	0.62
1:C:221:ARG:CG	1:C:221:ARG:HH11	2.13	0.62
1:C:299:THR:O	2:D:65:SER:HB3	2.00	0.62
2:F:148:CYS:O	2:F:152:VAL:HG23	1.99	0.62
2:L:30:GLN:OE1	2:L:146:ASN:N	2.25	0.62
2:J:131:LYS:HD2	2:J:139:GLU:CB	2.29	0.61
1:A:5:ILE:HD11	2:B:122:VAL:CG1	2.26	0.61
1:E:5:ILE:HD13	2:F:24:TYR:HD2	1.61	0.61
2:F:64:THR:O	2:F:64:THR:HG22	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:121:LYS:O	2:B:121:LYS:HG2	2.01	0.61
2:F:26:HIS:HB2	2:F:149:MET:HE2	1.81	0.61
1:A:133:THR:O	1:A:142:ASN:HB3	2.01	0.61
1:I:261:SER:O	1:I:263:SER:N	2.34	0.61
2:H:123:LYS:HA	2:H:138:PHE:HE2	1.65	0.61
2:J:123:LYS:CB	2:J:138:PHE:HZ	2.13	0.60
1:G:153:LYS:HG3	1:G:153:LYS:O	1.99	0.60
2:B:23:GLY:HA3	2:B:36:ALA:HA	1.83	0.60
1:A:227:MET:HE3	1:A:249:ILE:HG13	1.83	0.60
1:A:292:PHE:HZ	2:B:59:MET:HE3	1.65	0.60
2:B:119:TYR:CE1	2:B:136:GLY:HA2	2.36	0.60
2:D:150:GLU:HA	2:D:153:LYS:HE2	1.84	0.60
2:J:62:GLN:C	2:J:64:THR:H	2.09	0.60
2:F:38:LEU:N	2:F:38:LEU:HD12	2.15	0.60
1:A:22:LYS:HB3	3:A:402:NAG:H81	1.83	0.60
2:B:39:LYS:O	2:B:43:ILE:HG13	2.01	0.60
2:B:149:MET:CE	2:B:149:MET:HA	2.30	0.60
2:L:132:GLU:HG3	2:L:138:PHE:CD1	2.36	0.60
2:H:142:HIS:ND1	2:H:143:LYS:CE	2.64	0.60
1:C:293:GLN:HG3	1:C:304:PRO:HB2	1.84	0.60
2:F:75:LYS:O	2:F:79:ASN:ND2	2.34	0.60
2:H:142:HIS:ND1	2:H:143:LYS:CD	2.64	0.60
2:J:17:MET:HE1	2:J:23:GLY:N	2.16	0.60
1:A:2:THR:HB	2:B:139:GLU:OE2	2.02	0.60
2:F:38:LEU:HD12	2:F:38:LEU:H	1.65	0.60
2:B:61:ILE:HG23	2:B:61:ILE:O	2.01	0.60
1:K:48:ILE:HD12	1:K:48:ILE:H	1.67	0.59
1:E:77:SER:O	1:E:263:SER:HA	2.02	0.59
1:K:61:ILE:O	1:K:147:ASN:ND2	2.35	0.59
1:G:92:PRO:HB3	1:G:220:VAL:HG22	1.84	0.59
1:I:292:PHE:HZ	2:J:59:MET:HE3	1.68	0.59
1:A:22:LYS:HD3	3:A:402:NAG:H81	1.83	0.59
1:E:82:THR:HG22	1:E:269:ASP:HA	1.84	0.59
2:H:30:GLN:OE1	2:H:145:ASP:HB2	2.03	0.59
2:J:131:LYS:HB3	2:J:139:GLU:HB3	1.85	0.59
1:A:2:THR:CA	2:B:139:GLU:OE1	2.50	0.59
1:E:5:ILE:CD1	2:F:24:TYR:CE2	2.86	0.59
2:J:61:ILE:HG23	2:J:61:ILE:O	2.03	0.59
1:A:221:ARG:O	1:A:222:GLU:HB2	2.03	0.58
1:I:321:VAL:O	1:I:321:VAL:HG22	2.04	0.58
2:L:18:VAL:HG22	2:L:18:VAL:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:139:SER:O	1:K:139:SER:OG	2.17	0.58
2:D:26:HIS:CD2	2:D:149:MET:HG2	2.39	0.58
1:K:154:LYS:O	1:K:154:LYS:HG2	2.01	0.58
2:L:18:VAL:O	2:L:18:VAL:HG13	2.03	0.58
2:D:129:ASN:OD1	2:D:129:ASN:N	2.33	0.58
2:J:143:LYS:O	2:J:143:LYS:HG3	2.03	0.58
2:L:62:GLN:HB3	2:L:64:THR:HG23	1.84	0.58
1:G:130:ARG:HG2	1:G:130:ARG:HH11	1.68	0.58
2:L:125:GLN:C	2:L:126:LEU:HD23	2.29	0.58
2:H:28:ASN:ND2	2:H:30:GLN:HG3	2.19	0.58
2:H:149:MET:O	2:H:151:SER:N	2.36	0.58
1:G:130:ARG:HG2	1:G:130:ARG:NH1	2.17	0.58
1:K:153:LYS:HD2	1:K:156:ASN:CA	2.34	0.57
2:B:123:LYS:HB2	2:B:138:PHE:HZ	1.69	0.57
1:I:321:VAL:O	1:I:321:VAL:HG13	2.03	0.57
2:J:123:LYS:HB2	2:J:138:PHE:HZ	1.67	0.57
1:E:292:PHE:CZ	2:F:59:MET:HE3	2.38	0.57
2:L:26:HIS:HB2	2:L:149:MET:CE	2.34	0.57
1:A:144:PHE:HZ	1:A:227:MET:HE1	1.69	0.57
1:A:5:ILE:CD1	2:B:122:VAL:HG11	2.29	0.57
1:A:34:GLU:OE2	1:A:287:LYS:HB2	2.05	0.57
1:A:92:PRO:HB3	1:A:220:VAL:HG22	1.87	0.57
1:G:43:SER:O	1:G:277:THR:HG22	2.05	0.57
1:I:5:ILE:HD12	2:J:119:TYR:CD1	2.36	0.57
1:E:305:LYS:HE2	2:F:61:ILE:CD1	2.16	0.56
1:K:53:GLY:O	1:K:82:THR:OG1	2.23	0.56
1:C:188:GLN:HE21	1:C:247:ASN:HD21	1.52	0.56
1:G:172:GLU:OE2	1:G:259:LYS:HE2	2.06	0.56
1:A:102:LYS:O	1:A:106:SER:OG	2.20	0.56
2:J:62:GLN:O	2:J:64:THR:N	2.39	0.56
2:B:127:ARG:HB3	2:B:127:ARG:HH11	1.69	0.56
1:C:221:ARG:HH11	1:C:221:ARG:HG3	1.71	0.56
1:E:220:VAL:O	1:E:221:ARG:HB2	2.05	0.56
1:G:93:GLY:HA3	1:G:227:MET:O	2.06	0.56
2:B:122:VAL:HG21	2:B:138:PHE:CE2	2.32	0.56
1:K:54:ASN:OD1	1:K:54:ASN:N	2.38	0.56
2:L:26:HIS:ND1	2:L:149:MET:HG3	2.21	0.56
1:G:261:SER:CB	2:H:63:PHE:HZ	2.19	0.55
1:K:119:LYS:HG3	1:K:120:ALA:N	2.21	0.55
1:K:57:VAL:HG21	1:K:102:LYS:HG2	1.86	0.55
1:K:320:ASN:O	1:K:321:VAL:C	2.50	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:112:ASP:O	2:H:114:ASN:N	2.39	0.55
1:I:262:SER:O	1:I:262:SER:OG	2.23	0.55
1:A:76:TRP:HH2	1:A:111:PHE:CD1	2.24	0.55
1:G:185:ASP:O	1:G:188:GLN:HB3	2.07	0.55
1:C:209:ARG:HD3	1:E:213:GLU:OE1	2.06	0.55
2:D:61:ILE:O	2:D:61:ILE:HG23	2.07	0.55
1:K:148:LEU:HD21	1:K:176:ILE:HD12	1.89	0.55
2:D:140:PHE:CE1	2:D:144:CYS:SG	3.00	0.55
2:J:70:PHE:CE1	2:J:77:MET:HG2	2.42	0.55
2:L:127:ARG:O	2:L:129:ASN:OD1	2.25	0.55
2:D:38:LEU:H	2:D:38:LEU:CD1	2.19	0.55
2:J:62:GLN:HB2	2:J:64:THR:HG22	1.90	0.54
2:F:60:ASN:C	2:F:60:ASN:HD22	2.13	0.54
2:J:123:LYS:CB	2:J:138:PHE:CZ	2.90	0.54
2:J:142:HIS:O	2:J:142:HIS:ND1	2.41	0.54
1:K:2:THR:CG2	2:L:139:GLU:CB	2.84	0.54
2:H:125:GLN:OE1	2:H:155:GLY:HA2	2.06	0.54
2:D:145:ASP:CG	2:D:146:ASN:N	2.63	0.54
1:G:1:ASP:HB3	2:H:140:PHE:HB2	1.89	0.54
1:G:318:LEU:HD12	1:G:319:ARG:O	2.08	0.54
1:A:218:PRO:O	1:A:226:ARG:NH2	2.32	0.54
2:B:25:HIS:HB2	2:B:34:TYR:CD1	2.42	0.54
1:G:134:VAL:O	1:G:137:SER:OG	2.26	0.54
2:H:111:HIS:O	2:H:112:ASP:O	2.26	0.54
1:K:132:THR:OG1	1:K:142:ASN:HB3	2.08	0.54
1:A:2:THR:HA	2:B:139:GLU:OE1	2.08	0.54
2:L:28:ASN:HD21	2:L:145:ASP:C	2.15	0.54
2:J:17:MET:O	2:J:17:MET:HG2	2.06	0.53
1:A:174:LEU:HB2	1:A:257:LEU:HD11	1.90	0.53
1:C:299:THR:O	2:D:65:SER:CB	2.56	0.53
2:J:133:ILE:H	2:J:133:ILE:CD1	2.21	0.53
1:K:113:ARG:NH1	1:K:147:ASN:OD1	2.41	0.53
1:A:303:CYS:O	2:B:61:ILE:HG21	2.08	0.53
2:H:148:CYS:O	2:H:149:MET:C	2.52	0.53
2:L:30:GLN:O	2:L:30:GLN:HG3	2.09	0.53
2:D:126:LEU:O	2:D:127:ARG:C	2.51	0.53
1:E:41:LEU:HD21	1:E:268:SER:OG	2.09	0.53
1:I:7:TYR:CZ	2:J:6:ILE:HG23	2.44	0.53
2:L:16:GLY:O	2:L:34:TYR:CD2	2.62	0.53
2:D:131:LYS:HD3	2:D:139:GLU:HB3	1.91	0.53
1:A:4:CYS:HA	2:B:137:CYS:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:149:MET:HE2	2:B:149:MET:CA	2.37	0.53
2:H:146:ASN:HA	2:H:149:MET:HB3	1.90	0.53
2:H:148:CYS:O	2:H:149:MET:O	2.26	0.53
2:H:150:GLU:HA	2:H:153:LYS:HG3	1.89	0.53
1:I:301:GLY:H	2:J:63:PHE:HE1	1.56	0.53
1:A:94:GLU:OE1	1:A:94:GLU:N	2.40	0.53
2:F:107:THR:O	2:F:110:TYR:HB3	2.08	0.53
2:B:123:LYS:HB2	2:B:138:PHE:CZ	2.44	0.52
1:C:131:GLY:HA3	1:C:150:TRP:HB3	1.91	0.52
2:D:24:TYR:CD1	2:D:153:LYS:HD2	2.45	0.52
1:E:71:LEU:HD21	1:E:146:ARG:HD2	1.90	0.52
1:G:34:GLU:CD	1:G:287:LYS:HB2	2.35	0.52
1:A:279:CYS:SG	1:A:286:LEU:HD12	2.50	0.52
1:G:184:THR:HG22	1:G:185:ASP:H	1.74	0.52
1:C:107:THR:HG23	1:C:259:LYS:HD3	1.91	0.52
1:K:312:LEU:HD22	2:L:100:ILE:HG13	1.91	0.52
1:C:296:HIS:CE1	1:C:298:VAL:HG13	2.44	0.52
1:G:174:LEU:HB2	1:G:257:LEU:HD11	1.92	0.52
1:I:132:THR:HG23	1:I:142:ASN:HB3	1.92	0.52
1:E:41:LEU:HB2	1:E:271:GLN:O	2.10	0.52
2:F:38:LEU:H	2:F:38:LEU:CD1	2.21	0.52
1:G:1:ASP:O	2:H:140:PHE:HB2	2.09	0.51
1:I:260:GLY:O	1:I:262:SER:N	2.43	0.51
2:F:143:LYS:HD3	2:F:144:CYS:N	2.24	0.51
2:L:65:SER:C	2:L:66:VAL:CG2	2.84	0.51
2:L:127:ARG:C	2:L:129:ASN:H	2.17	0.51
1:A:123:TRP:CE2	1:A:151:ILE:HD11	2.46	0.51
1:C:263:SER:OG	1:C:264:GLY:N	2.36	0.51
1:E:5:ILE:HD11	2:F:24:TYR:HD2	1.73	0.51
1:E:32:LEU:HD12	2:F:100:ILE:HD11	1.92	0.51
1:C:4:CYS:HA	2:D:137:CYS:HA	1.92	0.51
1:G:181:HIS:CE1	1:G:212:PRO:HA	2.46	0.51
2:H:133:ILE:HB	2:H:137:CYS:O	2.11	0.51
1:A:180:HIS:ND1	1:A:192:TYR:OH	2.35	0.51
2:B:28:ASN:ND2	2:B:146:ASN:OD1	2.43	0.51
1:C:5:ILE:HD12	2:D:118:LEU:HB3	1.93	0.51
1:I:281:THR:HG22	1:I:284:GLY:H	1.76	0.51
1:K:2:THR:CG2	2:L:139:GLU:HG3	2.41	0.51
2:L:26:HIS:O	2:L:32:SER:HA	2.11	0.51
1:G:112:GLU:HB3	1:G:256:ALA:HB3	1.92	0.51
2:H:123:LYS:HA	2:H:138:PHE:CE2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:280:GLN:HE21	1:A:285:ALA:HB2	1.76	0.51
2:F:75:LYS:HG3	2:F:79:ASN:HD21	1.76	0.51
1:G:20:LEU:HD23	2:H:105:GLU:CD	2.36	0.50
1:I:148:LEU:HD21	1:I:176:ILE:HG13	1.93	0.50
1:A:93:GLY:HA3	1:A:227:MET:O	2.11	0.50
