



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 6, 2022 – 01:09 pm BST

PDB ID : 6ZC5
Title : Human Adenovirus serotype D10 FiberKnob protein
Authors : Baker, A.T.; Mundy, R.M.; Rizkallah, P.J.; Parker, A.L.
Deposited on : 2020-06-09
Resolution : 2.50 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at <http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.29
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0267
CCP4 : 7.1.010 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.29

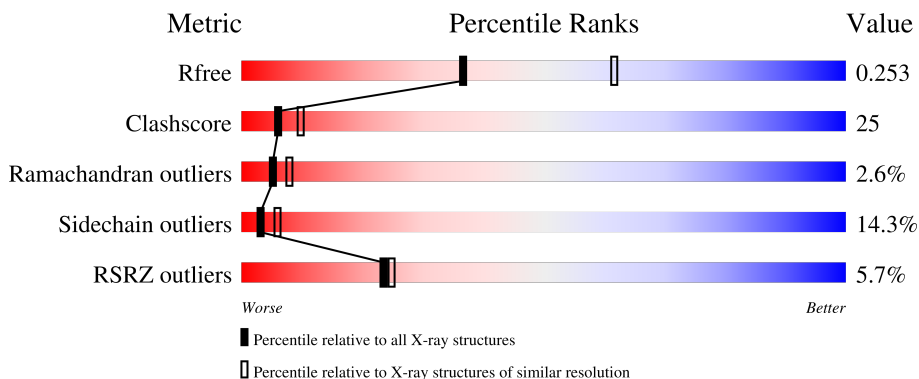
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.50 Å.

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





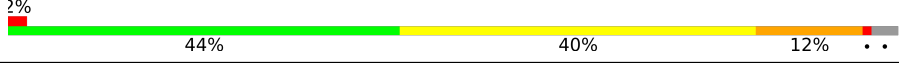
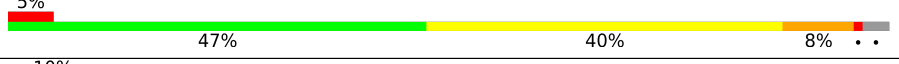

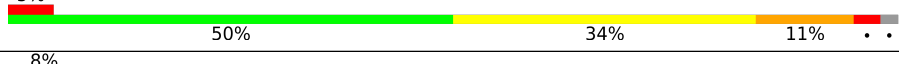

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4661 (2.50-2.50)
Clashscore	141614	5346 (2.50-2.50)
Ramachandran outliers	138981	5231 (2.50-2.50)
Sidechain outliers	138945	5233 (2.50-2.50)
RSRZ outliers	127900	4559 (2.50-2.50)

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	189	 4% 56% 36% 5%
1	B	189	 7% 61% 30%
1	C	189	 12% 54% 38%
1	D	189	 % 45% 40% 12%
1	E	189	 4% 44% 40% 13%

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Mol	Chain	Length	Quality of chain
1	F	189	 <p>7% 52% 41% 5% .</p>
1	G	189	 <p>3% 56% 34% 10%</p>
1	H	189	 <p>2% 44% 40% 12% . .</p>
1	I	189	 <p>5% 47% 40% 8% . .</p>
1	J	189	 <p>10% 56% 37% . . .</p>
1	K	189	 <p>5% 50% 34% 11% . .</p>
1	L	189	 <p>8% 56% 32% 9% . .</p>

2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 17536 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.

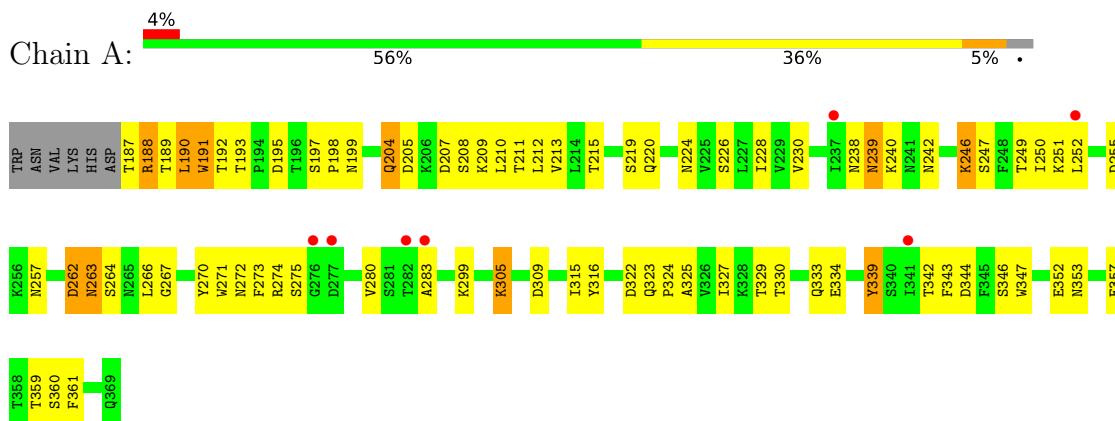
- Molecule 1 is a protein called Fiber.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	183	1450	929	234	283	4	0	0	0
1	B	183	1450	929	234	283	4	0	0	0
1	C	183	1450	929	234	283	4	0	0	0
1	D	184	1458	933	235	286	4	0	0	0
1	E	186	1477	945	240	288	4	0	0	0
1	F	186	1477	945	240	288	4	0	0	0
1	G	189	1506	965	245	292	4	0	0	0
1	H	183	1450	929	234	283	4	0	0	0
1	I	183	1450	929	234	283	4	0	0	0
1	J	183	1450	929	234	283	4	0	0	0
1	K	185	1468	939	238	287	4	0	0	0
1	L	183	1450	929	234	283	4	0	0	0

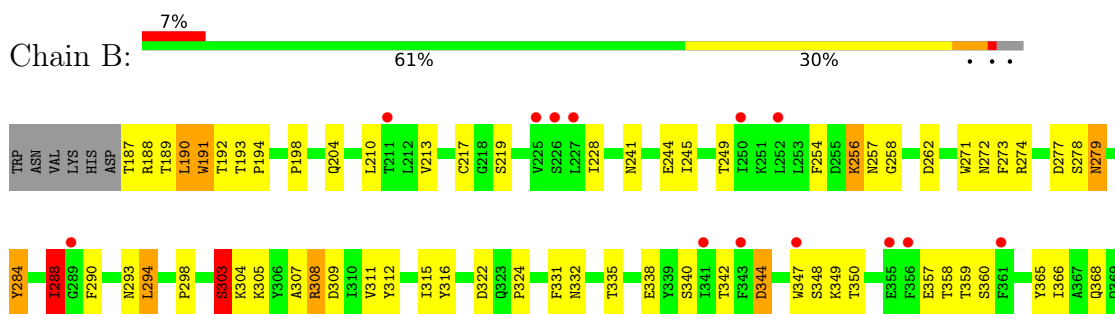
3 Residue-property plots

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.

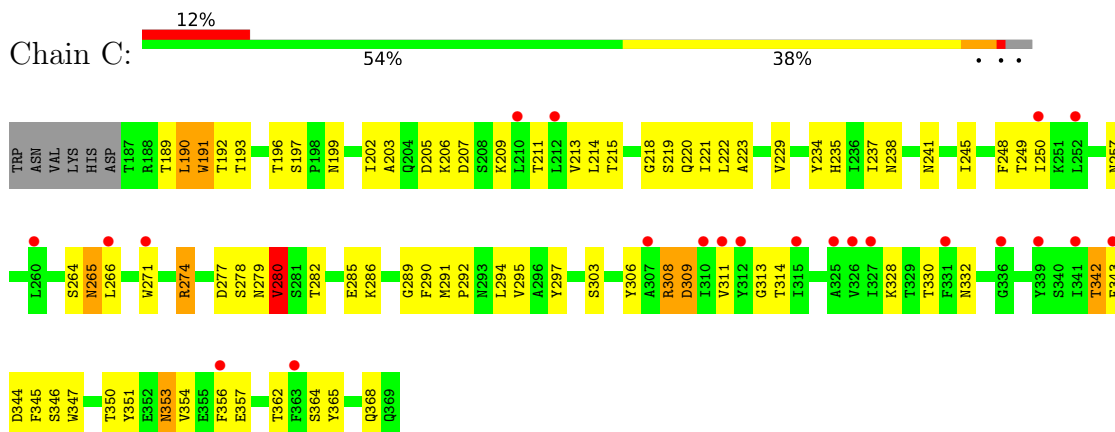
- Molecule 1: Fiber



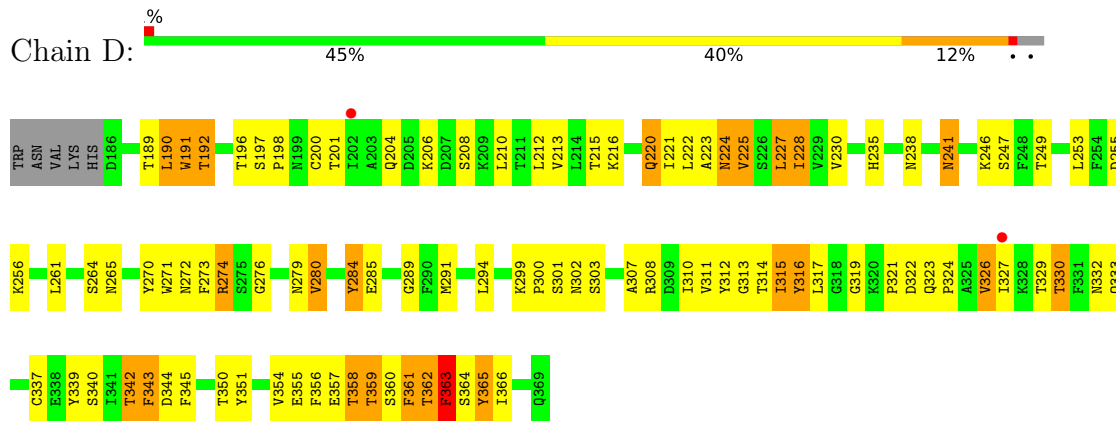
- Molecule 1: Fiber



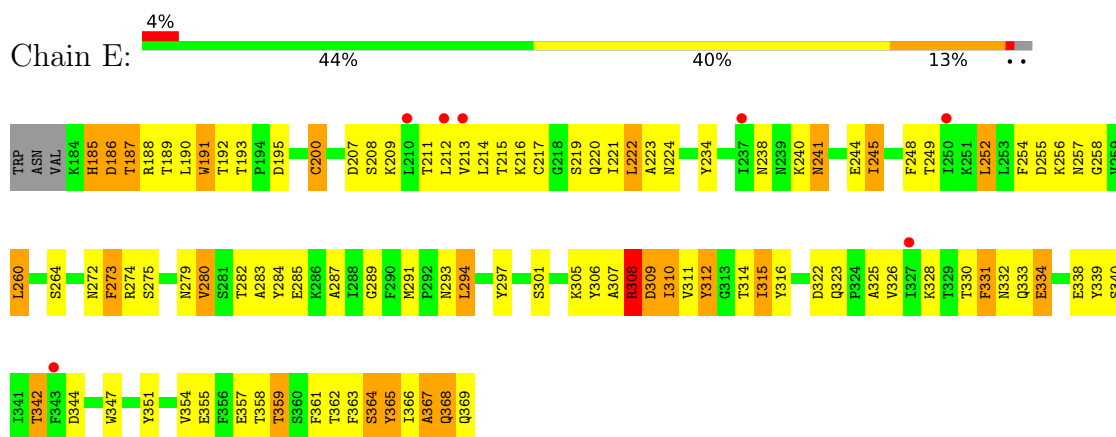
- Molecule 1: Fiber



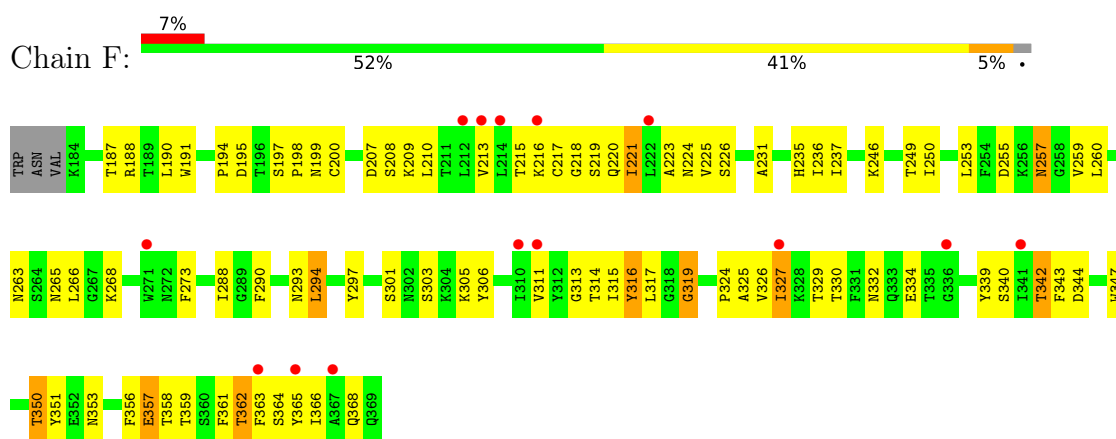
● Molecule 1: Fiber



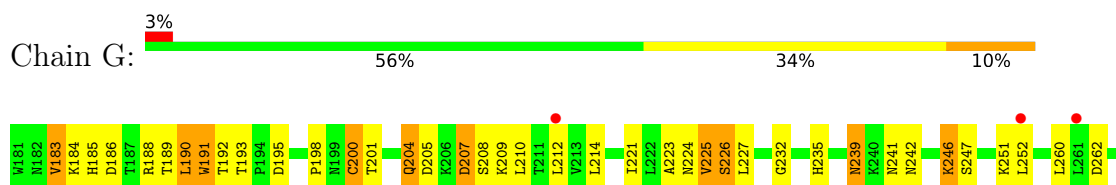
● Molecule 1: Fiber

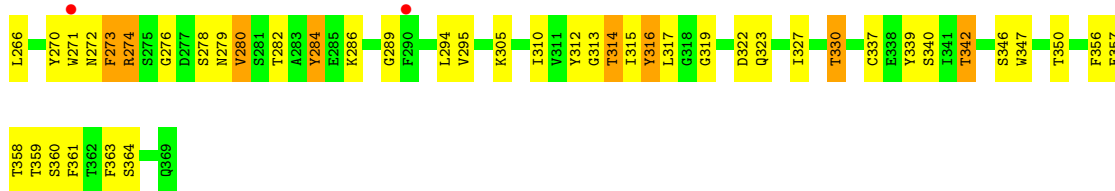


● Molecule 1: Fiber

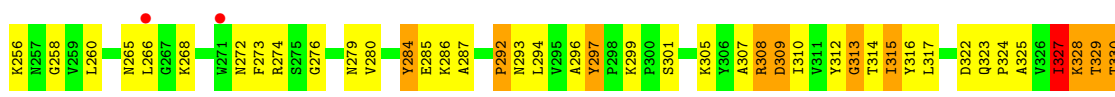
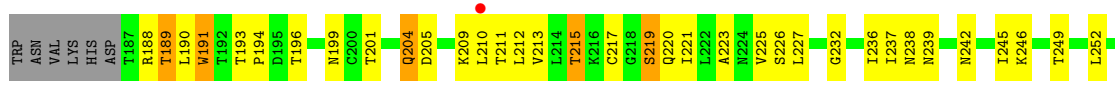
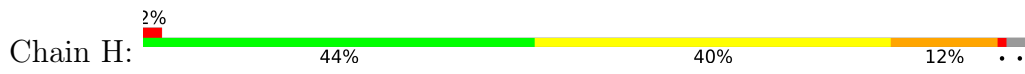


