



Full wwPDB EM Validation Report ⓘ

Oct 19, 2026 – 06:34 PM JST

PDB ID : 9WJM / pdb_00009wjm
EMDB ID : EMD-66022
Title : R2-TTT-GNB1L complex
Authors : Qin, Y.; Xu, G.
Deposited on : 2025-08-31
Resolution : 4.50 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp>

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:

EMDB validation analysis : 0.0.1.dev133
MolProbity : 4-5-2 with Phenix2.2
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.51

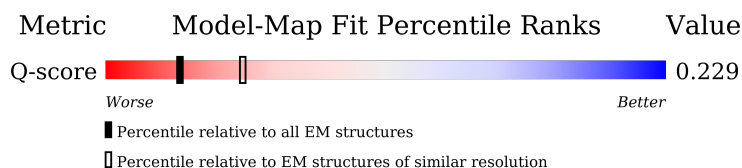
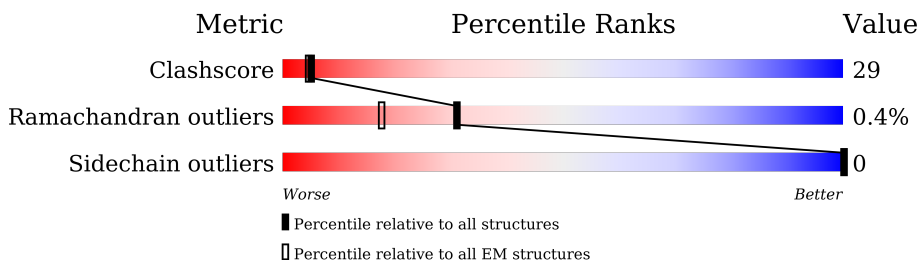
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.50 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.



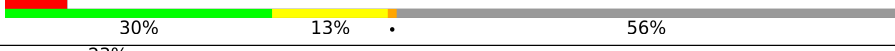
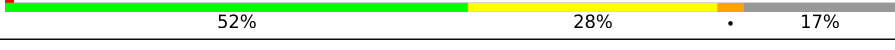
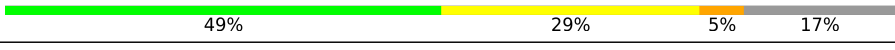
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	2937 (4.00 - 5.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1089	
1	K	1089	
1	N	1089	
2	B	508	

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Mol	Chain	Length	Quality of chain
2	L	508	
2	O	508	
3	C	837	
3	M	837	
3	P	837	
4	J	327	
5	D	456	
5	F	456	
5	H	456	
6	E	466	
6	G	466	
6	I	466	

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 40381 atoms, of which 606 are hydrogens and 0 are deuteriums.

In the tables below, 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 TELO2-interacting protein 1 homolog.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	A	881	Total	C	N	O	0	0
			4374	2609	881	884		
1	K	795	Total	C	N	O	0	0
			3945	2354	795	796		
1	N	858	Total	C	N	O	0	0
			4257	2540	858	859		

- Molecule 2 is a protein called TELO2-interacting protein 2.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	B	481	Total	C	N	O	0	0
			2376	1413	481	482		
2	L	479	Total	C	N	O	0	0
			2366	1408	479	479		
2	O	474	Total	C	N	O	0	0
			2342	1394	474	474		

- Molecule 3 is a protein called Telomere length regulation protein TEL2 homolog.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C	685	Total	C	N	O	0	0
			3389	2019	685	685		
3	M	363	Total	C	N	O	0	0
			1791	1065	363	363		
3	P	366	Total	C	N	O	0	0
			1806	1074	366	366		

- Molecule 4 is a protein called Guanine nucleotide-binding protein subunit beta-like protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	J	327	Total	C	H	N	O	0	0
			2215	954	606	327	328		

- Molecule 5 is a protein called RuvB-like helicase.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	D	397	Total	C	N	O	0	0
			1955	1161	397	397		
5	F	386	Total	C	N	O	0	0
			1903	1131	386	386		
5	H	385	Total	C	N	O	0	0
			1898	1128	385	385		