2:J:47:GLY:HA2	1:K:20:LEU:O	2.12	0.50
2:J:148:CYS:O	2:J:151:SER:N	2.44	0.50
1:C:221:ARG:CG	1:C:221:ARG:NH1	2.73	0.50
1:E:107:THR:HG23	1:E:259:LYS:HG3	1.91	0.50
1:C:98:TYR:CZ	1:C:102:LYS:HD2	2.46	0.50
1:E:282:PRO:HG2	1:E:296:HIS:CD2	2.45	0.50
1:K:138:HIS:CD2	1:K:138:HIS:C	2.85	0.50
2:H:145:ASP:OD1	2:H:145:ASP:N	2.37	0.50
2:L:28:ASN:HD21	2:L:145:ASP:CA	2.23	0.50
2:B:50:ASN:OD1	1:C:22:LYS:HE3	2.11	0.50
2:B:122:VAL:CG2	2:B:123:LYS:N	2.74	0.50
2:H:52:VAL:HG13	2:H:56:ILE:HD11	1.93	0.50
1:A:76:TRP:CH2	1:A:111:PHE:CD1	2.99	0.50
1:A:68:ASP:HA	1:A:71:LEU:HD22	1.94	0.50
1:G:3:ILE:HD12	2:H:152:VAL:HG21	1.94	0.50
2:J:18:VAL:HG23	2:J:18:VAL:O	2.12	0.50
1:A:185:ASP:OD1	1:A:185:ASP:N	2.29	0.50
2:J:37:ASP:O	2:J:38:LEU:C	2.54	0.50
1:K:299:THR:HB	1:K:303:CYS:SG	2.52	0.50
2:H:111:HIS:O	2:H:112:ASP:C	2.51	0.49
2:L:30:GLN:OE1	2:L:145:ASP:HB3	2.11	0.49
2:B:2:LEU:O	2:F:113:SER:OG	2.29	0.49
1:C:3:ILE:HG22	2:D:138:PHE:HB2	1.93	0.49
2:D:53:ASN:HA	2:D:56:ILE:HG12	1.95	0.49
1:C:123:TRP:CE2	1:C:151:ILE:HD11	2.47	0.49
2:D:38:LEU:O	2:D:41:THR:N	2.45	0.49
1:E:106:SER:O	1:E:263:SER:HB3	2.12	0.49
1:A:84:ASN:HA	1:A:86:LYS:HG2	1.94	0.49
1:I:266:MET:HG3	1:I:282:PRO:HG3	1.94	0.49
2:J:17:MET:HB2	2:J:34:TYR:CD1	2.47	0.49
1:C:303:CYS:SG	1:C:304:PRO:HD2	2.53	0.49
2:B:19:ASP:OD1	2:B:19:ASP:N	2.45	0.49
2:B:122:VAL:HG23	2:B:138:PHE:CZ	2.47	0.49
1:G:34:GLU:CG	1:G:290:LEU:HD12	2.42	0.49
1:C:30:VAL:HG23	1:C:316:THR:HG21	1.95	0.49
1:G:77:SER:O	1:G:263:SER:HA	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:1:ASP:HB3	2:L:140:PHE:HB2	1.95	0.49
1:C:172:GLU:OE2	1:C:259:LYS:CE	2.60	0.49
2:D:38:LEU:C	2:D:40:SER:N	2.70	0.49
2:F:149:MET:O	2:F:153:LYS:HG3	2.13	0.49
1:I:1:ASP:C	1:I:2:THR:CG2	2.86	0.49
2:J:127:ARG:CZ	2:J:127:ARG:CB	2.91	0.49
2:J:142:HIS:ND1	2:J:142:HIS:C	2.71	0.49
2:J:131:LYS:HD2	2:J:139:GLU:CG	2.42	0.49
1:K:2:THR:HG22	2:L:139:GLU:HB2	1.93	0.49
2:L:129:ASN:N	2:L:129:ASN:OD1	2.46	0.49
1:E:47:LYS:HB3	1:E:77:SER:OG	2.13	0.49
1:I:296:HIS:CE1	1:I:298:VAL:HG12	2.48	0.48
1:A:156:ASN:O	1:A:193:GLN:NE2	2.46	0.48
1:A:279:CYS:SG	1:A:303:CYS:HB3	2.53	0.48
1:G:280:GLN:HE21	1:G:281:THR:H	1.60	0.48
1:A:112:GLU:HB3	1:A:256:ALA:HB3	1.94	0.48
2:B:119:TYR:HE1	2:B:136:GLY:HA2	1.76	0.48
2:D:131:LYS:CD	2:D:139:GLU:HB3	2.43	0.48
2:L:25:HIS:HB2	2:L:34:TYR:CD1	2.48	0.48
1:C:293:GLN:HG2	1:C:304:PRO:HB2	1.93	0.48
2:H:35:ALA:HB3	2:H:153:LYS:HZ1	1.78	0.48
1:K:65:PRO:HB3	1:K:146:ARG:NH2	2.28	0.48
2:J:61:ILE:O	2:J:63:PHE:N	2.46	0.48
1:K:27:THR:HG23	1:K:318:LEU:O	2.14	0.48
1:A:144:PHE:CZ	1:A:227:MET:HE1	2.48	0.48
1:E:92:PRO:HB2	1:E:226:ARG:HD3	1.95	0.48
1:G:297:PRO:HG3	1:G:306:TYR:CE2	2.49	0.48
2:H:3:PHE:HD2	2:H:112:ASP:HB3	1.78	0.48
1:C:296:HIS:ND1	1:C:298:VAL:HG13	2.29	0.48
2:H:142:HIS:CG	2:H:143:LYS:HD2	2.48	0.48
1:C:156:ASN:ND2	1:C:193:GLN:OE1	2.46	0.48
1:G:33:LEU:HB2	1:G:312:LEU:HB2	1.95	0.48
2:L:27:ARG:HH11	2:L:27:ARG:CG	2.18	0.48
1:C:93:GLY:HA3	1:C:227:MET:O	2.14	0.48
2:D:30:GLN:N	2:D:30:GLN:CD	2.72	0.48
1:G:3:ILE:HB	2:H:140:PHE:HE1	1.78	0.47
1:I:93:GLY:HA3	1:I:227:MET:O	2.14	0.47
1:I:171:LYS:HD2	1:I:256:ALA:HB1	1.95	0.47
2:J:2:LEU:HB3	2:J:112:ASP:OD2	2.13	0.47
2:B:25:HIS:HD2	2:B:33:GLY:C	2.22	0.47
2:D:27:ARG:O	2:D:27:ARG:HG3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:86:LYS:HA	1:E:86:LYS:CE	2.41	0.47
1:G:47:LYS:HB3	1:G:77:SER:HB3	1.96	0.47
2:H:103:GLU:O	2:H:107:THR:OG1	2.22	0.47
2:H:140:PHE:CE2	2:H:144:CYS:CB	2.98	0.47
2:H:140:PHE:CE2	2:H:144:CYS:SG	3.07	0.47
2:J:61:ILE:O	2:J:61:ILE:HG13	2.14	0.47
2:L:25:HIS:HB2	2:L:34:TYR:HD1	1.79	0.47
1:C:3:ILE:CG2	2:D:138:PHE:HB2	2.44	0.47
2:D:129:ASN:O	2:D:141:TYR:HB2	2.13	0.47
2:B:25:HIS:CD2	2:B:33:GLY:O	2.67	0.47
2:H:140:PHE:CD2	2:H:144:CYS:HB2	2.49	0.47
2:J:62:GLN:C	2:J:64:THR:N	2.73	0.47
1:A:314:LEU:HD23	2:B:52:VAL:HG22	1.97	0.47
2:D:147:GLU:OE1	2:D:147:GLU:HA	2.15	0.47
1:C:316:THR:HB	2:D:48:ILE:HG21	1.96	0.47
2:D:123:LYS:HA	2:D:138:PHE:HE2	1.79	0.47
1:G:189:GLN:HG2	1:G:189:GLN:O	2.13	0.47
2:J:131:LYS:HD3	2:J:139:GLU:HB2	1.95	0.47
2:H:3:PHE:CE2	2:H:113:SER:HB2	2.49	0.47
1:I:18:THR:HG22	2:J:104:ASN:HB3	1.96	0.47
2:B:2:LEU:HG	2:B:112:ASP:OD2	2.15	0.47
1:C:92:PRO:O	1:C:226:ARG:HD3	2.13	0.47
2:D:38:LEU:O	2:D:40:SER:N	2.48	0.47
1:K:122:SER:O	1:K:124:PRO:HD3	2.14	0.47
1:A:287:LYS:HZ2	1:A:287:LYS:HG3	1.67	0.47
1:E:92:PRO:HG2	1:E:223:GLN:HB2	1.95	0.47
1:E:170:GLY:HA2	1:E:236:GLN:HG3	1.97	0.47
2:H:4:GLY:O	2:H:8:GLY:HA3	2.15	0.47
2:H:79:ASN:ND2	1:K:103:GLU:OE2	2.37	0.47
1:A:19:ILE:HB	2:B:102:LEU:HD23	1.97	0.47
2:B:30:GLN:C	2:B:30:GLN:NE2	2.73	0.47
1:I:27:THR:HG23	1:I:318:LEU:O	2.15	0.46
1:A:162:SER:HA	1:A:242:PHE:O	2.15	0.46
1:E:260:GLY:O	1:E:262:SER:N	2.48	0.46
2:H:112:ASP:O	2:H:115:VAL:N	2.48	0.46
1:K:5:ILE:HD12	2:L:24:TYR:CE2	2.49	0.46
2:L:26:HIS:CG	2:L:149:MET:HG3	2.50	0.46
2:B:45:ILE:O	2:B:49:SER:OG	2.32	0.46
2:B:119:TYR:C	2:B:121:LYS:H	2.23	0.46
1:E:8:HIS:HB2	2:F:20:GLY:O	2.14	0.46
2:J:39:LYS:O	2:J:43:ILE:HD12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:125:GLN:NE2	2:B:152:VAL:O	2.49	0.46
1:C:219:LYS:HE2	1:C:224:ALA:HB2	1.97	0.46
1:K:57:VAL:O	1:K:61:ILE:HG12	2.16	0.46
2:D:48:ILE:O	2:D:52:VAL:HG23	2.15	0.46
2:F:61:ILE:O	2:F:61:ILE:HG22	2.14	0.46
1:G:40:LYS:HD2	1:G:273:HIS:CD2	2.50	0.46
1:C:64:ASN:ND2	1:C:66:LYS:HB2	2.31	0.46
1:E:16:VAL:HG12	1:E:313:ARG:HG2	1.97	0.46
1:E:65:PRO:HB3	1:E:146:ARG:NH2	2.30	0.46
2:F:63:PHE:O	2:F:63:PHE:CD1	2.68	0.46
1:G:5:ILE:HG23	2:H:136:GLY:O	2.15	0.46
1:I:54:ASN:C	1:I:85:SER:HA	2.40	0.46
1:K:2:THR:HG22	2:L:139:GLU:CG	2.45	0.46
1:C:122:SER:O	1:C:124:PRO:HD3	2.16	0.46
2:D:144:CYS:CB	2:D:148:CYS:SG	3.04	0.46
2:H:58:LYS:HD2	2:J:97:GLU:HB3	1.98	0.46
1:A:42:CYS:H	1:A:280:GLN:NE2	2.13	0.46
2:L:63:PHE:O	2:L:65:SER:N	2.49	0.46
1:E:219:LYS:HA	1:E:223:GLN:O	2.16	0.46
1:K:93:GLY:HA3	1:K:227:MET:O	2.16	0.45
1:K:115:GLU:OE2	1:K:118:PRO:HA	2.16	0.45
1:A:16:VAL:HG21	1:A:315:ALA:HB2	1.97	0.45
1:E:90:CYS:O	1:E:221:ARG:CD	2.64	0.45
1:E:314:LEU:HD13	2:F:100:ILE:HD13	1.97	0.45
1:I:3:ILE:HG23	1:I:3:ILE:O	2.14	0.45
1:I:292:PHE:CZ	2:J:59:MET:HE3	2.50	0.45
1:K:311:GLN:HE21	1:K:313:ARG:HB2	1.81	0.45
1:E:93:GLY:HA3	1:E:227:MET:O	2.16	0.45
2:J:30:GLN:HE21	2:J:30:GLN:HB2	1.57	0.45
1:G:5:ILE:O	1:G:5:ILE:HG13	2.06	0.45
1:I:54:ASN:HB2	1:I:87:ASN:ND2	2.30	0.45
3:A:404:NAG:H83	3:A:404:NAG:O3	2.16	0.45
1:C:4:CYS:SG	2:D:14:TRP:HZ2	2.39	0.45
1:K:2:THR:CG2	2:L:139:GLU:HB2	2.47	0.45
2:L:132:GLU:HG2	2:L:138:PHE:HE1	1.82	0.45
2:H:149:MET:O	2:H:152:VAL:HG23	2.17	0.45
1:K:127:ASP:OD1	1:K:130:ARG:HG3	2.17	0.45
2:J:131:LYS:HD3	2:J:133:ILE:HD11	1.99	0.45
2:D:125:GLN:NE2	2:D:152:VAL:HG12	2.28	0.45
1:K:171:LYS:HE3	1:K:256:ALA:HB1	1.98	0.45
1:A:2:THR:CB	2:B:139:GLU:CD	2.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:8:HIS:ND1	2:J:20:GLY:O	2.47	0.45
2:J:142:HIS:O	2:J:142:HIS:CG	2.69	0.45
1:K:180:HIS:ND1	1:K:192:TYR:OH	2.46	0.45
2:L:30:GLN:OE1	2:L:146:ASN:HB2	2.16	0.45
2:L:123:LYS:HE2	2:L:132:GLU:OE2	2.17	0.45
1:G:4:CYS:N	2:H:25:HIS:O	2.40	0.44
2:L:30:GLN:CD	2:L:146:ASN:HB2	2.42	0.44
1:A:279:CYS:SG	1:A:303:CYS:CB	3.01	0.44
1:G:286:LEU:HD21	1:G:295:VAL:HG21	1.98	0.44
1:I:273:HIS:CD2	3:I:402:NAG:H81	2.53	0.44
1:A:225:GLY:O	1:A:226:ARG:NH1	2.42	0.44
2:B:119:TYR:O	2:B:122:VAL:CG2	2.63	0.44
1:E:123:TRP:CZ3	1:E:149:LEU:HD22	2.52	0.44
2:F:3:PHE:O	2:F:116:LYS:HD2	2.17	0.44
1:I:42:CYS:HB2	1:I:277:THR:HG22	1.99	0.44
2:J:131:LYS:HD2	2:J:139:GLU:HG2	1.97	0.44
2:L:30:GLN:OE1	2:L:146:ASN:CB	2.65	0.44
1:C:262:SER:O	1:C:263:SER:HB2	2.17	0.44
1:G:261:SER:HB3	2:H:63:PHE:CZ	2.45	0.44