● Molecule 1: Fiber

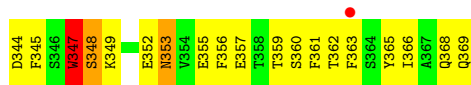
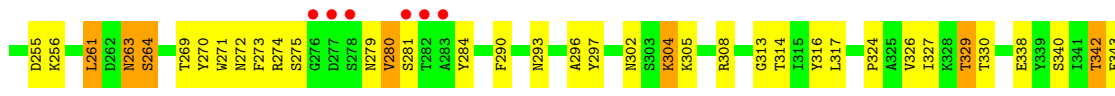
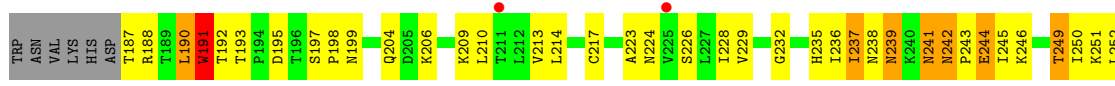




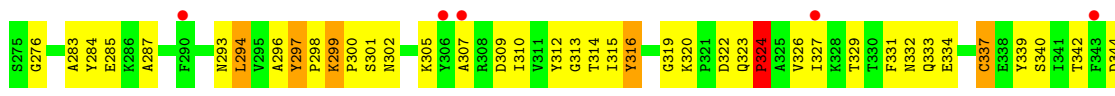
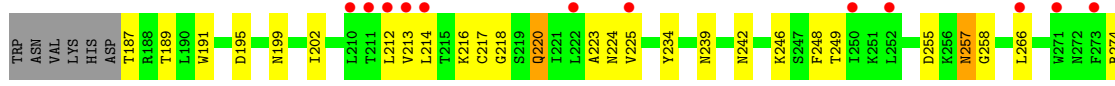
● Molecule 1: Fiber



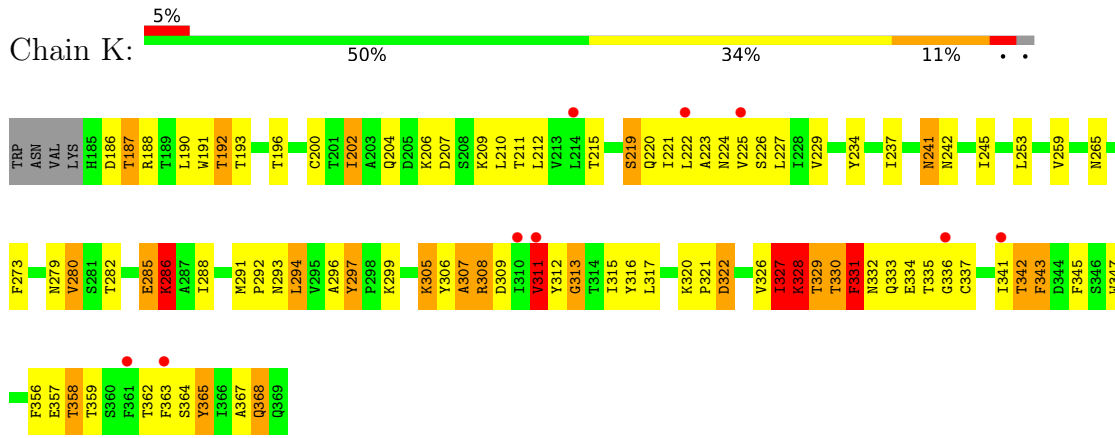
● Molecule 1: Fiber



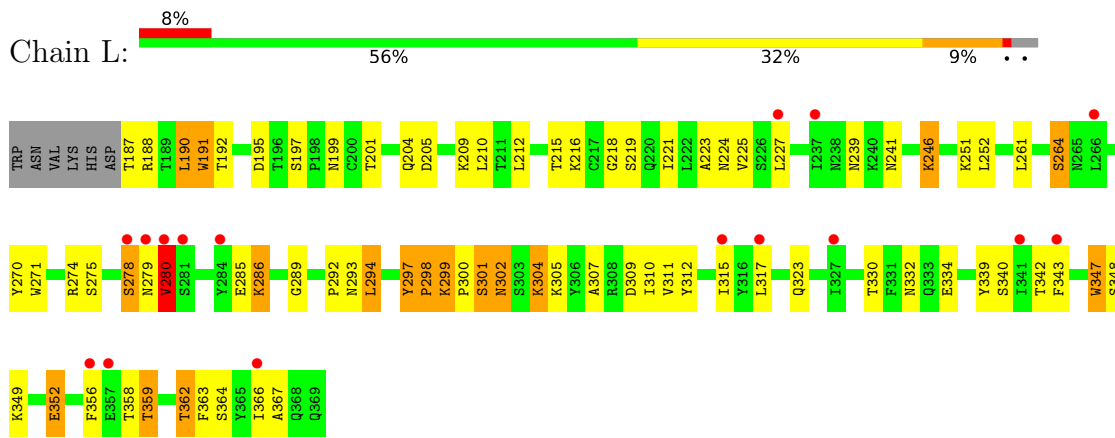
● Molecule 1: Fiber



● Molecule 1: Fiber



- Molecule 1: Fiber



4 Data and refinement statistics

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α , β , γ	101.36Å 101.36Å 326.72Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	108.91 – 2.50 108.91 – 2.50	Depositor EDS
% Data completeness (in resolution range)	98.6 (108.91-2.50) 98.6 (108.91-2.50)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.64 (at 2.52Å)	Xtrriage
Refinement program	REFMAC 5.8.0258	Depositor
R, R_{free}	0.219 , 0.251 0.220 , 0.253	Depositor DCC
R_{free} test set	6341 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å ²)	54.6	Xtrriage
Anisotropy	0.859	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	(Not available) , (Not available)	EDS
L-test for twinning ²	$\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	0.467 for -h,-k,l 0.477 for h,-h-k,-l 0.467 for -k,-h,-l	Xtrriage
Reported twinning fraction	0.253 for H, K, L 0.254 for K, H, -L 0.245 for -h,-k,l 0.248 for -K, -H, -L	Depositor
Outliers	0 of 128203 reflections	Xtrriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	17536	wwPDB-VP
Average B, all atoms (Å ²)	86.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.91% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.85	0/1484	0.86	0/2016
1	B	0.73	0/1484	0.78	0/2016
1	C	0.71	0/1484	0.75	0/2016
1	D	1.17	10/1492 (0.7%)	1.04	5/2027 (0.2%)
1	E	1.02	8/1512 (0.5%)	0.94	2/2053 (0.1%)
1	F	0.85	1/1512 (0.1%)	0.81	0/2053
1	G	0.86	3/1543 (0.2%)	0.84	0/2097
1	H	1.21	10/1484 (0.7%)	0.98	1/2016 (0.0%)
1	I	0.86	0/1484	0.85	0/2016
1	J	0.81	1/1484 (0.1%)	0.82	0/2016
1	K	1.13	7/1503 (0.5%)	0.92	0/2042
1	L	0.78	1/1484 (0.1%)	0.83	0/2016
All	All	0.93	41/17950 (0.2%)	0.87	8/24384 (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	D	0	2
1	E	0	4
1	G	0	2
1	I	0	2
1	J	0	3
1	K	0	3
All	All	0	17

All (41) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	361	PHE	CG-CD1	-12.38	1.20	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	292	PRO	N-CD	-8.92	1.35	1.47
1	D	363	PHE	CG-CD1	-8.43	1.26	1.38
1	E	331	PHE	CG-CD1	-8.20	1.26	1.38
1	D	365	TYR	CE1-CZ	-7.97	1.28	1.38
1	H	309	ASP	CG-OD1	-7.74	1.07	1.25
1	H	297	TYR	CZ-OH	7.48	1.50	1.37
1	D	361	PHE	C-O	-7.45	1.09	1.23
1	H	292	PRO	N-CD	-7.37	1.37	1.47
1	K	327	ILE	C-O	-7.03	1.09	1.23
1	H	343	PHE	CG-CD1	-7.03	1.28	1.38
1	K	343	PHE	CG-CD2	-6.97	1.28	1.38
1	H	292	PRO	C-O	-6.79	1.09	1.23
1	G	226	SER	CA-CB	-6.51	1.43	1.52
1	H	327	ILE	CB-CG2	-6.49	1.32	1.52
1	G	316	TYR	C-O	6.19	1.35	1.23
1	E	364	SER	CA-CB	6.16	1.62	1.52
1	E	309	ASP	C-O	6.05	1.34	1.23
1	D	224	ASN	CG-ND2	-6.03	1.17	1.32
1	K	327	ILE	CB-CG2	-5.95	1.34	1.52
1	K	328	LYS	N-CA	5.88	1.58	1.46
1	D	330	THR	C-O	5.86	1.34	1.23
1	H	328	LYS	C-N	-5.83	1.20	1.34
1	G	226	SER	C-O	5.78	1.34	1.23
1	F	319	GLY	C-O	5.66	1.32	1.23
1	H	343	PHE	CE2-CZ	-5.64	1.26	1.37
1	E	363	PHE	C-O	-5.60	1.12	1.23
1	K	331	PHE	CE1-CZ	-5.51	1.26	1.37
1	D	361	PHE	CE2-CZ	-5.47	1.26	1.37
1	E	308	ARG	C-O	5.46	1.33	1.23
1	D	342	THR	C-N	-5.42	1.21	1.34
1	J	316	TYR	C-O	5.34	1.33	1.23
1	E	334	GLU	CD-OE2	-5.29	1.19	1.25
1	K	334	GLU	CD-OE2	-5.28	1.19	1.25
1	H	297	TYR	CE1-CZ	-5.23	1.31	1.38
1	L	362	THR	C-O	5.22	1.33	1.23
1	D	343	PHE	CG-CD2	-5.21	1.30	1.38
1	H	313	GLY	N-CA	5.17	1.53	1.46
1	D	343	PHE	N-CA	5.14	1.56	1.46
1	E	364	SER	C-O	5.12	1.33	1.23
1	E	308	ARG	NE-CZ	-5.04	1.26	1.33

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	308	ARG	NE-CZ-NH1	-7.53	116.53	120.30
1	D	316	TYR	O-C-N	5.76	131.91	122.70
1	D	358	THR	C-N-CA	5.39	135.18	121.70
1	D	359	THR	CA-CB-OG1	-5.35	97.76	109.00
1	E	308	ARG	CB-CA-C	5.35	121.11	110.40
1	H	332	ASN	CB-CA-C	-5.26	99.88	110.40
1	D	359	THR	CB-CA-C	-5.14	97.73	111.60
1	D	358	THR	CA-CB-OG1	-5.11	98.27	109.00

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	283	ALA	Peptide
1	D	190	LEU	Peptide
1	D	363	PHE	Mainchain
1	E	185	HIS	Peptide
1	E	186	ASP	Peptide
1	E	222	LEU	Peptide
1	E	310	ILE	Mainchain
1	G	225	VAL	Peptide
1	G	319	GLY	Peptide
1	I	191	TRP	Peptide
1	I	347	TRP	Peptide
1	J	313	GLY	Mainchain
1	J	319	GLY	Peptide
1	J	337	CYS	Peptide
1	K	291	MET	Mainchain
1	K	313	GLY	Peptide
1	K	328	LYS	Mainchain

5.2 Too-close contacts [\(i\)](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1450	0	1430	67	0
1	B	1450	0	1430	70	0
1	C	1450	0	1430	53	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	1458	0	1434	105	0
1	E	1477	0	1454	107	0
1	F	1477	0	1454	83	0
1	G	1506	0	1478	77	0
1	H	1450	0	1429	129	0
1	I	1450	0	1430	75	0
1	J	1450	0	1430	46	0
1	K	1468	0	1441	95	1
1	L	1450	0	1430	69	0
All	All	17536	0	17270	861	1

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 25.