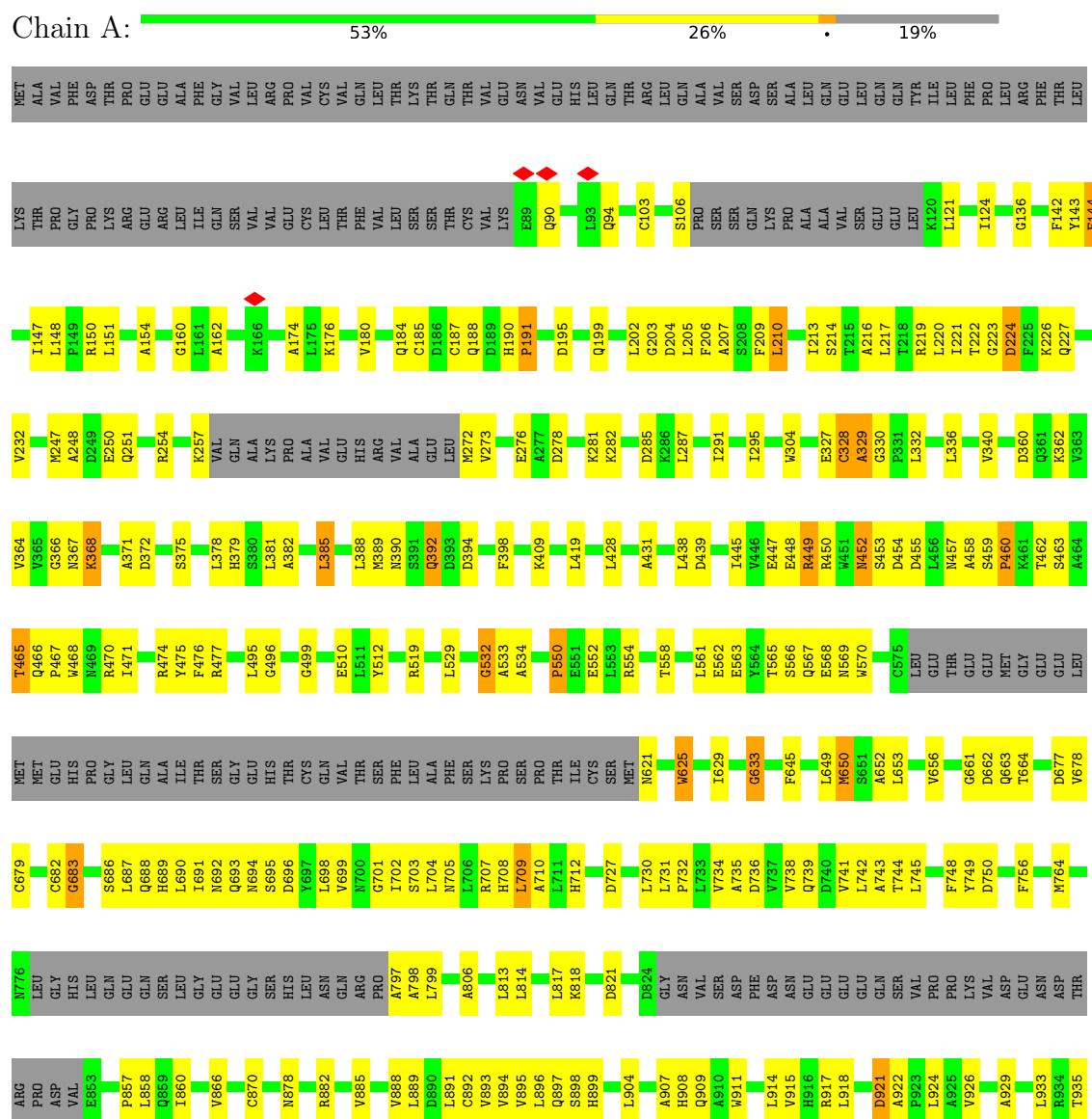
- Molecule 6 is a protein called RuvB-like helicase.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	E	398	Total	C	N	O	0	0
			1958	1162	398	398		
6	G	385	Total	C	N	O	0	0
			1899	1129	385	385		
6	I	387	Total	C	N	O	0	0
			1907	1133	387	387		