2:J:37:ASP:OD2	2:J:118:LEU:HD11	2.18	0.44
2:L:122:VAL:HG12	2:L:138:PHE:CE2	2.52	0.44
1:C:305:LYS:HE2	1:C:305:LYS:HB2	1.84	0.44
2:D:98:LEU:HD23	2:D:98:LEU:HA	1.68	0.44
2:D:142:HIS:O	2:D:143:LYS:C	2.60	0.44
1:G:3:ILE:HG13	2:H:26:HIS:HB3	2.00	0.44
1:K:43:SER:HA	1:K:49:PRO:HD3	1.99	0.44
1:A:90:CYS:HB2	1:A:135:SER:O	2.18	0.44
1:K:5:ILE:HD11	2:L:24:TYR:CD2	2.46	0.44
1:G:181:HIS:ND1	1:G:212:PRO:HA	2.32	0.44
1:I:122:SER:C	1:I:124:PRO:HD3	2.43	0.44
1:I:261:SER:O	1:I:262:SER:C	2.60	0.44
1:K:273:HIS:HD2	3:K:403:NAG:H81	1.82	0.44
2:L:26:HIS:O	2:L:26:HIS:CD2	2.71	0.44
2:D:63:PHE:O	2:D:63:PHE:CD1	2.70	0.44
2:J:3:PHE:HB2	2:J:112:ASP:CG	2.43	0.43
1:K:110:SER:HB3	1:K:258:LYS:HB3	2.00	0.43
2:L:25:HIS:HA	2:L:33:GLY:O	2.18	0.43
1:A:303:CYS:O	2:B:61:ILE:HG12	2.18	0.43
1:E:5:ILE:HD12	2:F:24:TYR:CE2	2.53	0.43
1:G:130:ARG:HH11	1:G:130:ARG:CG	2.30	0.43
2:H:123:LYS:HB2	2:H:138:PHE:HZ	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:86:LYS:HD2	1:A:86:LYS:HA	1.79	0.43
1:G:58:ALA:O	1:G:62:LEU:HB2	2.18	0.43
1:I:118:PRO:O	1:I:122:SER:HB2	2.18	0.43
1:I:299:THR:HB	1:I:303:CYS:SG	2.58	0.43
1:A:68:ASP:HA	1:A:71:LEU:CD2	2.48	0.43
1:E:299:THR:O	2:F:65:SER:OG	2.24	0.43
2:F:48:ILE:HD12	2:F:107:THR:HG23	1.99	0.43
1:G:19:ILE:HB	2:H:102:LEU:HD23	2.00	0.43
1:G:92:PRO:HB3	1:G:220:VAL:CG2	2.48	0.43
1:G:308:LYS:HA	1:G:308:LYS:HD3	1.74	0.43
2:H:127:ARG:HE	2:H:127:ARG:HB3	1.54	0.43
2:L:26:HIS:O	2:L:26:HIS:HD2	2.01	0.43
1:A:299:THR:HB	1:A:303:CYS:SG	2.58	0.43
1:C:3:ILE:HD12	1:C:4:CYS:H	1.84	0.43
1:E:197:THR:O	1:E:212:PRO:HD2	2.18	0.43
2:F:24:TYR:CD1	2:F:153:LYS:HD2	2.54	0.43
2:F:75:LYS:HG3	2:F:79:ASN:ND2	2.34	0.43
1:G:318:LEU:HB3	2:H:111:HIS:CG	2.54	0.43
1:A:48:ILE:HD12	1:A:48:ILE:H	1.83	0.43
1:A:181:HIS:CE1	1:A:212:PRO:HA	2.54	0.43
1:E:137:SER:HB2	1:E:141:ALA:O	2.19	0.43
1:I:169:LYS:O	1:I:171:LYS:HG3	2.19	0.43
2:J:61:ILE:O	2:J:62:GLN:C	2.61	0.43
2:J:127:ARG:HB2	2:J:128:ASN:H	1.57	0.43
2:H:126:LEU:HD23	2:H:126:LEU:HA	1.82	0.43
2:L:28:ASN:HD21	2:L:146:ASN:N	2.16	0.43
1:A:40:LYS:O	1:A:280:GLN:NE2	2.50	0.43
2:B:25:HIS:CD2	2:B:33:GLY:C	2.97	0.43
1:C:279:CYS:SG	1:C:286:LEU:CA	3.07	0.43
1:E:286:LEU:HD21	1:E:295:VAL:HG21	1.99	0.43
1:K:65:PRO:C	1:K:67:CYS:H	2.27	0.42
2:B:2:LEU:HD23	2:F:117:ASN:ND2	2.34	0.42
1:E:299:THR:HB	1:E:303:CYS:SG	2.59	0.42
1:G:98:TYR:CZ	1:G:102:LYS:HD2	2.53	0.42
1:G:219:LYS:HA	1:G:223:GLN:O	2.19	0.42
1:C:156:ASN:C	1:C:156:ASN:HD22	2.26	0.42
1:C:161:LEU:O	1:C:243:GLU:HA	2.19	0.42
1:E:17:ASP:OD2	1:E:22:LYS:HD2	2.19	0.42
1:G:147:ASN:ND2	1:G:255:PHE:HZ	2.18	0.42
1:I:318:LEU:HD12	1:I:319:ARG:O	2.20	0.42
1:A:22:LYS:CD	3:A:402:NAG:H81	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:153:LYS:HE2	1:C:190:THR:O	2.18	0.42
1:E:221:ARG:C	1:E:222:GLU:CG	2.93	0.42
1:E:293:GLN:OE1	1:E:295:VAL:N	2.45	0.42
1:A:266:MET:HE3	1:A:300:ILE:HD12	2.01	0.42
2:F:66:VAL:HG12	2:F:68:LYS:HE2	2.00	0.42
2:F:146:ASN:OD1	2:F:146:ASN:N	2.53	0.42
1:G:184:THR:CG2	1:G:185:ASP:N	2.82	0.42
2:H:131:LYS:HB2	2:H:141:TYR:CE1	2.54	0.42
2:J:64:THR:HG23	2:J:64:THR:O	2.20	0.42
2:J:148:CYS:HA	2:J:151:SER:HB3	2.01	0.42
1:K:19:ILE:HB	2:L:102:LEU:HD23	2.00	0.42
2:L:4:GLY:O	2:L:8:GLY:HA3	2.20	0.42
1:C:7:TYR:CD1	2:D:6:ILE:HD13	2.55	0.42
2:B:24:TYR:CE1	2:B:37:ASP:HB2	2.55	0.42
2:B:119:TYR:C	2:B:121:LYS:N	2.76	0.42
1:A:161:LEU:O	1:A:243:GLU:HA	2.19	0.42
2:F:142:HIS:CE1	2:F:144:CYS:SG	3.06	0.42
2:J:127:ARG:CZ	2:J:127:ARG:HB3	2.46	0.42
1:K:303:CYS:O	2:L:61:ILE:HB	2.20	0.42
2:B:148:CYS:HA	2:B:151:SER:HB2	2.01	0.42
2:D:119:TYR:CE1	2:D:136:GLY:HA2	2.55	0.42
1:E:17:ASP:OD1	1:E:17:ASP:N	2.53	0.42
1:G:31:ASN:O	1:G:290:LEU:HD22	2.19	0.42
1:K:1:ASP:O	2:L:140:PHE:HB2	2.19	0.42
1:K:175:VAL:HG21	1:K:240:ILE:HD13	2.01	0.42
2:L:130:ALA:HB1	2:L:139:GLU:O	2.20	0.42
1:C:3:ILE:O	1:C:3:ILE:HG23	2.20	0.42
1:K:33:LEU:HD21	1:K:294:ASN:ND2	2.34	0.42
1:K:138:HIS:CD2	1:K:138:HIS:O	2.73	0.42
1:A:177:TRP:HZ3	1:A:232:THR:HG22	1.84	0.42
2:B:25:HIS:CD2	2:B:34:TYR:CD1	3.08	0.42
2:B:127:ARG:HB3	2:B:127:ARG:CZ	2.48	0.42
1:C:299:THR:O	2:D:65:SER:OG	2.38	0.42
1:G:177:TRP:CE2	1:G:201:VAL:HG21	2.55	0.41
2:H:107:THR:O	2:H:110:TYR:HB3	2.20	0.41
1:K:49:PRO:HB3	1:K:78:TYR:CZ	2.55	0.41
1:K:181:HIS:CE1	1:K:212:PRO:HA	2.55	0.41
2:L:93:THR:O	2:L:97:GLU:HG2	2.21	0.41
2:B:130:ALA:CB	2:B:139:GLU:O	2.63	0.41
2:J:87:GLY:O	2:J:91:VAL:HG23	2.19	0.41
1:K:74:ASN:OD1	1:K:75:SER:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:61:ILE:HD12	2:L:62:GLN:N	2.35	0.41
1:C:8:HIS:ND1	1:C:9:ALA:N	2.69	0.41
1:I:81:GLU:O	1:I:267:ARG:HA	2.21	0.41
2:J:111:HIS:O	2:J:115:VAL:HG23	2.21	0.41
1:K:132:THR:OG1	1:K:133:THR:N	2.54	0.41
1:A:131:GLY:HA3	1:A:150:TRP:HB3	2.01	0.41
2:B:73:LEU:HD23	2:B:73:LEU:HA	1.89	0.41
1:I:49:PRO:HB3	1:I:78:TYR:CE1	2.55	0.41
1:I:92:PRO:HG2	1:I:226:ARG:HD2	2.02	0.41
1:E:292:PHE:HZ	2:F:59:MET:HE3	1.84	0.41
1:C:292:PHE:CE1	2:D:59:MET:HE2	2.56	0.41
2:F:61:ILE:HD13	2:F:61:ILE:HA	1.83	0.41
1:C:219:LYS:HE2	1:C:219:LYS:HB2	1.36	0.41
2:D:66:VAL:HG22	2:D:67:GLY:H	1.85	0.41
1:E:297:PRO:HD3	1:E:306:TYR:CZ	2.56	0.41
1:I:298:VAL:HG23	2:J:66:VAL:HG23	2.03	0.41
2:J:148:CYS:O	2:J:149:MET:C	2.63	0.41
1:K:47:LYS:HB3	1:K:77:SER:HB3	2.03	0.41
1:A:54:ASN:OD1	1:A:54:ASN:N	2.47	0.41
1:C:205:LYS:HE3	1:C:235:ASP:OD2	2.20	0.41
1:E:20:LEU:HD23	1:E:20:LEU:HA	1.89	0.41
1:E:44:LEU:HD22	1:E:300:ILE:HG22	2.03	0.41
1:E:109:SER:OG	1:E:260:GLY:N	2.42	0.41
2:F:66:VAL:HB	2:F:67:GLY:H	1.70	0.41
2:H:41:THR:O	2:H:45:ILE:HG12	2.21	0.41
1:I:263:SER:OG	1:I:264:GLY:N	2.53	0.41
1:C:5:ILE:HD11	2:D:119:TYR:CB	2.48	0.41
2:D:38:LEU:N	2:D:38:LEU:CD1	2.72	0.41
1:E:81:GLU:O	1:E:267:ARG:HA	2.21	0.41
1:G:180:HIS:HB2	1:G:249:ILE:HD11	2.03	0.40
1:E:62:LEU:HB3	1:E:145:TYR:CD1	2.56	0.40
1:G:16:VAL:HG21	1:G:315:ALA:HB2	2.02	0.40
1:E:5:ILE:HD11	2:F:24:TYR:CE2	2.55	0.40
1:G:47:LYS:HE2	1:G:47:LYS:HB2	1.66	0.40
1:I:43:SER:HA	1:I:49:PRO:HD3	2.03	0.40
2:J:24:TYR:CE1	2:J:153:LYS:HG2	2.56	0.40
2:B:71:ASN:OD1	2:B:74:GLU:HG3	2.20	0.40
2:F:127:ARG:H	2:F:127:ARG:HG3	1.66	0.40
1:G:189:GLN:HA	1:G:192:TYR:O	2.22	0.40
1:G:277:THR:OG1	1:G:278:LYS:N	2.55	0.40
2:H:98:LEU:O	2:H:102:LEU:HG	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:27:THR:C	1:I:28:HIS:ND1	2.78	0.40
1:K:59:GLY:N	1:K:88:GLY:HA2	2.36	0.40
1:K:262:SER:O	1:K:263:SER:OG	2.34	0.40
1:C:191:LEU:HD23	1:C:191:LEU:HA	1.87	0.40
2:D:61:ILE:O	2:D:61:ILE:CG2	2.69	0.40
2:D:148:CYS:HA	2:D:151:SER:HB3	2.04	0.40
1:E:71:LEU:CD2	1:E:146:ARG:HD2	2.50	0.40
1:E:293:GLN:NE2	1:E:306:TYR:HB2	2.36	0.40
1:G:153:LYS:HE3	1:G:190:THR:O	2.21	0.40
2:H:9:PHE:CE1	2:H:10:ILE:HG13	2.56	0.40
1:I:177:TRP:CE2	1:I:201:VAL:HG21	2.57	0.40
2:L:3:PHE:CE2	2:L:113:SER:HB2	2.56	0.40
2:L:65:SER:O	2:L:66:VAL:HG22	2.22	0.40
1:A:14:ASP:O	1:A:25:THR:HA	2.21	0.40
1:C:119:LYS:HB2	1:C:252:TRP:CE2	2.57	0.40
2:D:125:GLN:HE21	2:D:152:VAL:CG1	2.29	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	319/321 (99%)	298 (93%)	21 (7%)	0	100	100
1	C	319/321 (99%)	302 (95%)	16 (5%)	1 (0%)	37	61
1	E	319/321 (99%)	297 (93%)	20 (6%)	2 (1%)	22	45
1	G	319/321 (99%)	303 (95%)	14 (4%)	2 (1%)	22	45
1	I	319/321 (99%)	300 (94%)	16 (5%)	3 (1%)	14	35
1	K	319/321 (99%)	299 (94%)	19 (6%)	1 (0%)	37	61
2	B	154/156 (99%)	146 (95%)	5 (3%)	3 (2%)	6	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	D	154/156 (99%)	136 (88%)	11 (7%)	7 (4%)	2 4
2	F	154/156 (99%)	137 (89%)	15 (10%)	2 (1%)	10 26
2	H	154/156 (99%)	136 (88%)	13 (8%)	5 (3%)	3 8
2	J	154/156 (99%)	137 (89%)	13 (8%)	4 (3%)	4 11
2	L	154/156 (99%)	136 (88%)	14 (9%)	4 (3%)	4 11
All	All	2838/2862 (99%)	2627 (93%)	177 (6%)	34 (1%)	11 28