All (861) 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:H:315:ILE:HD13	1:H:358:THR:OG1	1.15	1.27
1:E:222:LEU:O	1:F:220:GLN:NE2	1.66	1.26
1:D:364:SER:OG	1:F:362:THR:HG21	1.33	1.23
1:H:313:GLY:O	1:H:327:ILE:N	1.68	1.22
1:K:309:ASP:OD2	1:K:333:GLN:NE2	1.74	1.20
1:G:226:SER:OG	1:G:358:THR:O	1.62	1.18
1:G:273:PHE:O	1:G:279:ASN:ND2	1.75	1.17
1:B:191:TRP:CZ2	1:B:274:ARG:HD2	1.80	1.16
1:D:299:LYS:NZ	1:D:337:CYS:O	1.77	1.16
1:K:313:GLY:O	1:K:327:ILE:N	1.76	1.16
1:F:249:THR:OG1	1:F:344:ASP:OD1	1.63	1.16
1:B:191:TRP:CE2	1:B:274:ARG:HD2	1.79	1.16
1:I:249:THR:OG1	1:I:344:ASP:OD1	1.59	1.14
1:A:213:VAL:HG21	1:B:366:ILE:HD11	1.27	1.14
1:D:201:THR:O	1:D:265:ASN:ND2	1.81	1.12
1:F:221:ILE:HG21	1:F:365:TYR:CE1	1.86	1.10
1:H:315:ILE:CD1	1:H:358:THR:OG1	2.04	1.05
1:H:249:THR:OG1	1:H:344:ASP:OD1	1.75	1.04
1:K:330:THR:O	1:K:342:THR:HG23	1.59	1.03
1:E:330:THR:CG2	1:E:333:GLN:HB2	1.89	1.02
1:I:236:ILE:HG22	1:I:355:GLU:HA	1.38	1.02
1:F:221:ILE:HG21	1:F:365:TYR:CZ	1.94	1.01
1:H:309:ASP:O	1:H:330:THR:HG22	1.60	1.01
1:E:330:THR:HG22	1:E:333:GLN:HB2	1.42	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:315:ILE:HD12	1:E:315:ILE:O	1.58	1.01
1:D:198:PRO:O	1:I:270:TYR:OH	1.80	0.98
1:K:331:PHE:CE2	1:K:365:TYR:HB3	1.98	0.98
1:H:293:ASN:HB2	1:H:368:GLN:HA	1.47	0.96
1:I:246:LYS:HB3	1:I:347:TRP:CZ2	2.00	0.95
1:D:312:TYR:OH	1:F:319:GLY:O	1.84	0.94
1:I:224:ASN:ND2	1:I:362:THR:OG1	2.00	0.94
1:B:191:TRP:CE2	1:B:274:ARG:CD	2.50	0.93
1:E:222:LEU:C	1:F:220:GLN:NE2	2.21	0.92
1:E:200:CYS:SG	1:E:208:SER:OG	2.27	0.92
1:A:195:ASP:OD2	1:L:195:ASP:OD2	1.88	0.91
1:D:223:ALA:O	1:D:362:THR:HA	1.72	0.90
1:A:357:GLU:OE1	1:B:307:ALA:N	2.05	0.90
1:B:191:TRP:CH2	1:B:194:PRO:HD3	2.07	0.90
1:K:227:LEU:H	1:K:358:THR:HG22	1.37	0.89
1:L:187:THR:N	1:L:216:LYS:O	2.06	0.89
1:E:315:ILE:O	1:E:315:ILE:CD1	2.21	0.88
1:G:223:ALA:HB1	1:G:363:PHE:CZ	2.08	0.88
1:H:315:ILE:HD13	1:H:358:THR:HG1	0.89	0.88
1:G:223:ALA:CB	1:G:363:PHE:CZ	2.57	0.87
1:I:193:THR:O	1:I:209:LYS:NZ	2.07	0.87
1:I:238:ASN:O	1:I:239:ASN:ND2	2.08	0.86
1:L:224:ASN:ND2	1:L:362:THR:OG1	2.08	0.86
1:D:315:ILE:HG22	1:D:359:THR:O	1.74	0.86
1:K:331:PHE:CE2	1:K:365:TYR:CB	2.58	0.86
1:E:362:THR:HG21	1:F:364:SER:OG	1.74	0.85
1:K:365:TYR:HD1	1:K:365:TYR:O	1.60	0.85
1:B:274:ARG:NH1	1:C:219:SER:OG	2.10	0.85
1:H:258:GLY:O	1:H:287:ALA:HB3	1.77	0.84
1:C:193:THR:HG23	1:C:279:ASN:HD21	1.39	0.84
1:B:191:TRP:CD2	1:B:274:ARG:HD3	2.12	0.84
1:H:365:TYR:HD1	1:H:365:TYR:O	1.59	0.84
1:E:215:THR:OG1	1:F:220:GLN:CG	2.27	0.83
1:B:303:SER:OG	1:L:278:SER:N	2.12	0.83
1:D:206:LYS:O	1:I:269:THR:HG21	1.78	0.83
1:K:315:ILE:HD13	1:K:358:THR:OG1	1.80	0.82
1:A:299:LYS:NZ	1:A:334:GLU:O	2.12	0.81
1:E:222:LEU:C	1:F:220:GLN:HE22	1.84	0.81
1:K:365:TYR:O	1:K:365:TYR:CD1	2.34	0.81
1:E:215:THR:OG1	1:F:220:GLN:HG2	1.80	0.80
1:C:189:THR:HG22	1:C:215:THR:HG23	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:324:PRO:HD2	1:J:351:TYR:OH	1.81	0.80
1:B:191:TRP:CD2	1:B:274:ARG:CD	2.65	0.80
1:G:190:LEU:HD21	1:G:273:PHE:CE1	2.17	0.80
1:G:204:GLN:OE1	1:G:232:GLY:HA2	1.82	0.79
1:H:293:ASN:CB	1:H:368:GLN:HA	2.12	0.79
1:E:306:TYR:HB2	1:E:308:ARG:NH1	1.97	0.79
1:H:329:THR:HG23	1:H:343:PHE:CD1	2.16	0.79
1:L:239:ASN:HD21	1:L:347:TRP:HH2	1.28	0.78
1:H:365:TYR:O	1:H:365:TYR:CD1	2.37	0.78
1:H:315:ILE:CD1	1:H:358:THR:HG1	1.85	0.77
1:I:236:ILE:CG2	1:I:355:GLU:HA	2.14	0.77
1:B:274:ARG:HB3	1:B:277:ASP:HA	1.67	0.77
1:H:333:GLN:NE2	1:H:333:GLN:O	2.17	0.77
1:D:213:VAL:HG12	1:E:220:GLN:HE21	1.49	0.77
1:D:223:ALA:HB3	1:D:363:PHE:O	1.85	0.76
1:A:193:THR:O	1:A:209:LYS:NZ	2.18	0.76
1:G:226:SER:OG	1:G:358:THR:OG1	2.03	0.76
1:H:293:ASN:O	1:H:296:ALA:HB3	1.85	0.76
1:D:316:TYR:CE1	1:D:324:PRO:HB3	2.20	0.76
1:F:217:CYS:HB2	1:F:220:GLN:HB2	1.67	0.76
1:G:189:THR:OG1	1:H:219:SER:OG	2.03	0.75
1:A:316:TYR:CE1	1:A:324:PRO:HB3	2.21	0.75
1:B:245:ILE:CG2	1:B:347:TRP:HB3	2.16	0.75
1:F:221:ILE:O	1:F:364:SER:HB2	1.86	0.75
1:K:196:THR:HA	1:K:209:LYS:HG2	1.67	0.75
1:K:311:VAL:HG12	1:K:311:VAL:O	1.85	0.75
1:A:213:VAL:CG2	1:B:366:ILE:HD11	2.14	0.74
1:F:260:LEU:O	1:F:268:LYS:NZ	2.19	0.74
1:G:204:GLN:OE1	1:G:232:GLY:CA	2.35	0.74
1:D:270:TYR:OH	1:I:198:PRO:O	2.05	0.74
1:I:236:ILE:HG22	1:I:355:GLU:CA	2.16	0.73
1:A:249:THR:OG1	1:A:344:ASP:OD1	2.06	0.73
1:K:193:THR:O	1:K:209:LYS:NZ	2.21	0.73
1:D:359:THR:HG22	1:E:310:ILE:HB	1.71	0.72
1:B:191:TRP:CZ2	1:B:193:THR:HA	2.24	0.72
1:C:193:THR:CG2	1:C:279:ASN:HD21	2.02	0.72
1:A:238:ASN:ND2	1:A:353:ASN:OD1	2.22	0.72
1:E:330:THR:HG21	1:E:333:GLN:HB2	1.71	0.72
1:L:297:TYR:OH	1:L:366:ILE:N	2.23	0.72
1:F:199:ASN:O	1:F:266:LEU:HD12	1.90	0.72
1:G:327:ILE:HG21	1:G:361:PHE:CD2	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:219:SER:O	1:L:367:ALA:HB3	1.90	0.72
1:F:313:GLY:HA3	1:F:361:PHE:CZ	2.25	0.71
1:E:330:THR:CG2	1:E:333:GLN:CB	2.68	0.71
1:K:210:LEU:HD13	1:K:227:LEU:HD13	1.73	0.70
1:J:315:ILE:HD12	1:J:315:ILE:O	1.90	0.70
1:H:210:LEU:HD12	1:H:226:SER:O	1.92	0.70
1:L:286:LYS:O	1:L:286:LYS:HG3	1.90	0.70
1:A:315:ILE:HG22	1:A:359:THR:O	1.91	0.70
1:B:274:ARG:CZ	1:C:219:SER:OG	2.39	0.70
1:C:193:THR:O	1:C:209:LYS:NZ	2.24	0.70
1:G:223:ALA:HB3	1:G:363:PHE:CZ	2.26	0.69
1:E:331:PHE:CE1	1:E:365:TYR:HD2	2.10	0.69
1:H:293:ASN:HB2	1:H:368:GLN:CA	2.20	0.69
1:I:239:ASN:HB3	1:I:353:ASN:ND2	2.08	0.69
1:D:215:THR:OG1	1:E:220:GLN:NE2	2.26	0.69
1:K:331:PHE:HE2	1:K:365:TYR:CB	2.04	0.69
1:E:291:MET:HA	1:E:291:MET:CE	2.23	0.68
1:A:224:ASN:OD1	1:B:308:ARG:NH2	2.19	0.68
1:K:365:TYR:CD1	1:K:365:TYR:C	2.65	0.68
1:L:216:LYS:NZ	1:L:218:GLY:O	2.26	0.68
1:F:339:TYR:HE1	1:F:368:GLN:HE21	1.40	0.68
1:E:331:PHE:CZ	1:E:365:TYR:HB3	2.29	0.68
1:D:322:ASP:OD1	1:D:322:ASP:N	2.25	0.68
1:F:221:ILE:CG2	1:F:365:TYR:CE1	2.74	0.68
1:D:364:SER:HG	1:F:362:THR:HG21	1.54	0.68
1:E:215:THR:CB	1:F:220:GLN:HG3	2.24	0.68
1:A:220:GLN:OE1	1:C:222:LEU:CD2	2.41	0.67
1:H:333:GLN:O	1:H:333:GLN:HG3	1.93	0.67
1:K:365:TYR:HD1	1:K:365:TYR:C	1.98	0.67
1:F:207:ASP:HB2	1:F:231:ALA:O	1.94	0.67
1:A:190:LEU:HD22	1:A:271:TRP:CE2	2.29	0.67
1:H:317:LEU:HD22	1:H:356:PHE:HA	1.77	0.67
1:F:255:ASP:OD1	1:F:259:VAL:HG22	1.93	0.66
1:K:241:ASN:OD1	1:K:241:ASN:N	2.29	0.66
1:H:189:THR:HB	1:H:215:THR:HA	1.77	0.66
1:G:260:LEU:HD22	1:G:266:LEU:HD23	1.78	0.65
1:D:213:VAL:CG1	1:E:220:GLN:HE21	2.10	0.65
1:E:221:ILE:O	1:E:364:SER:HB2	1.96	0.65
1:K:305:LYS:C	1:K:305:LYS:HD2	2.16	0.65
1:G:316:TYR:HE2	1:H:312:TYR:HB3	1.60	0.65
1:L:299:LYS:HB3	1:L:332:ASN:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:255:ASP:C	1:D:255:ASP:OD1	2.35	0.65
1:B:191:TRP:CE3	1:B:274:ARG:HD3	2.31	0.65
1:A:192:THR:HG22	1:A:212:LEU:O	1.96	0.65
1:K:315:ILE:HD12	1:K:315:ILE:O	1.96	0.65
1:D:215:THR:HG21	1:E:217:CYS:O	1.97	0.65
1:D:223:ALA:O	1:D:362:THR:CA	2.45	0.65
1:E:224:ASN:ND2	1:E:361:PHE:O	2.29	0.65
1:G:224:ASN:OD1	1:H:308:ARG:NH2	2.30	0.65
1:J:320:LYS:O	1:J:323:GLN:O	2.16	0.64
1:A:192:THR:HG21	1:A:210:LEU:O	1.97	0.64
1:A:213:VAL:HG21	1:B:366:ILE:CD1	2.18	0.64
1:G:223:ALA:HB3	1:G:363:PHE:CE2	2.31	0.64
1:J:293:ASN:HB3	1:J:296:ALA:HB3	1.79	0.64
1:A:255:ASP:OD1	1:A:257:ASN:N	2.31	0.64
1:K:308:ARG:O	1:K:308:ARG:HG2	1.98	0.64
1:B:191:TRP:CH2	1:B:194:PRO:CD	2.81	0.64
1:I:272:ASN:HB3	1:I:279:ASN:HB3	1.80	0.64
1:D:197:SER:OG	1:I:197:SER:CB	2.46	0.64
1:H:294:LEU:HD23	1:H:339:TYR:CE2	2.32	0.64
1:C:343:PHE:HB3	1:C:345:PHE:CE2	2.33	0.63
1:H:338:GLU:HB3	1:H:339:TYR:CE1	2.33	0.63
1:E:257:ASN:O	1:E:287:ALA:HB3	1.99	0.63
1:B:344:ASP:N	1:B:344:ASP:OD1	2.32	0.63
1:B:245:ILE:HG22	1:B:347:TRP:HB3	1.81	0.62
1:E:215:THR:OG1	1:F:220:GLN:HG3	1.99	0.62
1:D:212:LEU:HD13	1:D:225:VAL:HG23	1.81	0.62
1:D:189:THR:HG21	1:E:219:SER:OG	1.99	0.62
1:D:191:TRP:CD1	1:D:191:TRP:O	2.52	0.62
1:F:313:GLY:HA3	1:F:361:PHE:CE2	2.35	0.62
1:G:273:PHE:HB2	1:G:280:VAL:HG13	1.81	0.62
1:C:220:GLN:NE2	1:C:364:SER:HB2	2.15	0.62
1:K:331:PHE:CZ	1:K:365:TYR:HB3	2.34	0.62
1:L:300:PRO:HB2	1:L:304:LYS:HD3	1.81	0.62
1:D:311:VAL:HG11	1:D:363:PHE:HB2	1.81	0.62
1:E:291:MET:HA	1:E:291:MET:HE2	1.80	0.62
1:F:316:TYR:N	1:F:316:TYR:CD1	2.67	0.62
1:H:333:GLN:O	1:H:333:GLN:CG	2.48	0.62
1:B:316:TYR:CE2	1:B:324:PRO:HB3	2.35	0.62
1:E:362:THR:CG2	1:F:364:SER:OG	2.47	0.62
1:F:195:ASP:O	1:F:209:LYS:NZ	2.24	0.62
1:H:272:ASN:OD1	1:H:284:TYR:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:211:THR:HG22	1:K:211:THR:O	2.00	0.62
1:H:331:PHE:CE2	1:H:365:TYR:CB	2.83	0.61
1:K:227:LEU:N	1:K:358:THR:HG22	2.13	0.61
1:D:200:CYS:O	1:D:208:SER:OG	2.14	0.61
1:K:212:LEU:HD13	1:K:225:VAL:HB	1.82	0.61
1:K:331:PHE:O	1:K:333:GLN:HG2	2.00	0.61
1:A:316:TYR:O	1:A:359:THR:HG23	1.99	0.61
1:E:332:ASN:ND2	1:E:339:TYR:HA	2.16	0.61
1:G:226:SER:HB3	1:H:308:ARG:HD2	1.82	0.61
1:H:329:THR:HG23	1:H:343:PHE:CE1	2.35	0.61
1:K:329:THR:HG23	1:K:343:PHE:CE2	2.36	0.61
1:H:256:LYS:HA	1:H:338:GLU:HG3	1.82	0.61
1:H:331:PHE:CE2	1:H:365:TYR:HB2	2.35	0.61
1:E:252:LEU:N	1:E:252:LEU:CD1	2.63	0.61
1:F:221:ILE:CG2	1:F:365:TYR:CZ	2.78	0.61
1:G:225:VAL:O	1:G:225:VAL:HG13	2.00	0.61
1:K:294:LEU:HD12	1:K:297:TYR:O	2.01	0.61
1:K:187:THR:O	1:K:273:PHE:CE1	2.53	0.61
1:G:190:LEU:HD21	1:G:273:PHE:CD1	2.36	0.61
1:C:202:ILE:HD11	1:C:250:ILE:HD11	1.82	0.61
1:L:225:VAL:HG21	1:L:343:PHE:CE2	2.35	0.61
1:D:360:SER:HB2	1:E:311:VAL:HG22	1.82	0.61
1:I:255:ASP:OD1	1:I:255:ASP:C	2.40	0.61
1:K:237:ILE:CG2	1:K:347:TRP:CH2	2.83	0.61
1:K:368:GLN:OE1	1:K:368:GLN:O	2.19	0.61
1:L:275:SER:HB3	1:L:280:VAL:HB	1.82	0.61
1:L:190:LEU:HD22	1:L:271:TRP:CE2	2.35	0.60
1:L:292:PRO:HB3	1:L:297:TYR:CE1	2.36	0.60
1:G:357:GLU:OE1	1:H:307:ALA:N	2.33	0.60
1:I:235:HIS:CD2	1:I:236:ILE:HG23	2.36	0.60
1:I:329:THR:OG1	1:I:343:PHE:CD1	2.54	0.60
1:J:249:THR:HG23	1:J:344:ASP:OD1	2.02	0.60
1:D:225:VAL:HG11	1:D:327:ILE:HD13	1.84	0.60
1:E:192:THR:HG21	1:E:211:THR:HA	1.84	0.60
1:F:314:THR:HG22	1:F:316:TYR:CE1	2.37	0.60
1:A:322:ASP:OD1	1:A:323:GLN:NE2	2.31	0.60
1:H:274:ARG:NH2	1:I:369:GLN:O	2.34	0.60
1:D:321:PRO:O	1:D:324:PRO:HD3	2.01	0.60
1:I:192:THR:HG21	1:I:210:LEU:O	2.02	0.60
1:L:195:ASP:OD1	1:L:209:LYS:NZ	2.34	0.60
1:E:331:PHE:CE2	1:E:365:TYR:HB3	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:187:THR:O	1:I:187:THR:HG22	2.01	0.59
1:K:311:VAL:O	1:K:311:VAL:CG1	2.49	0.59
1:C:203:ALA:HB2	1:C:234:TYR:CE2	2.37	0.59
1:G:316:TYR:HE2	1:H:312:TYR:CB	2.15	0.59
1:J:299:LYS:HG2	1:J:300:PRO:HD2	1.84	0.59
1:H:286:LYS:HD2	1:H:286:LYS:N	2.16	0.59
1:I:238:ASN:C	1:I:239:ASN:HD22	2.02	0.59
1:K:331:PHE:CE2	1:K:365:TYR:HB2	2.37	0.59
1:B:190:LEU:HD13	1:B:271:TRP:CZ2	2.38	0.59
1:H:317:LEU:O	1:H:323:GLN:OE1	2.20	0.59
1:J:220:GLN:NE2	1:L:215:THR:OG1	2.35	0.59
1:C:309:ASP:OD1	1:C:309:ASP:N	2.32	0.59
1:E:279:ASN:O	1:E:280:VAL:HG22	2.03	0.59
1:K:224:ASN:ND2	1:L:364:SER:O	2.36	0.59
1:K:312:TYR:CE2	1:K:328:LYS:HG3	2.37	0.59
1:A:246:LYS:HA	1:A:347:TRP:CE2	2.38	0.59
1:E:332:ASN:HD22	1:E:339:TYR:HA	1.68	0.59
1:H:221:ILE:HG12	1:H:367:ALA:HB2	1.85	0.59
1:H:284:TYR:CE1	1:H:287:ALA:HB2	2.37	0.59
1:J:224:ASN:HB2	1:K:220:GLN:OE1	2.02	0.59
1:A:191:TRP:CZ2	1:A:274:ARG:HG3	2.38	0.59
1:H:284:TYR:HE1	1:H:287:ALA:HB2	1.68	0.59
1:I:250:ILE:N	1:I:343:PHE:O	2.32	0.59
1:L:261:LEU:O	1:L:264:SER:OG	2.20	0.59
1:H:309:ASP:O	1:H:330:THR:CG2	2.44	0.58
1:G:209:LYS:O	1:G:227:LEU:HD12	2.03	0.58
1:I:191:TRP:CZ2	1:I:274:ARG:HG3	2.38	0.58
1:I:239:ASN:HB3	1:I:353:ASN:HD21	1.67	0.58
1:J:239:ASN:HB3	1:J:350:THR:HG23	1.85	0.58
1:K:315:ILE:CD1	1:K:358:THR:OG1	2.50	0.58
1:K:331:PHE:CD1	1:K:331:PHE:N	2.69	0.58
1:G:316:TYR:CE2	1:H:312:TYR:CB	2.87	0.58
1:E:254:PHE:HB3	1:E:258:GLY:HA2	1.85	0.58
1:G:315:ILE:HD12	1:G:315:ILE:O	2.03	0.58
1:J:224:ASN:ND2	1:K:364:SER:OG	2.37	0.58
1:D:315:ILE:CG2	1:D:359:THR:O	2.49	0.58
1:I:290:PHE:O	1:I:365:TYR:OH	2.18	0.58
1:G:337:CYS:SG	1:G:339:TYR:O	2.62	0.58
1:L:219:SER:O	1:L:367:ALA:CB	2.51	0.58
1:H:258:GLY:O	1:H:287:ALA:CB	2.51	0.57
1:H:365:TYR:CD1	1:H:365:TYR:C	2.77	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:200:CYS:SG	1:G:208:SER:OG	2.37	0.57
1:H:331:PHE:N	1:H:331:PHE:CD1	2.71	0.57
1:D:322:ASP:O	1:D:324:PRO:HD2	2.04	0.57
1:K:226:SER:OG	1:K:358:THR:CG2	2.52	0.57
1:L:252:LEU:HD12	1:L:252:LEU:N	2.18	0.57
1:B:191:TRP:CD1	1:B:191:TRP:C	2.78	0.57
1:F:315:ILE:O	1:F:315:ILE:HD12	2.04	0.57
1:B:348:SER:OG	1:B:349:LYS:N	2.38	0.57
1:F:195:ASP:OD1	1:F:197:SER:OG	2.22	0.57
1:J:224:ASN:HB2	1:K:220:GLN:CD	2.25	0.57
1:A:224:ASN:ND2	1:A:361:PHE:O	2.37	0.57
1:H:227:LEU:H	1:H:358:THR:HG22	1.68	0.57
1:L:352:GLU:O	1:L:352:GLU:HG3	2.04	0.57
1:H:274:ARG:NE	1:H:276:GLY:O	2.38	0.57
1:K:227:LEU:H	1:K:358:THR:CG2	2.15	0.57
1:E:252:LEU:N	1:E:252:LEU:HD12	2.20	0.56