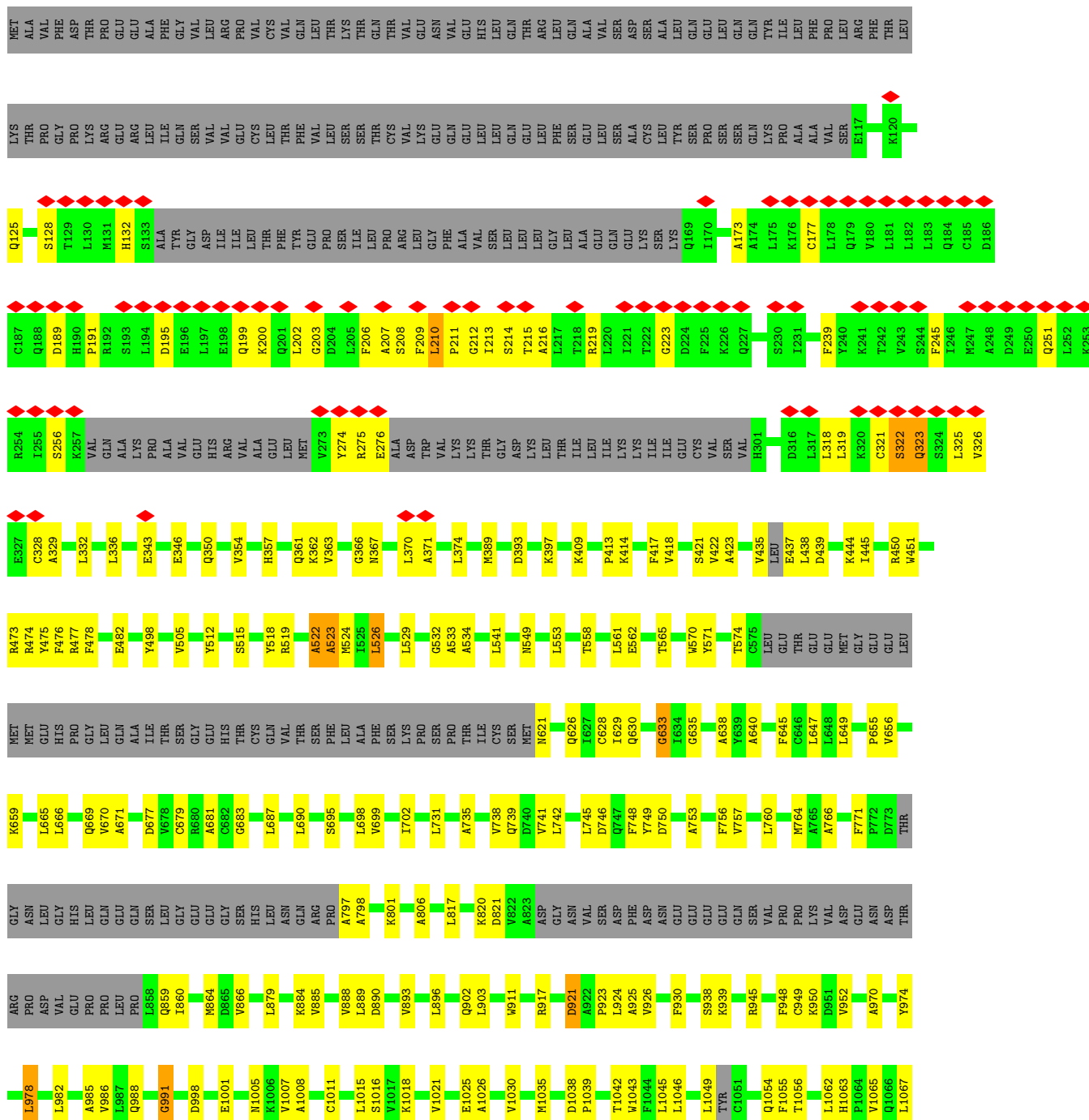
3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: TELO2-interacting protein 1 homolog