All (34) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	H	150	GLU
1	I	261	SER
2	J	63	PHE
2	L	128	ASN
2	D	127	ARG
2	D	154	ASN
2	F	61	ILE
2	H	63	PHE
1	I	262	SER
2	L	64	THR
2	B	67	GLY
2	B	127	ARG
2	D	39	LYS
2	D	129	ASN
2	D	143	LYS
1	E	261	SER
2	J	62	GLN
2	B	61	ILE
2	D	156	THR
1	G	112	GLU
2	H	149	MET
1	K	71	LEU
2	L	66	VAL
2	F	67	GLY
1	E	49	PRO
2	H	112	ASP
2	J	61	ILE
1	C	218	PRO
1	I	218	PRO
2	L	67	GLY

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Mol	Chain	Res	Type
2	H	67	GLY
2	J	67	GLY
2	D	67	GLY
1	G	155	GLY

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	282/282 (100%)	260 (92%)	22 (8%)	10 26
1	C	282/282 (100%)	259 (92%)	23 (8%)	9 23
1	E	282/282 (100%)	261 (93%)	21 (7%)	11 28
1	G	282/282 (100%)	250 (89%)	32 (11%)	4 11
1	I	282/282 (100%)	258 (92%)	24 (8%)	8 21
1	K	282/282 (100%)	262 (93%)	20 (7%)	12 30
2	B	134/134 (100%)	120 (90%)	14 (10%)	5 14
2	D	134/134 (100%)	114 (85%)	20 (15%)	2 6
2	F	134/134 (100%)	119 (89%)	15 (11%)	5 12
2	H	134/134 (100%)	115 (86%)	19 (14%)	2 7
2	J	134/134 (100%)	112 (84%)	22 (16%)	2 5
2	L	134/134 (100%)	121 (90%)	13 (10%)	6 17
All	All	2496/2496 (100%)	2251 (90%)	245 (10%)	6 16