1:I:239:ASN:CB	1:I:353:ASN:ND2	2.68	0.56
1:D:356:PHE:O	1:D:356:PHE:CD1	2.59	0.56
1:F:217:CYS:O	1:F:220:GLN:N	2.39	0.56
1:H:227:LEU:N	1:H:358:THR:HG22	2.21	0.56
1:F:332:ASN:ND2	1:F:339:TYR:HA	2.21	0.56
1:D:299:LYS:O	1:D:299:LYS:HG3	2.06	0.56
1:H:245:ILE:O	1:H:347:TRP:CH2	2.58	0.56
1:I:223:ALA:O	1:I:362:THR:HA	2.04	0.56
1:J:368:GLN:O	1:L:274:ARG:NH2	2.37	0.56
1:K:279:ASN:O	1:K:280:VAL:HG22	2.06	0.56
1:B:190:LEU:HD23	1:B:273:PHE:HD1	1.69	0.56
1:B:191:TRP:CH2	1:B:274:ARG:HD2	2.34	0.56
1:E:224:ASN:ND2	1:E:362:THR:OG1	2.38	0.56
1:E:306:TYR:HB2	1:E:308:ARG:HH11	1.69	0.56
1:I:239:ASN:HA	1:I:352:GLU:HA	1.88	0.56
1:K:331:PHE:O	1:K:332:ASN:C	2.44	0.56
1:F:316:TYR:CE2	1:F:324:PRO:HB3	2.41	0.56
1:G:315:ILE:HG23	1:G:361:PHE:HB2	1.87	0.56
1:K:331:PHE:HE2	1:K:365:TYR:HB3	1.57	0.56
1:D:213:VAL:HG21	1:E:366:ILE:CD1	2.36	0.56
1:G:223:ALA:CB	1:G:363:PHE:CE2	2.89	0.56
1:D:358:THR:O	1:E:307:ALA:HB3	2.05	0.55
1:A:228:ILE:HG22	1:A:230:VAL:HG13	1.88	0.55
1:A:252:LEU:N	1:A:252:LEU:HD12	2.22	0.55
1:E:193:THR:O	1:E:209:LYS:NZ	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:245:ILE:HG22	1:B:347:TRP:CB	2.36	0.55
1:D:357:GLU:O	1:D:357:GLU:HG3	2.06	0.55
1:H:294:LEU:HD23	1:H:339:TYR:CD2	2.41	0.55
1:J:223:ALA:HB1	1:J:363:PHE:CZ	2.41	0.55
1:H:331:PHE:CZ	1:H:365:TYR:HB3	2.42	0.55
1:H:221:ILE:O	1:H:364:SER:HA	2.07	0.55
1:K:226:SER:OG	1:K:358:THR:HG22	2.07	0.55
1:F:237:ILE:HG23	1:F:347:TRP:CH2	2.41	0.55
1:H:191:TRP:CH2	1:H:194:PRO:HD3	2.42	0.55
1:I:190:LEU:HD22	1:I:271:TRP:CE2	2.42	0.55
1:J:332:ASN:HD22	1:J:340:SER:H	1.55	0.55
1:K:202:ILE:O	1:K:207:ASP:CG	2.46	0.55
1:D:212:LEU:HD13	1:D:225:VAL:CG2	2.36	0.55
1:G:358:THR:O	1:G:358:THR:OG1	2.26	0.54
1:I:195:ASP:OD1	1:I:209:LYS:NZ	2.40	0.54
1:C:223:ALA:O	1:C:362:THR:HA	2.08	0.54
1:D:271:TRP:HD1	1:D:284:TYR:HH	1.54	0.54
1:C:313:GLY:O	1:C:314:THR:OG1	2.23	0.54
1:L:352:GLU:O	1:L:352:GLU:CG	2.55	0.54
1:E:293:ASN:O	1:E:297:TYR:HB2	2.07	0.54
1:E:297:TYR:HB3	1:E:309:ASP:OD1	2.08	0.54
1:F:200:CYS:HB3	1:F:208:SER:OG	2.08	0.54
1:G:327:ILE:CG2	1:G:361:PHE:CD2	2.90	0.54
1:H:225:VAL:HG11	1:H:327:ILE:HD11	1.89	0.54
1:H:293:ASN:C	1:H:293:ASN:OD1	2.45	0.54
1:H:296:ALA:HB1	1:H:297:TYR:CE2	2.42	0.54
1:K:312:TYR:CE1	1:K:328:LYS:HB2	2.43	0.54
1:H:191:TRP:HB2	1:H:213:VAL:HG13	1.89	0.54
1:J:307:ALA:HB3	1:L:358:THR:O	2.08	0.54
1:K:316:TYR:O	1:K:359:THR:HG23	2.07	0.54
1:L:192:THR:CG2	1:L:212:LEU:H	2.21	0.54
1:A:272:ASN:OD1	1:A:273:PHE:N	2.37	0.53
1:H:312:TYR:CE1	1:H:328:LYS:HB2	2.43	0.53
1:A:226:SER:CB	1:B:308:ARG:HD2	2.38	0.53
1:H:296:ALA:C	1:H:297:TYR:CD2	2.81	0.53
1:K:329:THR:HG23	1:K:343:PHE:CD2	2.42	0.53
1:L:192:THR:HG21	1:L:210:LEU:O	2.08	0.53
1:C:289:GLY:C	1:C:291:MET:H	2.11	0.53
1:F:315:ILE:HG13	1:F:327:ILE:HG22	1.91	0.53
1:G:225:VAL:O	1:G:225:VAL:CG1	2.56	0.53
1:H:365:TYR:HD1	1:H:365:TYR:C	2.10	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:237:ILE:HG23	1:K:347:TRP:CH2	2.43	0.53
1:A:316:TYR:HE1	1:A:324:PRO:HB3	1.73	0.53
1:H:294:LEU:CD2	1:H:339:TYR:CD2	2.92	0.53
1:B:274:ARG:NH2	1:C:219:SER:OG	2.40	0.53
1:B:288:ILE:HG13	1:B:290:PHE:HB2	1.91	0.53
1:F:330:THR:O	1:F:342:THR:HG23	2.09	0.53
1:K:293:ASN:HA	1:K:368:GLN:HA	1.91	0.53
1:D:224:ASN:HA	1:D:361:PHE:O	2.09	0.53
1:D:300:PRO:HD2	1:D:333:GLN:HE22	1.72	0.53
1:E:260:LEU:HD11	1:E:264:SER:CB	2.38	0.53
1:G:191:TRP:CE2	1:G:274:ARG:HB2	2.44	0.53
1:D:200:CYS:HB3	1:D:208:SER:O	2.08	0.53
1:E:274:ARG:HG2	1:E:275:SER:N	2.23	0.53
1:K:312:TYR:CZ	1:K:328:LYS:HG3	2.44	0.53
1:G:310:ILE:HG12	1:G:330:THR:HG23	1.90	0.53
1:C:203:ALA:HB2	1:C:234:TYR:HE2	1.74	0.53
1:D:249:THR:OG1	1:D:344:ASP:OD1	2.16	0.53
1:E:215:THR:HB	1:F:220:GLN:HG3	1.88	0.53
1:A:199:ASN:HB3	1:A:270:TYR:CD2	2.45	0.52
1:I:246:LYS:HB3	1:I:347:TRP:CH2	2.42	0.52
1:K:294:LEU:HD13	1:K:332:ASN:CG	2.29	0.52
1:B:332:ASN:HD22	1:B:340:SER:H	1.58	0.52
1:L:191:TRP:CZ2	1:L:274:ARG:HG3	2.44	0.52
1:L:201:THR:OG1	1:L:205:ASP:HA	2.09	0.52
1:G:190:LEU:HD12	1:G:271:TRP:CE2	2.44	0.52
1:B:294:LEU:O	1:B:298:PRO:HA	2.10	0.52
1:C:264:SER:O	1:C:266:LEU:N	2.43	0.52
1:D:189:THR:HG21	1:E:219:SER:CB	2.39	0.52
1:E:357:GLU:OE1	1:F:306:TYR:HA	2.10	0.52
1:F:297:TYR:OH	1:F:366:ILE:HG13	2.09	0.52
1:G:364:SER:CB	1:I:362:THR:HG21	2.40	0.52
1:H:215:THR:HG21	1:I:217:CYS:O	2.09	0.52
1:A:224:ASN:HA	1:A:361:PHE:O	2.10	0.52
1:B:190:LEU:HD23	1:B:273:PHE:CD1	2.45	0.52
1:B:303:SER:CB	1:L:278:SER:HB2	2.39	0.52
1:K:245:ILE:O	1:K:347:TRP:CH2	2.63	0.52
1:G:190:LEU:HB3	1:G:271:TRP:CZ2	2.44	0.52
1:H:317:LEU:HD21	1:H:356:PHE:CD1	2.45	0.52
1:I:226:SER:HB2	1:I:360:SER:HA	1.92	0.52
1:I:263:ASN:OD1	1:I:263:ASN:N	2.42	0.52
1:K:313:GLY:O	1:K:327:ILE:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:253:LEU:HD22	1:K:337:CYS:SG	2.50	0.52
1:A:246:LYS:HA	1:A:347:TRP:CZ2	2.44	0.52
1:D:198:PRO:HG3	1:D:230:VAL:HG21	1.92	0.52
1:H:308:ARG:O	1:H:308:ARG:HG3	2.08	0.52
1:E:330:THR:HG21	1:E:333:GLN:CB	2.35	0.52
1:H:191:TRP:CZ2	1:H:274:ARG:HD2	2.45	0.52
1:I:242:ASN:N	1:I:242:ASN:OD1	2.43	0.52
1:H:223:ALA:HB3	1:H:363:PHE:CE1	2.45	0.51
1:I:293:ASN:HA	1:I:368:GLN:HA	1.92	0.51
1:K:315:ILE:HD12	1:K:315:ILE:C	2.30	0.51
1:B:358:THR:O	1:C:308:ARG:HB2	2.11	0.51
1:C:280:VAL:O	1:C:280:VAL:HG13	2.10	0.51
1:H:256:LYS:CA	1:H:338:GLU:HG3	2.39	0.51
1:H:329:THR:CG2	1:H:343:PHE:CE1	2.93	0.51
1:J:361:PHE:CG	1:J:362:THR:N	2.78	0.51
1:K:212:LEU:HD22	1:K:343:PHE:CZ	2.45	0.51
1:B:191:TRP:CZ3	1:B:194:PRO:HD3	2.45	0.51
1:G:239:ASN:HB3	1:G:350:THR:HG23	1.92	0.51
1:H:239:ASN:O	1:H:350:THR:HG22	2.11	0.51
1:K:229:VAL:HG11	1:K:234:TYR:O	2.11	0.51
1:F:317:LEU:HD23	1:F:358:THR:HG22	1.91	0.51
1:G:204:GLN:HG3	1:G:207:ASP:HB3	1.93	0.51
1:H:260:LEU:O	1:H:268:LYS:NZ	2.43	0.51
1:E:330:THR:HB	1:E:342:THR:HG23	1.92	0.51
1:I:272:ASN:OD1	1:I:273:PHE:N	2.43	0.51
1:K:312:TYR:OH	1:K:328:LYS:HD2	2.10	0.51
1:D:271:TRP:HD1	1:D:284:TYR:OH	1.93	0.51
1:D:332:ASN:HD22	1:D:340:SER:H	1.58	0.51
1:H:191:TRP:CZ3	1:H:194:PRO:HD3	2.46	0.51
1:H:223:ALA:CB	1:H:363:PHE:CE1	2.94	0.51
1:B:192:THR:HG21	1:B:210:LEU:O	2.11	0.51
1:D:299:LYS:CB	1:D:332:ASN:O	2.59	0.51
1:E:338:GLU:HB3	1:E:339:TYR:CD1	2.46	0.51
1:F:225:VAL:HG11	1:F:327:ILE:HD11	1.93	0.51
1:I:204:GLN:OE1	1:I:232:GLY:HA2	2.10	0.51
1:A:329:THR:HG1	1:A:343:PHE:HE1	1.52	0.51
1:E:234:TYR:CZ	1:E:248:PHE:HB3	2.46	0.51
1:G:190:LEU:HD12	1:G:271:TRP:CZ2	2.46	0.51
1:G:364:SER:HB2	1:I:362:THR:HG21	1.93	0.51
1:H:191:TRP:CH2	1:H:274:ARG:HD2	2.46	0.51
1:B:257:ASN:O	1:B:288:ILE:CG2	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:186:ASP:HB2	1:E:188:ARG:NE	2.25	0.50
1:E:216:LYS:HD2	1:E:289:GLY:O	2.10	0.50
1:H:338:GLU:HB3	1:H:339:TYR:CD1	2.45	0.50
1:L:285:GLU:O	1:L:286:LYS:C	2.49	0.50
1:C:229:VAL:O	1:C:235:HIS:CD2	2.64	0.50
1:E:368:GLN:HE21	1:E:368:GLN:HA	1.75	0.50
1:J:316:TYR:HA	1:J:324:PRO:HA	1.93	0.50
1:K:210:LEU:HD12	1:K:226:SER:O	2.11	0.50
1:K:296:ALA:O	1:K:308:ARG:HD2	2.11	0.50
1:L:225:VAL:O	1:L:225:VAL:HG13	2.12	0.50
1:H:196:THR:HA	1:H:209:LYS:HG2	1.93	0.50
1:J:225:VAL:HG13	1:J:225:VAL:O	2.10	0.50
1:D:272:ASN:OD1	1:D:284:TYR:HB3	2.10	0.50
1:E:330:THR:HG22	1:E:333:GLN:CB	2.29	0.50
1:K:192:THR:HG23	1:K:212:LEU:O	2.11	0.50
1:K:363:PHE:CD1	1:K:363:PHE:C	2.84	0.50
1:D:225:VAL:CG1	1:D:327:ILE:HD13	2.41	0.50
1:I:280:VAL:HG12	1:I:280:VAL:O	2.12	0.50
1:D:192:THR:HG21	1:D:210:LEU:O	2.11	0.50
1:D:274:ARG:HD3	1:D:276:GLY:O	2.11	0.50
1:E:272:ASN:ND2	1:E:282:THR:O	2.44	0.50
1:K:221:ILE:HG13	1:K:365:TYR:HE1	1.77	0.50
1:K:259:VAL:HG22	1:K:285:GLU:HA	1.94	0.50
1:K:317:LEU:HD22	1:K:356:PHE:HA	1.94	0.50
1:D:301:SER:OG	1:D:302:ASN:N	2.45	0.50
1:J:239:ASN:ND2	1:J:242:ASN:O	2.45	0.50
1:D:271:TRP:CD1	1:D:284:TYR:OH	2.62	0.50
1:G:327:ILE:HG12	1:G:327:ILE:O	2.12	0.50
1:F:237:ILE:CG2	1:F:347:TRP:CH2	2.95	0.49
1:I:329:THR:OG1	1:I:343:PHE:CE1	2.64	0.49
1:B:315:ILE:HG21	1:B:359:THR:O	2.12	0.49
1:F:340:SER:O	1:F:340:SER:OG	2.27	0.49
1:H:272:ASN:HD21	1:H:280:VAL:HB	1.77	0.49
1:D:238:ASN:HA	1:D:351:TYR:O	2.12	0.49
1:G:224:ASN:HB2	1:H:220:GLN:OE1	2.11	0.49
1:H:292:PRO:CB	1:H:331:PHE:HB3	2.42	0.49
1:C:330:THR:HB	1:C:342:THR:HG23	1.94	0.49
1:D:351:TYR:HB3	1:D:354:VAL:HG21	1.95	0.49
1:E:191:TRP:CZ2	1:E:274:ARG:HD2	2.48	0.49
1:A:189:THR:O	1:A:273:PHE:HA	2.12	0.49
1:L:246:LYS:HA	1:L:347:TRP:CZ2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:302:ASN:OD1	1:L:302:ASN:N	2.40	0.49
1:A:305:LYS:HD3	1:A:305:LYS:C	2.33	0.49
1:D:235:HIS:O	1:D:355:GLU:HA	2.12	0.49
1:E:223:ALA:N	1:F:220:GLN:HE22	2.10	0.49
1:G:347:TRP:CZ3	1:G:356:PHE:HE2	2.30	0.49
1:H:226:SER:OG	1:H:227:LEU:N	2.45	0.49
1:C:308:ARG:HD3	1:C:308:ARG:N	2.28	0.49
1:C:328:LYS:HB3	1:C:344:ASP:O	2.12	0.49
1:D:191:TRP:CD1	1:D:191:TRP:C	2.85	0.49
1:D:249:THR:HG23	1:D:344:ASP:OD1	2.12	0.49
1:G:270:TYR:O	1:G:279:ASN:OD1	2.31	0.49
1:H:201:THR:O	1:H:265:ASN:HB3	2.12	0.49
1:H:317:LEU:CD2	1:H:356:PHE:HA	2.42	0.49
1:B:274:ARG:HH21	1:B:277:ASP:HB2	1.78	0.49
1:H:193:THR:O	1:H:209:LYS:NZ	2.43	0.49
1:D:364:SER:O	1:F:224:ASN:ND2	2.45	0.49
1:K:202:ILE:O	1:K:204:GLN:N	2.44	0.49
1:K:227:LEU:N	1:K:358:THR:CG2	2.75	0.49
1:A:190:LEU:O	1:A:271:TRP:CH2	2.66	0.48
1:A:215:THR:HG21	1:B:217:CYS:O	2.13	0.48
1:J:216:LYS:HE3	1:J:218:GLY:O	2.12	0.48
1:E:212:LEU:HD11	1:E:214:LEU:HD21	1.95	0.48
1:E:248:PHE:O	1:E:249:THR:OG1	2.26	0.48
1:E:293:ASN:HB2	1:E:366:ILE:O	2.13	0.48
1:E:347:TRP:O	1:E:347:TRP:CE3	2.66	0.48
1:G:274:ARG:NE	1:G:276:GLY:O	2.45	0.48
1:J:223:ALA:CB	1:J:363:PHE:CZ	2.96	0.48
1:L:221:ILE:HD11	1:L:289:GLY:O	2.13	0.48
1:F:210:LEU:HD12	1:F:226:SER:O	2.14	0.48
1:F:332:ASN:HD22	1:F:340:SER:H	1.59	0.48
1:A:263:ASN:OD1	1:A:263:ASN:N	2.46	0.48
1:B:256:LYS:HA	1:B:338:GLU:HG2	1.96	0.48
1:D:279:ASN:O	1:D:280:VAL:HG22	2.13	0.48
1:D:363:PHE:HE2	1:D:365:TYR:HD2	1.62	0.48
1:J:274:ARG:NE	1:J:276:GLY:O	2.47	0.48
1:J:361:PHE:CE1	1:J:362:THR:O	2.66	0.48
1:D:356:PHE:O	1:D:356:PHE:HD1	1.95	0.48
1:K:202:ILE:O	1:K:207:ASP:OD1	2.30	0.48
1:K:322:ASP:N	1:K:322:ASP:OD1	2.47	0.48
1:G:224:ASN:HB2	1:H:220:GLN:CD	2.34	0.48
1:F:225:VAL:HG12	1:F:361:PHE:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:226:SER:OG	1:G:227:LEU:N	2.46	0.48
1:H:296:ALA:C	1:H:297:TYR:CG	2.87	0.48
1:A:325:ALA:HB1	1:A:346:SER:O	2.13	0.48
1:I:348:SER:O	1:I:349:LYS:HE2	2.14	0.48
1:K:307:ALA:O	1:K:309:ASP:N	2.47	0.48
1:L:223:ALA:HB3	1:L:363:PHE:CZ	2.49	0.48
1:B:360:SER:HB2	1:C:311:VAL:HG22	1.96	0.48
1:D:220:GLN:HG3	1:F:215:THR:OG1	2.14	0.48
1:K:223:ALA:HB3	1:K:363:PHE:CZ	2.49	0.48
1:L:293:ASN:N	1:L:297:TYR:HE1	2.12	0.48
1:L:315:ILE:HD12	1:L:315:ILE:O	2.14	0.48
1:A:220:GLN:OE1	1:C:222:LEU:HD23	2.13	0.47
1:E:255:ASP:O	1:E:258:GLY:N	2.40	0.47
1:F:253:LEU:CD2	1:F:340:SER:HB2	2.44	0.47
1:L:317:LEU:O	1:L:323:GLN:NE2	2.47	0.47
1:B:191:TRP:HB2	1:B:213:VAL:HG22	1.95	0.47
1:H:331:PHE:CE2	1:H:365:TYR:HB3	2.49	0.47
1:J:331:PHE:CE2	1:J:365:TYR:CB	2.97	0.47
1:C:190:LEU:HD22	1:C:271:TRP:CE2	2.49	0.47
1:E:187:THR:OG1	1:E:216:LYS:O	2.25	0.47
1:H:223:ALA:CB	1:H:363:PHE:CZ	2.97	0.47
1:I:237:ILE:O	1:I:238:ASN:C	2.53	0.47
1:I:329:THR:OG1	1:I:343:PHE:HD1	1.97	0.47
1:E:221:ILE:HB	1:E:365:TYR:CE1	2.50	0.47
1:J:361:PHE:CZ	1:J:362:THR:O	2.68	0.47
1:C:221:ILE:O	1:C:364:SER:HA	2.14	0.47
1:F:315:ILE:HD12	1:F:325:ALA:O	2.15	0.47
1:A:189:THR:HG1	1:B:219:SER:CB	2.18	0.47
1:B:189:THR:HG21	1:C:219:SER:HB2	1.97	0.47
1:D:319:GLY:O	1:E:312:TYR:CE1	2.67	0.47
1:H:310:ILE:HA	1:H:330:THR:HG23	1.96	0.47
1:I:228:ILE:N	1:I:228:ILE:HD12	2.29	0.47
1:I:252:LEU:O	1:I:340:SER:HA	2.15	0.47
1:I:255:ASP:OD1	1:I:256:LYS:N	2.47	0.47
1:D:321:PRO:HG3	1:E:312:TYR:OH	2.15	0.47
1:I:199:ASN:HB3	1:I:270:TYR:CD2	2.49	0.47
1:D:190:LEU:HA	1:D:273:PHE:HA	1.95	0.47
1:J:189:THR:HG21	1:J:213:VAL:HG13	1.97	0.47
1:A:266:LEU:HD12	1:A:267:GLY:H	1.80	0.47
1:C:294:LEU:HD23	1:C:368:GLN:HE21	1.80	0.47
1:D:272:ASN:O	1:D:279:ASN:ND2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:297:TYR:CD2	1:H:331:PHE:HD2	2.33	0.47
1:H:312:TYR:OH	1:H:328:LYS:HD2	2.14	0.47
1:H:331:PHE:CZ	1:H:365:TYR:HD2	2.32	0.47
1:L:300:PRO:O	1:L:302:ASN:O	2.32	0.47
1:B:303:SER:HB3	1:L:278:SER:HB2	1.97	0.46
1:D:299:LYS:HB2	1:D:332:ASN:O	2.15	0.46
1:E:330:THR:HB	1:E:342:THR:CG2	2.45	0.46
1:F:324:PRO:HD2	1:F:351:TYR:OH	2.15	0.46
1:H:204:GLN:OE1	1:H:232:GLY:HA3	2.15	0.46
1:H:292:PRO:HD2	1:H:339:TYR:HB3	1.97	0.46
1:J:310:ILE:HB	1:L:359:THR:HG22	1.97	0.46
1:A:220:GLN:OE1	1:C:222:LEU:HD21	2.13	0.46
1:A:255:ASP:OD1	1:A:255:ASP:C	2.53	0.46
1:G:212:LEU:HD11	1:G:214:LEU:HD21	1.97	0.46
1:H:293:ASN:O	1:H:296:ALA:CB	2.61	0.46
1:H:313:GLY:O	1:H:327:ILE:HG22	2.15	0.46
1:D:313:GLY:O	1:D:326:VAL:HG12	2.15	0.46
1:J:307:ALA:O	1:J:309:ASP:N	2.48	0.46
1:J:364:SER:OG	1:J:365:TYR:N	2.48	0.46
1:E:244:GLU:HG2	1:E:245:ILE:HD13	1.97	0.46
1:E:260:LEU:HD11	1:E:264:SER:HB2	1.97	0.46
1:F:221:ILE:O	1:F:364:SER:CB	2.60	0.46
1:G:310:ILE:HB	1:I:359:THR:HG22	1.97	0.46
1:F:223:ALA:O	1:F:362:THR:CG2	2.63	0.46
1:B:274:ARG:HB3	1:B:277:ASP:CA	2.43	0.46
1:H:292:PRO:HB2	1:H:331:PHE:HB3	1.98	0.46
1:I:229:VAL:CG2	1:I:356:PHE:HB3	2.46	0.46
1:I:261:LEU:O	1:I:264:SER:OG	2.27	0.46
1:J:258:GLY:HA3	1:J:287:ALA:O	2.15	0.46
1:D:196:THR:HG21	1:E:308:ARG:NH2	2.31	0.46
1:D:227:LEU:HD23	1:D:356:PHE:CE1	2.51	0.46
1:E:334:GLU:HB2	1:E:340:SER:CB	2.45	0.46
1:G:191:TRP:NE1	1:G:274:ARG:HB2	2.31	0.46
1:L:334:GLU:HB2	1:L:340:SER:CB	2.46	0.46
1:A:197:SER:CB	1:L:197:SER:HG	2.28	0.46
1:B:278:SER:O	1:B:279:ASN:ND2	2.43	0.46
1:F:317:LEU:HD11	1:F:325:ALA:HB2	1.96	0.46
1:A:249:THR:HG21	1:A:251:LYS:HE2	1.98	0.46
1:A:360:SER:HB2	1:B:311:VAL:HG22	1.97	0.46
1:L:311:VAL:O	1:L:311:VAL:HG12	2.16	0.46
1:F:329:THR:HG1	1:F:343:PHE:HD1	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:217:CYS:O	1:H:220:GLN:O	2.34	0.45
1:H:242:ASN:O	1:H:245:ILE:HG12	2.16	0.45
1:H:314:THR:HA	1:H:325:ALA:O	2.16	0.45
1:J:255:ASP:OD2	1:J:257:ASN:ND2	2.49	0.45
1:K:192:THR:O	1:K:192:THR:OG1	2.27	0.45
1:K:357:GLU:OE1	1:L:307:ALA:N	2.50	0.45
1:C:328:LYS:O	1:C:344:ASP:N	2.27	0.45
1:H:327:ILE:HG23	1:H:327:ILE:O	2.15	0.45
1:I:213:VAL:O	1:I:214:LEU:HD23	2.16	0.45
1:A:192:THR:CG2	1:A:211:THR:HA	2.47	0.45
1:C:249:THR:HA	1:C:343:PHE:O	2.17	0.45
1:E:368:GLN:HE21	1:E:368:GLN:CA	2.30	0.45
1:H:312:TYR:CE2	1:H:328:LYS:HG3	2.50	0.45
1:K:293:ASN:HB2	1:K:368:GLN:HA	1.98	0.45
1:A:204:GLN:HG3	1:A:207:ASP:HB3	1.99	0.45
1:D:312:TYR:CZ	1:F:319:GLY:O	2.69	0.45
1:E:328:LYS:HB3	1:E:344:ASP:HB2	1.99	0.45
1:H:299:LYS:HZ2	1:H:335:THR:HA	1.81	0.45
1:B:284:TYR:CD1	1:B:284:TYR:O	2.70	0.45
1:C:237:ILE:HG23	1:C:347:TRP:CH2	2.51	0.45
1:H:324:PRO:HD2	1:H:351:TYR:OH	2.17	0.45
1:I:326:VAL:O	1:I:345:PHE:HA	2.16	0.45
1:B:228:ILE:HD11	1:C:308:ARG:HH21	1.81	0.45
1:D:261:LEU:O	1:D:264:SER:OG	2.27	0.45
1:D:316:TYR:CD1	1:D:324:PRO:HB3	2.51	0.45
1:E:315:ILE:CD1	1:E:325:ALA:HB3	2.47	0.45
1:F:190:LEU:HD22	1:F:273:PHE:CD1	2.51	0.45
1:H:190:LEU:HA	1:H:273:PHE:HA	1.98	0.45
1:A:199:ASN:CB	1:A:270:TYR:CD2	3.00	0.45
1:G:274:ARG:HD3	1:G:274:ARG:C	2.37	0.45
1:D:291:MET:HB3	1:D:339:TYR:CD2	2.52	0.45
1:G:191:TRP:HE1	1:G:279:ASN:ND2	2.15	0.45
1:I:239:ASN:CB	1:I:353:ASN:HD21	2.28	0.45
1:J:187:THR:HG22	1:J:187:THR:O	2.17	0.45
1:B:274:ARG:NE	1:B:277:ASP:HA	2.32	0.45
1:F:250:ILE:HG23	1:F:265:ASN:HB2	1.99	0.45
1:H:317:LEU:HD21	1:H:356:PHE:CG	2.52	0.45
1:I:224:ASN:ND2	1:I:362:THR:HG1	2.13	0.45
1:J:331:PHE:CE2	1:J:365:TYR:HB3	2.51	0.45
1:K:306:TYR:O	1:K:308:ARG:N	2.50	0.45
1:K:368:GLN:OE1	1:K:368:GLN:HA	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:315:ILE:HD11	1:A:325:ALA:HB3	1.99	0.45
1:H:212:LEU:HA	1:H:225:VAL:HA	1.99	0.45
1:I:316:TYR:CE2	1:I:324:PRO:HB3	2.52	0.45
1:I:353:ASN:N	1:I:353:ASN:HD22	2.15	0.45
1:A:220:GLN:HE21	1:C:213:VAL:HG12	1.82	0.44
1:H:293:ASN:CA	1:H:368:GLN:HA	2.47	0.44
1:J:212:LEU:HD11	1:J:214:LEU:HD21	2.00	0.44
1:L:212:LEU:HD13	1:L:225:VAL:CG2	2.46	0.44
1:L:300:PRO:HB2	1:L:304:LYS:CD	2.47	0.44
1:E:238:ASN:CG	1:E:241:ASN:ND2	2.71	0.44
1:F:255:ASP:CG	1:F:259:VAL:HG22	2.38	0.44
1:G:359:THR:O	1:G:359:THR:OG1	2.26	0.44
1:C:214:LEU:HD13	1:C:365:TYR:OH	2.17	0.44
1:C:297:TYR:CD1	1:C:309:ASP:HB3	2.52	0.44
1:D:307:ALA:O	1:F:359:THR:HA	2.16	0.44
1:D:321:PRO:HG3	1:E:312:TYR:CE2	2.52	0.44
1:E:258:GLY:O	1:E:287:ALA:CB	2.66	0.44
1:G:246:LYS:HA	1:G:347:TRP:CE2	2.53	0.44
1:L:241:ASN:N	1:L:241:ASN:HD22	2.14	0.44
1:A:226:SER:HB3	1:B:308:ARG:HD2	2.00	0.44
1:I:244:GLU:CD	1:I:244:GLU:H	2.20	0.44
1:J:199:ASN:ND2	1:J:266:LEU:HD11	2.32	0.44
1:B:190:LEU:CD1	1:B:271:TRP:CZ2	3.00	0.44
1:J:234:TYR:CZ	1:J:248:PHE:HB3	2.53	0.44
1:B:322:ASP:C	1:B:324:PRO:HD3	2.38	0.44
1:G:191:TRP:CD1	1:G:279:ASN:ND2	2.84	0.44
1:H:284:TYR:CD1	1:H:284:TYR:C	2.91	0.44
1:H:293:ASN:HA	1:H:368:GLN:HB2	1.99	0.44
1:I:297:TYR:OH	1:I:366:ILE:HG12	2.18	0.44
1:I:317:LEU:HD22	1:I:356:PHE:HA	2.00	0.44
1:B:288:ILE:CG1	1:B:290:PHE:HB2	2.48	0.44
1:D:197:SER:CB	1:I:197:SER:OG	2.66	0.44
1:D:249:THR:CB	1:D:344:ASP:OD1	2.66	0.44
1:H:309:ASP:C	1:H:330:THR:HG22	2.34	0.44
1:K:368:GLN:OE1	1:K:368:GLN:CA	2.66	0.44
1:C:191:TRP:CZ2	1:C:277:ASP:O	2.71	0.44
1:G:201:THR:HG23	1:G:205:ASP:HA	2.00	0.44
1:H:293:ASN:O	1:H:296:ALA:N	2.48	0.44
1:I:223:ALA:O	1:I:363:PHE:N	2.49	0.44
1:L:192:THR:HG22	1:L:212:LEU:H	1.82	0.44
1:C:191:TRP:CE2	1:C:274:ARG:HG3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:237:ILE:CG2	1:C:347:TRP:CH2	3.00	0.44
1:E:274:ARG:CG	1:E:275:SER:N	2.81	0.44
1:E:358:THR:HG23	1:E:359:THR:O	2.18	0.44
1:G:251:LYS:C	1:G:252:LEU:HD12	2.37	0.44
1:I:296:ALA:O	1:I:308:ARG:NE	2.50	0.44
1:L:348:SER:O	1:L:349:LYS:HB2	2.18	0.44
1:E:306:TYR:HD2	1:E:308:ARG:NH1	2.16	0.43
1:F:316:TYR:N	1:F:316:TYR:HD1	2.12	0.43
1:K:200:CYS:HA	1:K:265:ASN:O	2.18	0.43
1:B:191:TRP:CG	1:B:192:THR:N	2.83	0.43
1:C:205:ASP:OD1	1:C:206:LYS:HG2	2.18	0.43
1:C:353:ASN:ND2	1:D:299:LYS:O	2.51	0.43
1:G:224:ASN:HB2	1:H:220:GLN:NE2	2.33	0.43
1:H:297:TYR:HD1	1:H:309:ASP:HA	1.83	0.43
1:K:229:VAL:HG11	1:K:234:TYR:C	2.38	0.43
1:K:362:THR:OG1	1:L:364:SER:N	2.50	0.43
1:D:191:TRP:CE2	1:D:274:ARG:HG3	2.53	0.43
1:D:317:LEU:HD21	1:D:356:PHE:CZ	2.53	0.43
1:A:357:GLU:OE1	1:B:307:ALA:HB2	2.18	0.43
1:E:222:LEU:HD23	1:F:220:GLN:CB	2.48	0.43
1:E:331:PHE:CE1	1:E:365:TYR:CD2	2.98	0.43
1:F:316:TYR:O	1:F:359:THR:HG23	2.18	0.43
1:F:317:LEU:CD1	1:F:325:ALA:HB2	2.48	0.43
1:H:316:TYR:O	1:H:359:THR:HG23	2.18	0.43
1:K:273:PHE:O	1:K:279:ASN:OD1	2.37	0.43
1:L:239:ASN:ND2	1:L:347:TRP:HH2	2.05	0.43
1:D:326:VAL:O	1:D:345:PHE:HA	2.18	0.43
1:J:314:THR:HA	1:J:326:VAL:HA	2.00	0.43
1:K:299:LYS:NZ	1:K:337:CYS:O	2.40	0.43
1:C:238:ASN:ND2	1:C:241:ASN:OD1	2.51	0.43
1:H:191:TRP:CD1	1:H:274:ARG:HB2	2.53	0.43
1:L:197:SER:O	1:L:197:SER:OG	2.37	0.43
1:L:286:LYS:O	1:L:286:LYS:CG	2.62	0.43
1:A:188:ARG:O	1:A:215:THR:HG23	2.18	0.43
1:A:262:ASP:C	1:A:264:SER:H	2.22	0.43
1:B:191:TRP:NE1	1:B:274:ARG:HG2	2.34	0.43
1:D:360:SER:HB2	1:E:311:VAL:CG2	2.46	0.43
1:J:297:TYR:OH	1:J:366:ILE:HG13	2.19	0.43
1:A:219:SER:H	1:C:189:THR:HG21	1.84	0.43
1:A:238:ASN:ND2	1:A:352:GLU:HG3	2.34	0.43
1:C:343:PHE:HB3	1:C:345:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:366:ILE:CD1	1:F:213:VAL:HG21	2.48	0.43
1:G:192:THR:HG21	1:G:210:LEU:O	2.19	0.43
1:L:227:LEU:HD23	1:L:356:PHE:CE1	2.54	0.43
1:B:254:PHE:HB3	1:B:258:GLY:HA2	2.00	0.43
1:F:357:GLU:O	1:F:357:GLU:HG3	2.19	0.43
1:D:197:SER:OG	1:I:197:SER:HB2	2.19	0.43
1:D:351:TYR:HB3	1:D:354:VAL:CG2	2.48	0.43
1:K:305:LYS:HG2	1:K:333:GLN:HE22	1.84	0.43
1:A:226:SER:HB2	1:B:308:ARG:CZ	2.49	0.42
1:B:316:TYR:O	1:B:359:THR:HG23	2.19	0.42
1:C:202:ILE:HD13	1:C:248:PHE:CE1	2.53	0.42
1:C:292:PRO:HG2	1:C:332:ASN:ND2	2.34	0.42
1:E:273:PHE:CE2	1:E:285:GLU:HB2	2.54	0.42
1:G:359:THR:HB	1:H:310:ILE:O	2.19	0.42
1:H:237:ILE:CG2	1:H:347:TRP:CH2	3.02	0.42
1:J:334:GLU:O	1:J:337:CYS:SG	2.62	0.42
1:C:257:ASN:HD21	1:C:286:LYS:H	1.67	0.42
1:D:213:VAL:HG21	1:E:366:ILE:HD13	2.00	0.42
1:E:316:TYR:N	1:E:359:THR:OG1	2.52	0.42
1:C:297:TYR:CE1	1:C:309:ASP:HA	2.54	0.42
1:D:321:PRO:HG3	1:E:312:TYR:CZ	2.54	0.42
1:H:236:ILE:HB	1:L:301:SER:HB2	2.00	0.42
1:H:237:ILE:HG21	1:H:347:TRP:CZ3	2.54	0.42
1:I:304:LYS:HG3	1:L:251:LYS:HZ1	1.84	0.42
1:L:299:LYS:N	1:L:300:PRO:CD	2.82	0.42
1:D:197:SER:OG	1:I:197:SER:HB3	2.20	0.42
1:G:327:ILE:O	1:G:327:ILE:CG1	2.68	0.42
1:J:332:ASN:N	1:J:332:ASN:ND2	2.68	0.42
1:K:320:LYS:HB3	1:K:322:ASP:OD1	2.19	0.42
1:D:255:ASP:OD1	1:D:256:LYS:N	2.53	0.42
1:D:366:ILE:HD13	1:F:213:VAL:HG21	2.01	0.42
1:E:283:ALA:O	1:E:285:GLU:N	2.53	0.42
1:H:272:ASN:HB3	1:H:279:ASN:HB3	2.01	0.42
1:I:187:THR:O	1:I:187:THR:CG2	2.66	0.42
1:L:294:LEU:O	1:L:298:PRO:HB3	2.20	0.42
1:A:198:PRO:O	1:L:270:TYR:OH	2.26	0.42
1:E:192:THR:HG22	1:E:212:LEU:O	2.19	0.42
1:E:354:VAL:HG12	1:E:355:GLU:O	2.19	0.42
1:G:314:THR:CG2	1:G:315:ILE:N	2.82	0.42
1:L:310:ILE:HG21	1:L:312:TYR:CE1	2.55	0.42
1:D:310:ILE:HA	1:D:329:THR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:274:ARG:HH21	1:H:369:GLN:HA	1.84	0.42
1:K:219:SER:HA	1:K:367:ALA:HB3	2.01	0.42
1:L:292:PRO:CB	1:L:297:TYR:CE1	3.03	0.42
1:E:191:TRP:CH2	1:E:274:ARG:HD2	2.54	0.42
1:E:323:GLN:HA	1:E:351:TYR:CE1	2.55	0.42
1:F:311:VAL:HG11	1:F:363:PHE:HB2	2.01	0.42
1:G:313:GLY:HA3	1:G:361:PHE:CZ	2.55	0.42
1:E:291:MET:O	1:E:367:ALA:HA	2.20	0.42
1:F:327:ILE:O	1:F:327:ILE:HG12	2.19	0.42
1:G:342:THR:O	1:G:342:THR:OG1	2.36	0.42
1:I:241:ASN:ND2	1:I:242:ASN:OD1	2.52	0.42
1:A:239:ASN:O	1:A:242:ASN:N	2.53	0.42
1:C:202:ILE:CD1	1:C:248:PHE:CE1	3.03	0.42
1:E:294:LEU:HD13	1:E:294:LEU:HA	1.91	0.42
1:I:347:TRP:CD1	1:I:347:TRP:N	2.87	0.42
1:E:217:CYS:O	1:E:220:GLN:O	2.37	0.41
1:I:273:PHE:O	1:I:279:ASN:HA	2.20	0.41
1:K:307:ALA:C	1:K:309:ASP:H	2.22	0.41
1:D:221:ILE:C	1:D:222:LEU:O	2.58	0.41
1:D:227:LEU:HD23	1:D:356:PHE:HE1	1.85	0.41
1:D:364:SER:OG	1:F:362:THR:CG2	2.29	0.41
1:H:191:TRP:CB	1:H:213:VAL:HG13	2.50	0.41
1:J:217:CYS:O	1:L:215:THR:HG21	2.20	0.41
1:F:315:ILE:O	1:F:315:ILE:CD1	2.68	0.41
1:F:317:LEU:HD22	1:F:356:PHE:HA	2.02	0.41
1:A:339:TYR:CD1	1:A:339:TYR:N	2.87	0.41
1:H:297:TYR:O	1:H:332:ASN:ND2	2.36	0.41
1:I:313:GLY:HA3	1:I:361:PHE:CE2	2.56	0.41
1:A:252:LEU:N	1:A:252:LEU:CD1	2.83	0.41
1:B:294:LEU:HD13	1:B:294:LEU:HA	1.80	0.41
1:E:189:THR:OG1	1:F:219:SER:HB2	2.20	0.41
1:F:293:ASN:OD1	1:F:294:LEU:N	2.54	0.41
1:G:191:TRP:NE1	1:G:279:ASN:ND2	2.69	0.41
1:G:322:ASP:OD1	1:G:323:GLN:NE2	2.53	0.41
1:J:234:TYR:CE1	1:J:248:PHE:HB3	2.55	0.41
1:K:331:PHE:HE2	1:K:365:TYR:HB2	1.76	0.41
1:K:331:PHE:N	1:K:331:PHE:HD1	2.14	0.41
1:A:210:LEU:HD13	1:A:250:ILE:HD13	2.03	0.41
1:D:228:ILE:HG21	1:E:306:TYR:CE1	2.56	0.41
1:G:193:THR:O	1:G:195:ASP:N	2.53	0.41
1:H:199:ASN:O	1:H:266:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:294:LEU:H	1:B:368:GLN:NE2	2.18	0.41
1:C:250:ILE:HG23	1:C:265:ASN:HB2	2.03	0.41
1:D:223:ALA:O	1:D:363:PHE:N	2.52	0.41
1:D:225:VAL:HG11	1:D:327:ILE:CD1	2.49	0.41
1:G:284:TYR:CD1	1:G:284:TYR:N	2.88	0.41
1:G:317:LEU:HD22	1:G:356:PHE:HA	2.03	0.41
1:H:236:ILE:HB	1:L:301:SER:CB	2.51	0.41
1:A:330:THR:HG22	1:A:333:GLN:HG3	2.03	0.41
1:F:216:LYS:HB2	1:F:290:PHE:CE2	2.56	0.41
1:F:315:ILE:HG13	1:F:327:ILE:CG2	2.51	0.41
1:K:237:ILE:HG21	1:K:347:TRP:CH2	2.56	0.41
1:A:187:THR:HA	1:A:273:PHE:CD1	2.56	0.41
1:A:212:LEU:HD12	1:A:224:ASN:O	2.20	0.41
1:A:315:ILE:CG2	1:A:359:THR:O	2.65	0.41
1:D:310:ILE:HG13	1:D:330:THR:HG23	2.03	0.41
1:E:191:TRP:HB2	1:E:213:VAL:HG22	2.03	0.41
1:G:190:LEU:CD2	1:G:273:PHE:CD1	3.03	0.41
1:G:316:TYR:CD2	1:H:312:TYR:HB2	2.55	0.41
1:H:190:LEU:HD13	1:H:273:PHE:CD1	2.56	0.41
1:H:237:ILE:HG23	1:H:347:TRP:CH2	2.56	0.41
1:H:238:ASN:HA	1:H:351:TYR:O	2.21	0.41
1:I:330:THR:HB	1:I:342:THR:HG23	2.03	0.41
1:J:298:PRO:O	1:J:333:GLN:NE2	2.54	0.41
1:J:316:TYR:N	1:J:316:TYR:CD1	2.89	0.41
1:C:351:TYR:HB3	1:C:354:VAL:CG2	2.51	0.41
1:D:241:ASN:OD1	1:D:241:ASN:N	2.54	0.41
1:E:365:TYR:C	1:E:365:TYR:CD1	2.95	0.41
1:F:197:SER:O	1:F:198:PRO:C	2.58	0.41
1:G:190:LEU:HD12	1:G:271:TRP:NE1	2.36	0.41
1:D:213:VAL:HG12	1:E:220:GLN:NE2	2.26	0.40
1:D:216:LYS:HD2	1:D:289:GLY:O	2.21	0.40
1:D:253:LEU:HD23	1:D:340:SER:HB2	2.03	0.40
1:K:327:ILE:HD12	1:K:327:ILE:HG21	1.88	0.40
1:L:216:LYS:HD2	1:L:289:GLY:O	2.20	0.40
1:B:331:PHE:CE2	1:B:365:TYR:HB3	2.56	0.40
1:H:293:ASN:HA	1:H:368:GLN:CB	2.51	0.40
1:K:285:GLU:O	1:K:286:LYS:HB2	2.20	0.40
1:L:192:THR:OG1	1:L:199:ASN:ND2	2.54	0.40
1:L:280:VAL:O	1:L:280:VAL:HG13	2.21	0.40
1:B:191:TRP:CZ2	1:B:274:ARG:CD	2.74	0.40
1:B:293:ASN:HB2	1:B:366:ILE:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:366:ILE:N	1:I:366:ILE:HD13	2.36	0.40
1:J:294:LEU:HD13	1:J:298:PRO:HA	2.03	0.40
1:D:308:ARG:NH2	1:F:194:PRO:O	2.54	0.40
1:E:187:THR:O	1:E:187:THR:CG2	2.69	0.40
1:G:221:ILE:HD11	1:G:289:GLY:O	2.22	0.40
1:G:271:TRP:CD1	1:G:271:TRP:C	2.95	0.40
1:G:315:ILE:CG2	1:G:361:PHE:HB2	2.51	0.40
1:J:302:ASN:OD1	1:J:302:ASN:C	2.59	0.40
1:K:227:LEU:HD22	1:K:345:PHE:CE2	2.56	0.40
1:K:320:LYS:HA	1:K:321:PRO:HD3	1.95	0.40
1:L:332:ASN:HD22	1:L:340:SER:H	1.67	0.40
1:A:226:SER:OG	1:B:308:ARG:HB2	2.22	0.40
1:E:255:ASP:C	1:E:257:ASN:H	2.25	0.40
1:F:236:ILE:HG22	1:F:353:ASN:HA	2.04	0.40
1:F:257:ASN:HA	1:F:288:ILE:HD11	2.03	0.40
1:G:183:VAL:O	1:G:185:HIS:CD2	2.75	0.40
1:I:229:VAL:HG23	1:I:356:PHE:HB3	2.03	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:202:ILE:O	1:K:336:GLY:O[3_554]	2.11	0.09