All (245) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	2	THR
1	G	3	ILE
1	G	5	ILE
1	G	11	ASN
1	G	15	THR
1	G	30	VAL

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Mol	Chain	Res	Type
1	G	94	GLU
1	G	95	PHE
1	G	107	THR
1	G	110	SER
1	G	111	PHE
1	G	112	GLU
1	G	128	THR
1	G	129	THR
1	G	152	VAL
1	G	153	LYS
1	G	164	SER
1	G	190	THR
1	G	192	TYR
1	G	194	ASN
1	G	200	SER
1	G	217	ARG
1	G	220	VAL
1	G	236	GLN
1	G	259	LYS
1	G	261	SER
1	G	262	SER
1	G	268	SER
1	G	278	LYS
1	G	287	LYS
1	G	307	VAL
1	G	321	VAL
2	H	15	THR
2	H	25	HIS
2	H	26	HIS
2	H	29	GLU
2	H	30	GLN
2	H	52	VAL
2	H	60	ASN
2	H	62	GLN
2	H	63	PHE
2	H	64	THR
2	H	66	VAL
2	H	112	ASP
2	H	127	ARG
2	H	143	LYS
2	H	145	ASP
2	H	149	MET

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Mol	Chain	Res	Type
2	H	152	VAL
2	H	154	ASN
2	H	157	TYR
1	I	2	THR
1	I	15	THR
1	I	26	VAL
1	I	27	THR
1	I	57	VAL
1	I	111	PHE
1	I	121	THR
1	I	122	SER
1	I	129	THR
1	I	132	THR
1	I	135	SER
1	I	153	LYS
1	I	154	LYS
1	I	157	SER
1	I	171	LYS
1	I	192	TYR
1	I	195	ASN
1	I	200	SER
1	I	257	LEU
1	I	258	LYS
1	I	265	ILE
1	I	281	THR
1	I	300	ILE
1	I	318	LEU
2	J	2	LEU
2	J	22	TYR
2	J	27	ARG
2	J	30	GLN
2	J	38	LEU
2	J	39	LYS
2	J	61	ILE
2	J	62	GLN
2	J	116	LYS
2	J	122	VAL
2	J	123	LYS
2	J	124	SER
2	J	126	LEU
2	J	127	ARG
2	J	129	ASN

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Mol	Chain	Res	Type
2	J	131	LYS
2	J	132	GLU
2	J	133	ILE
2	J	142	HIS
2	J	143	LYS
2	J	147	GLU
2	J	148	CYS
1	K	1	ASP
1	K	43	SER
1	K	54	ASN
1	K	57	VAL
1	K	72	THR
1	K	84	ASN
1	K	95	PHE
1	K	130	ARG
1	K	132	THR
1	K	138	HIS
1	K	139	SER
1	K	153	LYS
1	K	154	LYS
1	K	175	VAL
1	K	186	SER
1	K	194	ASN
1	K	208	LYS
1	K	217	ARG
1	K	263	SER
1	K	321	VAL
2	L	27	ARG
2	L	29	GLU
2	L	39	LYS
2	L	40	SER
2	L	41	THR
2	L	60	ASN
2	L	66	VAL
2	L	126	LEU
2	L	127	ARG
2	L	129	ASN
2	L	144	CYS
2	L	149	MET
2	L	156	THR
1	A	5	ILE
1	A	18	THR

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Mol	Chain	Res	Type
1	A	57	VAL
1	A	69	LEU
1	A	71	LEU
1	A	86	LYS
1	A	95	PHE
1	A	139	SER
1	A	142	ASN
1	A	185	ASP
1	A	186	SER
1	A	189	GLN
1	A	194	ASN
1	A	213	GLU
1	A	220	VAL
1	A	221	ARG
1	A	262	SER
1	A	268	SER
1	A	287	LYS
1	A	289	ASN
1	A	318	LEU
1	A	321	VAL
2	B	2	LEU
2	B	19	ASP
2	B	30	GLN
2	B	38	LEU
2	B	49	SER
2	B	61	ILE
2	B	64	THR
2	B	66	VAL
2	B	121	LYS
2	B	126	LEU
2	B	127	ARG
2	B	139	GLU
2	B	156	THR
2	B	157	TYR
1	C	3	ILE
1	C	5	ILE
1	C	13	THR
1	C	15	THR
1	C	57	VAL
1	C	69	LEU
1	C	86	LYS
1	C	111	PHE

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Mol	Chain	Res	Type
1	C	127	ASP
1	C	135	SER
1	C	164	SER
1	C	171	LYS
1	C	184	THR
1	C	194	ASN
1	C	200	SER
1	C	219	LYS
1	C	221	ARG
1	C	279	CYS
1	C	298	VAL
1	C	299	THR
1	C	302	LYS
1	C	303	CYS
1	C	318	LEU
2	D	19	ASP
2	D	22	TYR
2	D	24	TYR
2	D	27	ARG
2	D	30	GLN
2	D	38	LEU
2	D	39	LYS
2	D	60	ASN
2	D	61	ILE
2	D	64	THR
2	D	123	LYS
2	D	127	ARG
2	D	129	ASN
2	D	131	LYS
2	D	132	GLU
2	D	148	CYS
2	D	152	VAL
2	D	153	LYS
2	D	156	THR
2	D	157	TYR
1	E	48	ILE
1	E	57	VAL
1	E	69	LEU
1	E	77	SER
1	E	82	THR
1	E	83	SER
1	E	94	GLU