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	181/189 (96%)	158 (87%)	19 (10%)	4 (2%)	6 10
1	B	181/189 (96%)	153 (84%)	25 (14%)	3 (2%)	9 16
1	C	181/189 (96%)	155 (86%)	20 (11%)	6 (3%)	4 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	D	182/189 (96%)	150 (82%)	27 (15%)	5 (3%)	5	7
1	E	184/189 (97%)	150 (82%)	27 (15%)	7 (4%)	3	4
1	F	184/189 (97%)	154 (84%)	27 (15%)	3 (2%)	9	17
1	G	187/189 (99%)	153 (82%)	27 (14%)	7 (4%)	3	4
1	H	181/189 (96%)	156 (86%)	24 (13%)	1 (1%)	25	43
1	I	181/189 (96%)	150 (83%)	26 (14%)	5 (3%)	5	7
1	J	181/189 (96%)	152 (84%)	25 (14%)	4 (2%)	6	10
1	K	183/189 (97%)	152 (83%)	25 (14%)	6 (3%)	4	5
1	L	181/189 (96%)	152 (84%)	24 (13%)	5 (3%)	5	7
All	All	2187/2268 (96%)	1835 (84%)	296 (14%)	56 (3%)	5	8

All (56) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	280	VAL
1	D	280	VAL
1	E	280	VAL
1	E	284	TYR
1	K	280	VAL
1	B	288	ILE
1	C	303	SER
1	D	323	GLN
1	E	195	ASP
1	E	256	LYS
1	E	273	PHE
1	E	367	ALA
1	G	183	VAL
1	I	264	SER
1	I	280	VAL
1	K	307	ALA
1	K	308	ARG
1	L	280	VAL
1	L	286	LYS
1	D	303	SER
1	E	260	LEU
1	F	235	HIS
1	F	350	THR
1	K	206	LYS
1	A	240	LYS

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Mol	Chain	Res	Type
1	C	265	ASN
1	D	247	SER
1	F	218	GLY
1	I	243	PRO
1	J	353	ASN
1	K	286	LYS
1	L	301	SER
1	A	205	ASP
1	A	280	VAL
1	B	303	SER
1	G	198	PRO
1	G	235	HIS
1	G	247	SER
1	H	246	LYS
1	J	283	ALA
1	J	324	PRO
1	L	298	PRO
1	A	263	ASN
1	C	199	ASN
1	G	184	LYS
1	G	273	PHE
1	I	206	LYS
1	L	246	LYS
1	B	198	PRO
1	I	245	ILE
1	K	311	VAL
1	C	295	VAL
1	G	295	VAL
1	C	218	GLY
1	D	315	ILE
1	J	202	ILE

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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	164/170 (96%)	149 (91%)	15 (9%)	9	18
1	B	164/170 (96%)	138 (84%)	26 (16%)	2	4
1	C	164/170 (96%)	141 (86%)	23 (14%)	3	6
1	D	165/170 (97%)	146 (88%)	19 (12%)	5	11
1	E	167/170 (98%)	143 (86%)	24 (14%)	3	6
1	F	167/170 (98%)	148 (89%)	19 (11%)	5	11
1	G	170/170 (100%)	142 (84%)	28 (16%)	2	4
1	H	164/170 (96%)	136 (83%)	28 (17%)	2	3
1	I	164/170 (96%)	137 (84%)	27 (16%)	2	4
1	J	164/170 (96%)	143 (87%)	21 (13%)	4	8
1	K	166/170 (98%)	134 (81%)	32 (19%)	1	2
1	L	164/170 (96%)	143 (87%)	21 (13%)	4	8
All	All	1983/2040 (97%)	1700 (86%)	283 (14%)	3	6