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Mol	Chain	Res	Type
1	E	95	PHE
1	E	110	SER
1	E	121	THR
1	E	128	THR
1	E	134	VAL
1	E	138	HIS
1	E	153	LYS
1	E	175	VAL
1	E	195	ASN
1	E	221	ARG
1	E	222	GLU
1	E	271	GLN
1	E	298	VAL
1	E	321	VAL
2	F	11	GLU
2	F	15	THR
2	F	27	ARG
2	F	28	ASN
2	F	29	GLU
2	F	38	LEU
2	F	60	ASN
2	F	61	ILE
2	F	62	GLN
2	F	64	THR
2	F	68	LYS
2	F	93	THR
2	F	98	LEU
2	F	144	CYS
2	F	148	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (45) such sidechains are listed below:

Mol	Chain	Res	Type
1	G	31	ASN
1	G	194	ASN
1	G	228	ASN
1	G	271	GLN
1	G	289	ASN
2	H	28	ASN
1	I	87	ASN
1	I	126	HIS
1	I	167	ASN

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Mol	Chain	Res	Type
1	I	193	GLN
1	I	194	ASN
1	I	273	HIS
1	I	320	ASN
2	J	30	GLN
2	J	50	ASN
1	K	8	HIS
1	K	10	ASN
1	K	138	HIS
1	K	283	HIS
1	K	294	ASN
1	K	311	GLN
2	L	26	HIS
1	A	31	ASN
1	A	45	ASN
1	A	236	GLN
1	A	273	HIS
1	A	280	GLN
2	B	25	HIS
1	C	156	ASN
1	C	188	GLN
1	C	273	HIS
1	C	283	HIS
2	D	50	ASN
1	E	28	HIS
1	E	45	ASN
1	E	125	ASN
1	E	194	ASN
1	E	236	GLN
1	E	253	HIS
2	F	26	HIS
2	F	28	ASN
2	F	30	GLN
2	F	60	ASN
2	F	79	ASN
2	F	142	HIS

5.3.3 RNA

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	NAG	G	403	1	14,14,15	0.27	0	17,19,21	0.79	1 (5%)
3	NAG	E	404	1	14,14,15	0.28	0	17,19,21	0.65	0
3	NAG	G	401	1	14,14,15	0.32	0	17,19,21	0.77	0
3	NAG	A	404	1	14,14,15	0.28	0	17,19,21	0.63	0
3	NAG	E	402	1	14,14,15	0.41	0	17,19,21	0.81	0
3	NAG	A	402	1	14,14,15	0.34	0	17,19,21	1.13	2 (11%)
3	NAG	A	403	1	14,14,15	0.28	0	17,19,21	0.69	0
3	NAG	I	404	1	14,14,15	0.29	0	17,19,21	0.94	0
3	NAG	K	403	1	14,14,15	0.31	0	17,19,21	0.88	1 (5%)
3	NAG	I	403	1	14,14,15	0.29	0	17,19,21	0.77	1 (5%)
3	NAG	C	404	1	14,14,15	0.29	0	17,19,21	0.72	0
3	NAG	G	404	1	14,14,15	0.28	0	17,19,21	0.68	0
3	NAG	I	401	1	14,14,15	0.28	0	17,19,21	0.75	0
3	NAG	K	401	1	14,14,15	0.27	0	17,19,21	0.96	0
3	NAG	C	403	1	14,14,15	0.26	0	17,19,21	0.88	0
3	NAG	K	402	1	14,14,15	0.32	0	17,19,21	0.70	0
3	NAG	E	403	1	14,14,15	0.30	0	17,19,21	0.73	0
3	NAG	C	401	1	14,14,15	0.26	0	17,19,21	0.78	0
3	NAG	C	402	1	14,14,15	0.28	0	17,19,21	0.87	0
3	NAG	E	401	1	14,14,15	0.32	0	17,19,21	0.79	0
3	NAG	G	402	1	14,14,15	0.27	0	17,19,21	0.59	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	NAG	I	402	1	14,14,15	0.32	0	17,19,21	0.89	0
3	NAG	K	404	1	14,14,15	0.28	0	17,19,21	0.67	0
3	NAG	A	401	1	14,14,15	0.29	0	17,19,21	0.77	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	G	403	1	-	4/6/23/26	0/1/1/1
3	NAG	E	404	1	-	2/6/23/26	0/1/1/1
3	NAG	G	401	1	-	2/6/23/26	0/1/1/1
3	NAG	A	404	1	-	2/6/23/26	0/1/1/1
3	NAG	E	402	1	-	0/6/23/26	0/1/1/1
3	NAG	A	402	1	-	4/6/23/26	0/1/1/1
3	NAG	A	403	1	-	2/6/23/26	0/1/1/1
3	NAG	I	404	1	-	2/6/23/26	0/1/1/1
3	NAG	K	403	1	-	4/6/23/26	0/1/1/1
3	NAG	I	403	1	-	2/6/23/26	0/1/1/1
3	NAG	C	404	1	-	0/6/23/26	0/1/1/1
3	NAG	G	404	1	-	2/6/23/26	0/1/1/1
3	NAG	I	401	1	-	4/6/23/26	0/1/1/1
3	NAG	K	401	1	-	2/6/23/26	0/1/1/1
3	NAG	C	403	1	-	0/6/23/26	0/1/1/1
3	NAG	K	402	1	-	2/6/23/26	0/1/1/1
3	NAG	E	403	1	-	2/6/23/26	0/1/1/1
3	NAG	C	401	1	-	0/6/23/26	0/1/1/1
3	NAG	C	402	1	-	0/6/23/26	0/1/1/1
3	NAG	E	401	1	-	2/6/23/26	0/1/1/1
3	NAG	G	402	1	-	4/6/23/26	0/1/1/1
3	NAG	I	402	1	-	0/6/23/26	0/1/1/1
3	NAG	K	404	1	-	2/6/23/26	0/1/1/1
3	NAG	A	401	1	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	402	NAG	C2-N2-C7	-2.50	119.35	122.90
3	K	403	NAG	O5-C5-C6	2.42	111.00	107.20
3	G	403	NAG	O5-C5-C6	2.22	110.68	107.20
3	I	403	NAG	O5-C5-C6	2.08	110.46	107.20
3	A	402	NAG	O5-C5-C6	2.00	110.34	107.20

There are no chirality outliers.

All (44) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	G	401	NAG	C8-C7-N2-C2
3	G	401	NAG	O7-C7-N2-C2
3	G	402	NAG	C8-C7-N2-C2
3	G	402	NAG	O7-C7-N2-C2
3	G	404	NAG	C8-C7-N2-C2
3	G	404	NAG	O7-C7-N2-C2
3	K	403	NAG	O7-C7-N2-C2
3	A	404	NAG	C8-C7-N2-C2
3	A	404	NAG	O7-C7-N2-C2
3	K	403	NAG	C8-C7-N2-C2
3	G	403	NAG	C8-C7-N2-C2
3	G	403	NAG	O7-C7-N2-C2
3	I	401	NAG	C8-C7-N2-C2
3	E	403	NAG	O5-C5-C6-O6
3	K	403	NAG	C4-C5-C6-O6
3	I	401	NAG	O7-C7-N2-C2
3	E	401	NAG	C8-C7-N2-C2
3	E	401	NAG	O7-C7-N2-C2
3	G	403	NAG	C4-C5-C6-O6
3	K	403	NAG	O5-C5-C6-O6
3	A	402	NAG	C8-C7-N2-C2
3	G	403	NAG	O5-C5-C6-O6
3	K	401	NAG	C8-C7-N2-C2
3	I	404	NAG	C4-C5-C6-O6
3	E	404	NAG	C4-C5-C6-O6
3	E	403	NAG	C4-C5-C6-O6
3	K	404	NAG	C4-C5-C6-O6
3	I	404	NAG	O5-C5-C6-O6
3	A	402	NAG	O7-C7-N2-C2
3	E	404	NAG	O5-C5-C6-O6
3	K	401	NAG	O7-C7-N2-C2
3	I	403	NAG	C4-C5-C6-O6
3	A	402	NAG	C4-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
3	G	402	NAG	C4-C5-C6-O6
3	I	401	NAG	C4-C5-C6-O6
3	K	404	NAG	O5-C5-C6-O6
3	A	403	NAG	C4-C5-C6-O6
3	I	403	NAG	O5-C5-C6-O6
3	A	402	NAG	O5-C5-C6-O6
3	I	401	NAG	O5-C5-C6-O6
3	G	402	NAG	O5-C5-C6-O6
3	A	403	NAG	O5-C5-C6-O6
3	K	402	NAG	C4-C5-C6-O6
3	K	402	NAG	O5-C5-C6-O6

There are no ring outliers.

4 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	404	NAG	1	0
3	A	402	NAG	3	0
3	K	403	NAG	1	0
3	I	402	NAG	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, 95^{th} 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	321/321 (100%)	1.09	48 (14%)	6	6	18, 46, 70, 104	0
1	C	321/321 (100%)	1.04	47 (14%)	7	6	14, 48, 76, 105	0
1	E	321/321 (100%)	1.00	34 (10%)	13	12	16, 48, 69, 88	0
1	G	321/321 (100%)	0.75	33 (10%)	13	12	15, 38, 69, 112	0
1	I	321/321 (100%)	0.81	28 (8%)	17	16	14, 45, 70, 110	0
1	K	321/321 (100%)	0.92	40 (12%)	9	9	15, 45, 73, 102	0
2	B	156/156 (100%)	1.39	41 (26%)	2	2	15, 60, 98, 130	0
2	D	156/156 (100%)	1.75	59 (37%)	1	1	16, 66, 128, 140	0
2	F	156/156 (100%)	1.33	40 (25%)	2	2	17, 60, 94, 115	0
2	H	156/156 (100%)	1.61	58 (37%)	1	1	16, 73, 111, 130	0
2	J	156/156 (100%)	1.79	68 (43%)	1	1	17, 73, 118, 135	0
2	L	156/156 (100%)	1.74	65 (41%)	1	1	13, 69, 111, 120	0
All	All	2862/2862 (100%)	1.15	561 (19%)	4	4	13, 50, 97, 140	0

All (561) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	157	TYR	6.3
2	F	64	THR	6.2
2	H	63	PHE	6.1
1	C	4	CYS	6.0
2	L	35	ALA	5.8
2	D	157	TYR	5.7
2	D	61	ILE	5.6
2	D	156	THR	5.6
2	L	18	VAL	5.6
2	J	61	ILE	5.5
1	I	3	ILE	5.4

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Mol	Chain	Res	Type	RSRZ
2	D	63	PHE	5.4
1	C	279	CYS	5.3
2	D	19	ASP	5.3
2	H	62	GLN	5.2
2	D	33	GLY	5.2
2	F	61	ILE	5.2
1	C	140	GLY	5.2
2	D	27	ARG	5.1
2	L	149	MET	5.0
2	D	138	PHE	5.0
1	A	3	ILE	4.9
2	L	64	THR	4.9
2	F	35	ALA	4.8
1	K	138	HIS	4.7
1	G	287	LYS	4.7
2	J	35	ALA	4.7
2	F	66	VAL	4.7
2	J	62	GLN	4.7
1	K	143	SER	4.6
2	H	24	TYR	4.6
2	L	65	SER	4.6
2	J	23	GLY	4.6
2	J	63	PHE	4.6
2	B	63	PHE	4.6
1	C	303	CYS	4.6
2	H	140	PHE	4.5
2	J	33	GLY	4.5
1	K	139	SER	4.5
2	L	33	GLY	4.5
1	K	3	ILE	4.5
2	D	152	VAL	4.5
1	G	262	SER	4.5
2	H	35	ALA	4.5
2	D	154	ASN	4.4
2	H	23	GLY	4.4
2	J	30	GLN	4.4
2	J	22	TYR	4.4
2	J	19	ASP	4.4
2	L	140	PHE	4.4
1	E	138	HIS	4.4
1	A	153	LYS	4.4
2	J	138	PHE	4.4

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Mol	Chain	Res	Type	RSRZ
2	L	138	PHE	4.4
2	D	144	CYS	4.4
1	E	262	SER	4.4
2	B	24	TYR	4.3
2	H	150	GLU	4.3
1	A	189	GLN	4.3
1	A	222	GLU	4.3
2	H	21	TRP	4.2
2	D	62	GLN	4.2
1	G	5	ILE	4.2
2	J	17	MET	4.2
1	A	1	ASP	4.2
1	E	139	SER	4.2
2	F	65	SER	4.1
2	B	23	GLY	4.1
1	I	5	ILE	4.1
2	L	150	GLU	4.1
2	D	66	VAL	4.1
1	I	140	GLY	4.1
2	D	134	GLY	4.1
2	L	63	PHE	4.1
2	J	24	TYR	4.1
2	H	138	PHE	4.1
2	F	138	PHE	4.1
2	L	38	LEU	4.0
2	H	149	MET	4.0
1	E	153	LYS	4.0
2	F	63	PHE	4.0
1	A	287	LYS	4.0
1	G	130	ARG	4.0
2	H	64	THR	4.0
2	D	25	HIS	4.0
1	A	111	PHE	4.0
1	K	4	CYS	3.9
2	L	127	ARG	3.9
1	A	2	THR	3.9
1	A	186	SER	3.9
2	B	33	GLY	3.9
2	B	62	GLN	3.9
2	F	24	TYR	3.9
2	H	26	HIS	3.8
1	E	264	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
2	J	36	ALA	3.8
2	H	142	HIS	3.8
2	L	157	TYR	3.8
2	J	25	HIS	3.7
2	J	16	GLY	3.7
2	D	130	ALA	3.7
1	C	1	ASP	3.7
2	H	144	CYS	3.7
2	F	144	CYS	3.7
2	L	24	TYR	3.7
2	D	64	THR	3.7
1	I	4	CYS	3.7
2	D	119	TYR	3.6
2	B	30	GLN	3.6
1	E	5	ILE	3.6
1	E	193	GLN	3.6
1	G	1	ASP	3.6
2	J	152	VAL	3.6
2	F	18	VAL	3.6
1	C	317	GLY	3.6
2	H	134	GLY	3.6
2	B	26	HIS	3.6
2	D	153	LYS	3.6
2	B	35	ALA	3.6
2	H	141	TYR	3.6
2	J	34	TYR	3.6
1	E	3	ILE	3.6
2	J	31	GLY	3.6
2	J	140	PHE	3.6
2	L	19	ASP	3.5
1	E	154	LYS	3.5
2	H	22	TYR	3.5
2	D	142	HIS	3.5
2	D	140	PHE	3.5
2	L	23	GLY	3.5
1	E	137	SER	3.5
1	E	321	VAL	3.5
2	D	32	SER	3.5
2	J	130	ALA	3.4
2	D	124	SER	3.4
2	F	62	GLN	3.4
2	D	141	TYR	3.4

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Mol	Chain	Res	Type	RSRZ
2	D	143	LYS	3.4
1	K	5	ILE	3.4
1	A	318	LEU	3.4
1	E	141	ALA	3.4
1	A	152	VAL	3.4
1	K	125	ASN	3.4
1	E	6	GLY	3.4
2	J	136	GLY	3.4
2	B	144	CYS	3.4
2	D	149	MET	3.4
1	E	72	THR	3.4
2	B	64	THR	3.4
2	J	157	TYR	3.4
1	K	16	VAL	3.4
2	D	155	GLY	3.4
2	D	126	LEU	3.4
2	L	7	ALA	3.3
2	L	145	ASP	3.3
2	L	125	GLN	3.3
1	K	23	ASN	3.3
1	K	262	SER	3.3
1	G	321	VAL	3.3
1	K	26	VAL	3.3
1	E	191	LEU	3.3
2	H	2	LEU	3.3
2	L	31	GLY	3.3
2	B	138	PHE	3.3
2	J	64	THR	3.3
2	D	20	GLY	3.3
2	J	32	SER	3.3
2	D	34	TYR	3.3
1	I	16	VAL	3.3
2	L	66	VAL	3.3
2	F	67	GLY	3.3
1	E	320	ASN	3.3
2	L	136	GLY	3.2
2	D	137	CYS	3.2
1	A	187	ASP	3.2
1	C	301	GLY	3.2
2	H	61	ILE	3.2
1	G	9	ALA	3.2
2	H	123	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
2	B	32	SER	3.2
1	G	318	LEU	3.2
2	B	20	GLY	3.2
2	L	142	HIS	3.1
2	H	126	LEU	3.1
1	G	112	GLU	3.1
1	G	302	LYS	3.1
1	C	289	ASN	3.1
2	H	124	SER	3.1
2	J	66	VAL	3.1
1	K	140	GLY	3.1
2	L	22	TYR	3.1
2	L	144	CYS	3.1
2	H	133	ILE	3.1
2	L	21	TRP	3.1
2	J	6	ILE	3.1
1	I	74	ASN	3.1
2	B	27	ARG	3.1
2	F	140	PHE	3.1
2	J	28	ASN	3.0
2	J	124	SER	3.0
2	D	151	SER	3.0
1	A	301	GLY	3.0
1	C	153	LYS	3.0
2	J	148	CYS	3.0
2	J	127	ARG	3.0
2	H	116	LYS	3.0
1	A	164	SER	3.0
2	L	26	HIS	3.0
1	G	131	GLY	3.0
2	D	150	GLU	3.0
1	C	158	TYR	3.0
1	K	132	THR	3.0
2	B	36	ALA	3.0
2	L	131	LYS	3.0
2	D	6	ILE	2.9
2	J	141	TYR	2.9
1	C	2	THR	2.9
1	E	1	ASP	2.9
1	E	120	ALA	2.9
1	A	11	ASN	2.9
1	C	11	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
2	L	20	GLY	2.9
2	J	65	SER	2.9
2	L	118	LEU	2.9
1	E	299	THR	2.9
1	I	1	ASP	2.9
1	E	125	ASN	2.9
2	D	129	ASN	2.9
2	B	31	GLY	2.9
2	J	26	HIS	2.9
2	J	14	TRP	2.9
2	L	27	ARG	2.9
2	L	153	LYS	2.9
1	I	321	VAL	2.9
1	K	298	VAL	2.9
2	L	62	GLN	2.9
2	J	2	LEU	2.9
2	L	61	ILE	2.9
2	B	65	SER	2.9
2	H	25	HIS	2.8
2	J	27	ARG	2.8
2	B	29	GLU	2.8
1	G	77	SER	2.8
2	L	152	VAL	2.8
1	K	318	LEU	2.8
1	A	279	CYS	2.8
2	B	153	LYS	2.8
1	C	157	SER	2.8
2	D	122	VAL	2.8
1	A	193	GLN	2.8
1	A	288	GLY	2.8
1	I	9	ALA	2.8
1	G	317	GLY	2.8
2	J	37	ASP	2.8
1	C	3	ILE	2.8
2	F	11	GLU	2.8
1	G	129	THR	2.8
1	C	150	TRP	2.8
2	H	36	ALA	2.8
2	J	119	TYR	2.8
2	H	27	ARG	2.8
1	C	151	ILE	2.7
2	B	61	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
1	E	194	ASN	2.7
2	H	139	GLU	2.7
1	C	152	VAL	2.7
1	G	311	GLN	2.7
1	E	271	GLN	2.7
2	F	32	SER	2.7
2	J	7	ALA	2.7
2	J	156	THR	2.7
1	K	287	LYS	2.7
2	H	153	LYS	2.7
2	L	141	TYR	2.7
1	A	321	VAL	2.7
1	G	189	GLN	2.7
1	C	139	SER	2.7
2	D	123	LYS	2.7
2	H	136	GLY	2.7
2	F	136	GLY	2.7
1	C	300	ILE	2.7
1	I	24	VAL	2.7
1	G	299	THR	2.7
2	F	2	LEU	2.7
2	H	132	GLU	2.7
2	D	131	LYS	2.7
1	A	16	VAL	2.7
1	C	111	PHE	2.7
1	E	124	PRO	2.7
2	L	12	GLY	2.7
2	F	33	GLY	2.7
2	J	133	ILE	2.7
2	D	22	TYR	2.6
2	B	19	ASP	2.6
1	A	168	ASN	2.6
1	C	44	LEU	2.6
2	J	126	LEU	2.6
2	H	3	PHE	2.6
2	J	111	HIS	2.6
2	L	148	CYS	2.6
1	A	131	GLY	2.6
2	J	147	GLU	2.6
1	G	303	CYS	2.6
1	I	36	SER	2.6
1	K	150	TRP	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	139	SER	2.6
1	A	261	SER	2.6
2	D	65	SER	2.6
2	L	132	GLU	2.6
1	I	158	TYR	2.6
2	J	143	LYS	2.6
2	L	119	TYR	2.6
2	D	30	GLN	2.6
2	L	133	ILE	2.6
1	K	158	TYR	2.6
1	C	74	ASN	2.6
2	D	2	LEU	2.6
1	I	15	THR	2.6
2	D	31	GLY	2.6
1	C	222	GLU	2.5
1	I	10	ASN	2.5
1	E	298	VAL	2.5
2	H	18	VAL	2.5
2	H	129	ASN	2.5
1	E	221	ARG	2.5
1	I	265	ILE	2.5
2	J	116	LYS	2.5
1	C	143	SER	2.5
2	L	32	SER	2.5
1	G	279	CYS	2.5
2	H	119	TYR	2.5
2	H	157	TYR	2.5
2	H	19	ASP	2.5
2	B	152	VAL	2.5
2	D	36	ALA	2.5
1	K	155	GLY	2.5
2	J	41	THR	2.5
2	J	21	TRP	2.5
1	A	262	SER	2.5
1	C	135	SER	2.5
2	H	122	VAL	2.5
1	C	127	ASP	2.5
2	F	25	HIS	2.5
1	C	7	TYR	2.5
1	K	1	ASP	2.5
1	E	23	ASN	2.5
2	J	135	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
2	B	139	GLU	2.4
1	I	191	LEU	2.4
1	A	221	ARG	2.4
2	F	127	ARG	2.4
1	G	4	CYS	2.4
1	K	283	HIS	2.4
2	L	39	LYS	2.4
1	C	9	ALA	2.4
1	A	5	ILE	2.4
2	D	28	ASN	2.4
2	F	4	GLY	2.4
2	F	139	GLU	2.4
1	K	123	TRP	2.4
2	B	140	PHE	2.4
1	C	315	ALA	2.4
2	L	48	ILE	2.4
2	B	22	TYR	2.4
1	G	74	ASN	2.4
1	K	6	GLY	2.4
2	H	33	GLY	2.4
2	J	67	GLY	2.4
1	K	129	THR	2.4
2	J	29	GLU	2.4
1	A	22	LYS	2.4
1	A	8	HIS	2.4
1	C	263	SER	2.4
2	H	65	SER	2.4
2	H	66	VAL	2.4
1	K	141	ALA	2.4
2	F	22	TYR	2.4
1	A	289	ASN	2.4
2	D	23	GLY	2.4
2	H	131	LYS	2.4
2	J	153	LYS	2.4
2	L	17	MET	2.4
2	D	21	TRP	2.4
1	I	139	SER	2.4
1	E	263	SER	2.4
1	C	5	ILE	2.4
1	K	260	GLY	2.4
1	I	156	ASN	2.4
1	I	281	THR	2.3