All (283) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	188	ARG
1	A	190	LEU
1	A	191	TRP
1	A	204	GLN
1	A	208	SER
1	A	239	ASN
1	A	246	LYS
1	A	247	SER
1	A	262	ASP
1	A	275	SER
1	A	305	LYS
1	A	309	ASP
1	A	327	ILE
1	A	339	TYR
1	A	342	THR
1	B	187	THR
1	B	188	ARG
1	B	190	LEU
1	B	191	TRP

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Mol	Chain	Res	Type
1	B	204	GLN
1	B	241	ASN
1	B	244	GLU
1	B	249	THR
1	B	256	LYS
1	B	262	ASP
1	B	272	ASN
1	B	279	ASN
1	B	284	TYR
1	B	288	ILE
1	B	294	LEU
1	B	303	SER
1	B	304	LYS
1	B	305	LYS
1	B	308	ARG
1	B	309	ASP
1	B	312	TYR
1	B	335	THR
1	B	342	THR
1	B	344	ASP
1	B	350	THR
1	B	357	GLU
1	C	190	LEU
1	C	191	TRP
1	C	192	THR
1	C	196	THR
1	C	197	SER
1	C	207	ASP
1	C	211	THR
1	C	245	ILE
1	C	274	ARG
1	C	278	SER
1	C	280	VAL
1	C	282	THR
1	C	285	GLU
1	C	290	PHE
1	C	306	TYR
1	C	308	ARG
1	C	309	ASP
1	C	342	THR
1	C	346	SER
1	C	350	THR

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Mol	Chain	Res	Type
1	C	353	ASN
1	C	356	PHE
1	C	357	GLU
1	D	191	TRP
1	D	192	THR
1	D	204	GLN
1	D	220	GLN
1	D	225	VAL
1	D	227	LEU
1	D	228	ILE
1	D	241	ASN
1	D	246	LYS
1	D	274	ARG
1	D	284	TYR
1	D	285	GLU
1	D	294	LEU
1	D	314	THR
1	D	326	VAL
1	D	342	THR
1	D	343	PHE
1	D	350	THR
1	D	362	THR
1	E	185	HIS
1	E	187	THR
1	E	190	LEU
1	E	191	TRP
1	E	200	CYS
1	E	207	ASP
1	E	240	LYS
1	E	241	ASN
1	E	245	ILE
1	E	252	LEU
1	E	294	LEU
1	E	301	SER
1	E	305	LYS
1	E	308	ARG
1	E	312	TYR
1	E	314	THR
1	E	315	ILE
1	E	322	ASP
1	E	326	VAL
1	E	342	THR

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Mol	Chain	Res	Type
1	E	359	THR
1	E	365	TYR
1	E	368	GLN
1	E	369	GLN
1	F	187	THR
1	F	188	ARG
1	F	191	TRP
1	F	221	ILE
1	F	246	LYS
1	F	257	ASN
1	F	263	ASN
1	F	294	LEU
1	F	301	SER
1	F	303	SER
1	F	305	LYS
1	F	316	TYR
1	F	326	VAL
1	F	327	ILE
1	F	334	GLU
1	F	342	THR
1	F	350	THR
1	F	357	GLU
1	F	362	THR
1	G	186	ASP
1	G	188	ARG
1	G	190	LEU
1	G	191	TRP
1	G	200	CYS
1	G	204	GLN
1	G	207	ASP
1	G	239	ASN
1	G	241	ASN
1	G	242	ASN
1	G	246	LYS
1	G	262	ASP
1	G	272	ASN
1	G	274	ARG
1	G	278	SER
1	G	280	VAL
1	G	282	THR
1	G	284	TYR
1	G	286	LYS

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Mol	Chain	Res	Type
1	G	294	LEU
1	G	305	LYS
1	G	312	TYR
1	G	314	THR
1	G	330	THR
1	G	340	SER
1	G	342	THR
1	G	346	SER
1	G	360	SER
1	H	188	ARG
1	H	189	THR
1	H	191	TRP
1	H	204	GLN
1	H	205	ASP
1	H	211	THR
1	H	215	THR
1	H	219	SER
1	H	252	LEU
1	H	284	TYR
1	H	285	GLU
1	H	301	SER
1	H	305	LYS
1	H	308	ARG
1	H	315	ILE
1	H	322	ASP
1	H	327	ILE
1	H	329	THR
1	H	330	THR
1	H	331	PHE
1	H	335	THR
1	H	339	TYR
1	H	341	ILE
1	H	342	THR
1	H	350	THR
1	H	356	PHE
1	H	357	GLU
1	H	365	TYR
1	I	188	ARG
1	I	190	LEU
1	I	191	TRP
1	I	237	ILE
1	I	239	ASN

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Mol	Chain	Res	Type
1	I	241	ASN
1	I	242	ASN
1	I	244	GLU
1	I	249	THR
1	I	251	LYS
1	I	261	LEU
1	I	263	ASN
1	I	275	SER
1	I	281	SER
1	I	284	TYR
1	I	302	ASN
1	I	304	LYS
1	I	305	LYS
1	I	314	THR
1	I	327	ILE
1	I	329	THR
1	I	338	GLU
1	I	342	THR
1	I	347	TRP
1	I	348	SER
1	I	353	ASN
1	I	357	GLU
1	J	191	TRP
1	J	195	ASP
1	J	220	GLN
1	J	246	LYS
1	J	257	ASN
1	J	284	TYR
1	J	285	GLU
1	J	294	LEU
1	J	297	TYR
1	J	299	LYS
1	J	301	SER
1	J	305	LYS
1	J	312	TYR
1	J	322	ASP
1	J	324	PRO
1	J	327	ILE
1	J	329	THR
1	J	339	TYR
1	J	342	THR
1	J	346	SER

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Mol	Chain	Res	Type
1	J	364	SER
1	K	186	ASP
1	K	187	THR
1	K	188	ARG
1	K	190	LEU
1	K	191	TRP
1	K	192	THR
1	K	202	ILE
1	K	215	THR
1	K	219	SER
1	K	222	LEU
1	K	241	ASN
1	K	242	ASN
1	K	282	THR
1	K	285	GLU
1	K	286	LYS
1	K	288	ILE
1	K	294	LEU
1	K	297	TYR
1	K	305	LYS
1	K	311	VAL
1	K	322	ASP
1	K	326	VAL
1	K	327	ILE
1	K	329	THR
1	K	330	THR
1	K	331	PHE
1	K	335	THR
1	K	341	ILE
1	K	342	THR
1	K	358	THR
1	K	365	TYR
1	K	368	GLN
1	L	188	ARG
1	L	190	LEU
1	L	191	TRP
1	L	204	GLN
1	L	264	SER
1	L	278	SER
1	L	279	ASN
1	L	280	VAL
1	L	294	LEU

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Mol	Chain	Res	Type
1	L	297	TYR
1	L	299	LYS
1	L	302	ASN
1	L	304	LYS
1	L	305	LYS
1	L	309	ASP
1	L	330	THR
1	L	339	TYR
1	L	342	THR
1	L	347	TRP
1	L	352	GLU
1	L	359	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (58) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	302	ASN
1	A	332	ASN
1	B	241	ASN
1	B	332	ASN
1	B	368	GLN
1	C	220	GLN
1	C	235	HIS
1	C	238	ASN
1	C	241	ASN
1	C	257	ASN
1	C	332	ASN
1	C	368	GLN
1	D	204	GLN
1	D	235	HIS
1	D	238	ASN
1	D	332	ASN
1	D	333	GLN
1	E	185	HIS
1	E	220	GLN
1	E	224	ASN
1	E	239	ASN
1	E	241	ASN
1	E	332	ASN
1	E	368	GLN
1	F	220	GLN
1	F	224	ASN

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Mol	Chain	Res	Type
1	F	241	ASN
1	F	332	ASN
1	F	353	ASN
1	F	368	GLN
1	G	185	HIS
1	G	220	GLN
1	G	239	ASN
1	G	272	ASN
1	G	332	ASN
1	H	235	HIS
1	H	353	ASN
1	H	369	GLN
1	I	224	ASN
1	I	241	ASN
1	I	302	ASN
1	I	323	GLN
1	I	353	ASN
1	I	368	GLN
1	J	204	GLN
1	J	220	GLN
1	J	224	ASN
1	J	239	ASN
1	J	332	ASN
1	J	333	GLN
1	K	239	ASN
1	L	199	ASN
1	L	204	GLN
1	L	224	ASN
1	L	239	ASN
1	L	241	ASN
1	L	323	GLN
1	L	332	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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	183/189 (96%)	0.16	7 (3%) 40 43	30, 74, 122, 175	0
1	B	183/189 (96%)	0.14	13 (7%) 16 16	44, 108, 144, 201	0
1	C	183/189 (96%)	0.47	22 (12%) 4 4	67, 100, 140, 174	0
1	D	184/189 (97%)	0.03	2 (1%) 80 82	8, 70, 105, 147	0
1	E	186/189 (98%)	-0.16	7 (3%) 40 43	20, 87, 131, 150	0
1	F	186/189 (98%)	0.25	14 (7%) 14 14	30, 86, 114, 131	0
1	G	189/189 (100%)	-0.08	5 (2%) 56 59	30, 100, 139, 172	0
1	H	183/189 (96%)	-0.10	3 (1%) 72 74	9, 73, 112, 134	0
1	I	183/189 (96%)	0.21	9 (4%) 29 31	37, 78, 121, 179	0
1	J	183/189 (96%)	0.11	18 (9%) 7 7	30, 99, 139, 169	0
1	K	185/189 (97%)	-0.03	9 (4%) 29 31	8, 82, 113, 136	0
1	L	183/189 (96%)	0.38	16 (8%) 10 10	37, 83, 124, 156	0
All	All	2211/2268 (97%)	0.11	125 (5%) 23 25	8, 87, 134, 201	0

All (125) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	325	ALA	9.3
1	A	282	THR	8.2
1	B	361	PHE	7.9
1	J	213	VAL	6.4
1	L	356	PHE	6.1
1	C	326	VAL	6.1
1	J	266	LEU	6.0
1	F	214	LEU	5.8
1	I	283	ALA	5.8
1	C	336	GLY	5.7
1	F	311	VAL	5.6

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Mol	Chain	Res	Type	RSRZ
1	C	363	PHE	5.2
1	B	225	VAL	5.2
1	C	310	ILE	5.0
1	F	367	ALA	4.6
1	G	290	PHE	4.6
1	J	212	LEU	4.5
1	L	281	SER	4.5
1	K	222	LEU	4.5
1	I	276	GLY	4.4
1	B	356	PHE	4.2
1	L	280	VAL	4.1
1	F	212	LEU	4.0
1	C	311	VAL	4.0
1	F	271	TRP	4.0
1	C	331	PHE	4.0
1	J	210	LEU	4.0
1	C	260	LEU	3.9
1	F	365	TYR	3.9
1	L	284	TYR	3.9
1	J	343	PHE	3.9
1	B	343	PHE	3.9
1	L	279	ASN	3.8
1	A	277	ASP	3.8
1	F	222	LEU	3.8
1	J	214	LEU	3.7
1	F	363	PHE	3.6
1	I	277	ASP	3.6
1	L	327	ILE	3.5
1	E	212	LEU	3.5
1	B	341	ILE	3.4
1	E	327	ILE	3.4
1	L	237	ILE	3.4
1	B	289	GLY	3.4
1	C	356	PHE	3.4
1	B	211	THR	3.4
1	C	266	LEU	3.3
1	J	252	LEU	3.3
1	L	227	LEU	3.3
1	L	315	ILE	3.3
1	B	347	TRP	3.3
1	J	290	PHE	3.2
1	C	252	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	226	SER	3.1
1	A	276	GLY	3.1
1	F	341	ILE	3.1
1	K	310	ILE	3.1
1	C	210	LEU	3.1
1	C	341	ILE	3.1
1	L	357	GLU	3.1
1	L	266	LEU	3.0
1	L	343	PHE	3.0
1	I	282	THR	3.0
1	E	343	PHE	3.0
1	J	250	ILE	2.9
1	C	271	TRP	2.9
1	C	250	ILE	2.9
1	I	281	SER	2.9
1	C	307	ALA	2.9
1	A	237	ILE	2.8
1	E	250	ILE	2.8
1	A	283	ALA	2.8
1	H	266	LEU	2.8
1	A	341	ILE	2.7
1	K	361	PHE	2.7
1	I	278	SER	2.7
1	I	363	PHE	2.7
1	E	210	LEU	2.6
1	J	306	TYR	2.6
1	B	252	LEU	2.6
1	G	252	LEU	2.6
1	C	312	TYR	2.6
1	K	214	LEU	2.6
1	J	327	ILE	2.6
1	B	355	GLU	2.6
1	C	327	ILE	2.6
1	D	202	ILE	2.5
1	K	311	VAL	2.5
1	C	343	PHE	2.5
1	J	222	LEU	2.5
1	F	310	ILE	2.5
1	F	327	ILE	2.4
1	G	212	LEU	2.4
1	E	237	ILE	2.4
1	E	213	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
1	K	225	VAL	2.3
1	B	250	ILE	2.3
1	C	339	TYR	2.3
1	H	210	LEU	2.3
1	C	315	ILE	2.3
1	K	336	GLY	2.2
1	A	252	LEU	2.2
1	F	336	GLY	2.2
1	F	213	VAL	2.2
1	L	366	ILE	2.2
1	J	211	THR	2.2
1	J	271	TRP	2.2
1	L	341	ILE	2.2
1	J	307	ALA	2.1
1	I	225	VAL	2.1
1	J	345	PHE	2.1
1	F	216	LYS	2.1
1	D	327	ILE	2.1
1	K	341	ILE	2.1
1	J	225	VAL	2.1
1	B	227	LEU	2.1
1	C	212	LEU	2.1
1	L	317	LEU	2.1
1	G	261	LEU	2.1
1	L	278	SER	2.1
1	G	271	TRP	2.1
1	K	363	PHE	2.0
1	H	271	TRP	2.0
1	J	273	PHE	2.0
1	I	211	THR	2.0

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

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

6.3 Carbohydrates [\(i\)](#)

There are no monosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.