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Mol	Chain	Res	Type	RSRZ
2	L	156	THR	2.3
2	H	29	GLU	2.3
2	F	38	LEU	2.3
1	C	124	PRO	2.3
2	D	26	HIS	2.3
2	B	21	TRP	2.3
2	F	3	PHE	2.3
1	G	186	SER	2.3
1	E	155	GLY	2.3
1	G	2	THR	2.3
2	J	11	GLU	2.3
2	D	120	GLU	2.3
2	J	123	LYS	2.3
2	F	149	MET	2.3
2	B	25	HIS	2.3
1	A	141	ALA	2.3
2	D	35	ALA	2.3
2	F	124	SER	2.3
1	G	78	TYR	2.3
1	G	320	ASN	2.3
2	H	38	LEU	2.3
2	H	15	THR	2.3
1	I	279	CYS	2.3
2	H	120	GLU	2.3
2	B	156	THR	2.3
2	F	132	GLU	2.3
1	G	271	GLN	2.3
2	L	14	TRP	2.3
2	L	56	ILE	2.3
1	K	261	SER	2.3
1	E	261	SER	2.3
2	H	32	SER	2.3
2	H	113	SER	2.3
1	K	131	GLY	2.3
1	K	319	ARG	2.3
1	C	21	GLU	2.3
1	C	129	THR	2.3
2	H	127	ARG	2.3
2	H	128	ASN	2.3
2	J	150	GLU	2.3
2	L	34	TYR	2.3
2	L	137	CYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	C	271	GLN	2.3
1	C	265	ILE	2.3
2	L	10	ILE	2.3
2	J	13	GLY	2.3
2	J	151	SER	2.3
2	F	8	GLY	2.3
2	F	23	GLY	2.3
2	F	31	GLY	2.3
2	L	116	LYS	2.2
1	I	316	THR	2.2
1	K	84	ASN	2.2
2	J	42	GLN	2.2
1	E	130	ARG	2.2
1	I	291	PRO	2.2
2	J	15	THR	2.2
1	C	192	TYR	2.2
2	D	24	TYR	2.2
1	I	26	VAL	2.2
2	B	55	VAL	2.2
2	H	5	ALA	2.2
1	A	159	PRO	2.2
1	C	18	THR	2.2
1	A	74	ASN	2.2
2	L	28	ASN	2.2
2	B	117	ASN	2.2
2	J	109	ASP	2.2
1	G	26	VAL	2.2
1	C	144	PHE	2.2
2	J	137	CYS	2.2
2	L	9	PHE	2.2
2	L	115	VAL	2.2
2	B	66	VAL	2.2
1	A	69	LEU	2.2
1	I	155	GLY	2.2
2	D	14	TRP	2.2
1	K	222	GLU	2.2
2	L	139	GLU	2.2
2	D	29	GLU	2.2
2	L	25	HIS	2.2
1	A	198	TYR	2.2
2	L	154	ASN	2.2
1	K	321	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
1	C	321	VAL	2.2
2	L	122	VAL	2.2
2	D	133	ILE	2.2
1	A	303	CYS	2.2
1	G	191	LEU	2.2
2	H	118	LEU	2.2
1	A	246	GLY	2.2
2	D	13	GLY	2.2
2	F	134	GLY	2.2
1	G	132	THR	2.1
2	F	26	HIS	2.1
2	J	146	ASN	2.1
2	H	112	ASP	2.1
1	K	265	ILE	2.1
2	B	18	VAL	2.1
2	B	143	LYS	2.1
1	A	73	ALA	2.1
2	B	148	CYS	2.1
2	F	36	ALA	2.1
2	D	127	ARG	2.1
2	J	20	GLY	2.1
2	B	150	GLU	2.1
2	D	132	GLU	2.1
1	I	8	HIS	2.1
2	F	40	SER	2.1
2	H	121	LYS	2.1
2	B	135	ASN	2.1
2	F	153	LYS	2.1
1	A	127	ASP	2.1
2	L	45	ILE	2.1
2	J	38	LEU	2.1
1	K	270	ALA	2.1
1	E	244	ALA	2.1
1	E	260	GLY	2.1
2	H	20	GLY	2.1
2	B	4	GLY	2.1
2	F	20	GLY	2.1
2	L	29	GLU	2.1
2	B	142	HIS	2.1
1	G	289	ASN	2.1
1	K	134	VAL	2.1
2	J	100	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	K	289	ASN	2.1
1	A	194	ASN	2.1
1	C	84	ASN	2.1
2	D	42	GLN	2.1
1	C	286	LEU	2.1
2	H	99	LEU	2.1
1	G	319	ARG	2.1
1	K	130	ARG	2.1
1	C	250	ALA	2.1
2	J	134	GLY	2.1
1	G	153	LYS	2.1
1	K	40	LYS	2.1
1	K	2	THR	2.1
2	L	40	SER	2.1
2	B	113	SER	2.1
1	E	292	PHE	2.1
2	J	18	VAL	2.1
1	A	191	LEU	2.1
2	L	126	LEU	2.1
2	B	60	ASN	2.1
1	G	7	TYR	2.1
2	F	157	TYR	2.1
1	A	319	ARG	2.1
1	A	140	GLY	2.1
1	I	218	PRO	2.0
1	I	136	CYS	2.0
1	A	94	GLU	2.0
2	J	144	CYS	2.0
1	A	299	THR	2.0
1	E	2	THR	2.0
1	C	188	GLN	2.0
1	C	272	VAL	2.0
1	K	149	LEU	2.0
2	L	129	ASN	2.0
2	F	28	ASN	2.0
2	F	34	TYR	2.0
2	D	7	ALA	2.0
1	A	218	PRO	2.0
1	A	90	CYS	2.0
1	A	107	THR	2.0
1	C	15	THR	2.0
2	H	156	THR	2.0

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Mol	Chain	Res	Type	RSRZ
1	I	271	GLN	2.0
1	C	16	VAL	2.0
2	H	152	VAL	2.0
2	L	128	ASN	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 oligosaccharides 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, 95^{th} 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	NAG	E	402	14/15	0.05	0.51	30,30,30,30	0
3	NAG	G	404	14/15	0.34	0.31	30,30,30,30	0
3	NAG	A	404	14/15	0.35	0.27	30,30,30,30	0
3	NAG	G	401	14/15	0.39	0.38	30,30,30,30	0
3	NAG	G	402	14/15	0.46	0.30	30,30,30,30	0
3	NAG	K	402	14/15	0.52	0.33	30,30,30,30	0
3	NAG	K	403	14/15	0.52	0.33	30,30,30,30	0
3	NAG	C	401	14/15	0.53	0.32	30,30,30,30	0
3	NAG	K	401	14/15	0.53	0.23	30,30,30,30	0
3	NAG	C	402	14/15	0.55	0.23	30,30,30,30	0
3	NAG	A	402	14/15	0.56	0.37	30,30,30,30	0
3	NAG	C	403	14/15	0.57	0.23	30,30,30,30	0
3	NAG	I	401	14/15	0.57	0.26	30,30,30,30	0
3	NAG	E	401	14/15	0.59	0.24	30,30,30,30	0
3	NAG	A	401	14/15	0.59	0.28	30,30,30,30	0
3	NAG	E	403	14/15	0.61	0.23	30,30,30,30	0
3	NAG	K	404	14/15	0.63	0.23	30,30,30,30	0
3	NAG	I	404	14/15	0.63	0.26	30,30,30,30	0
3	NAG	E	404	14/15	0.63	0.31	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	NAG	I	402	14/15	0.66	0.28	30,30,30,30	0
3	NAG	C	404	14/15	0.66	0.28	30,30,30,30	0
3	NAG	I	403	14/15	0.68	0.25	30,30,30,30	0
3	NAG	G	403	14/15	0.71	0.21	30,30,30,30	0
3	NAG	A	403	14/15	0.72	0.27	30,30,30,30	0

6.5 Other polymers (i)

There are no such residues in this entry.