- Molecule 1: Telo2-interacting protein 1 homolog



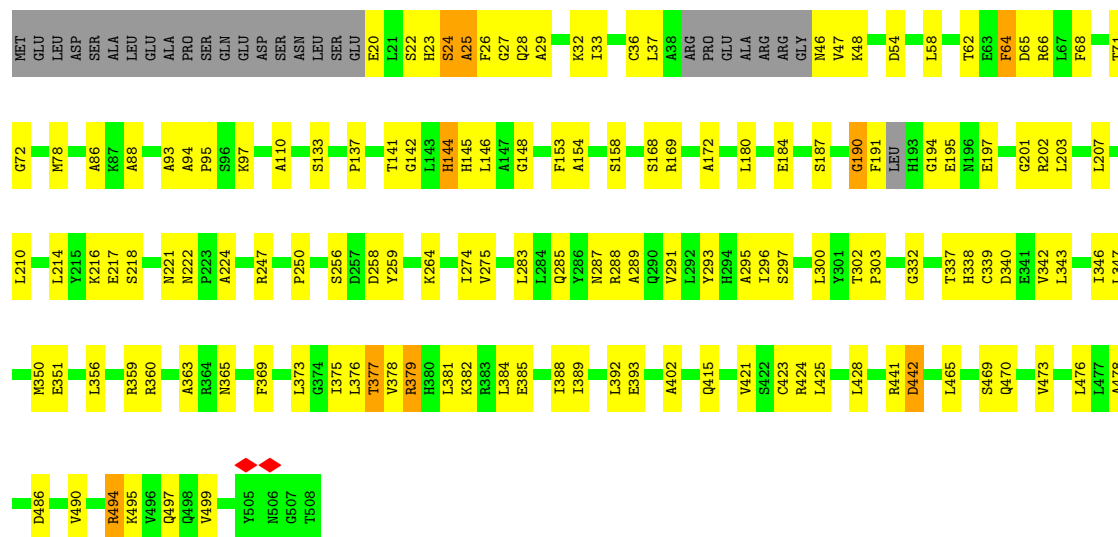
Chain N:





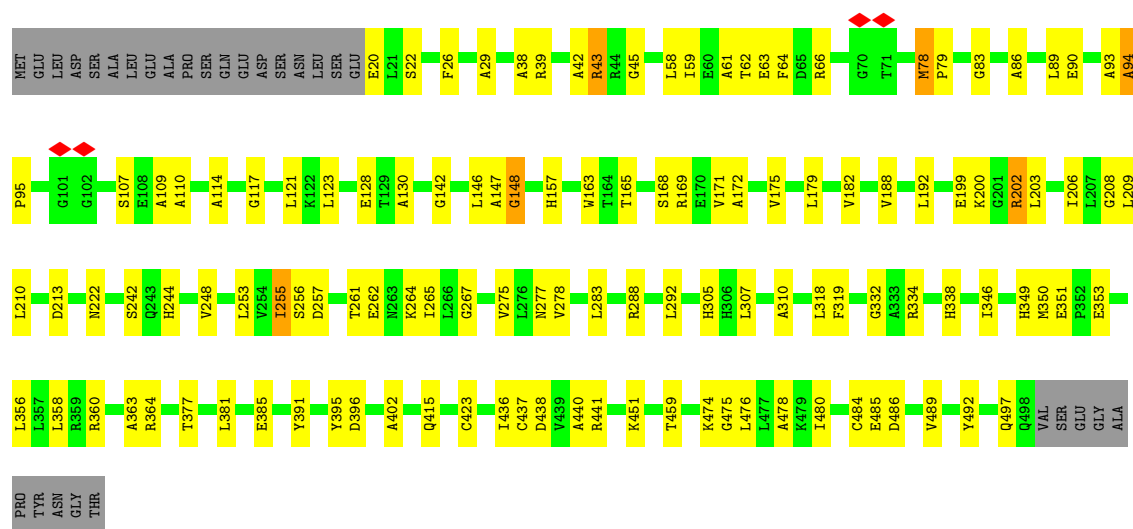
• Molecule 2: TELO2-interacting protein 2

Chain B: 67% 26% 5%



• Molecule 2: TELO2-interacting protein 2

Chain L: 70% 23% 6%



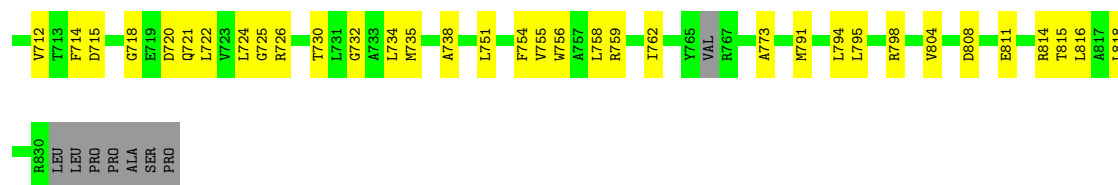
• Molecule 2: TELO2-interacting protein 2

Chain O: 25% 63% 29% 7%

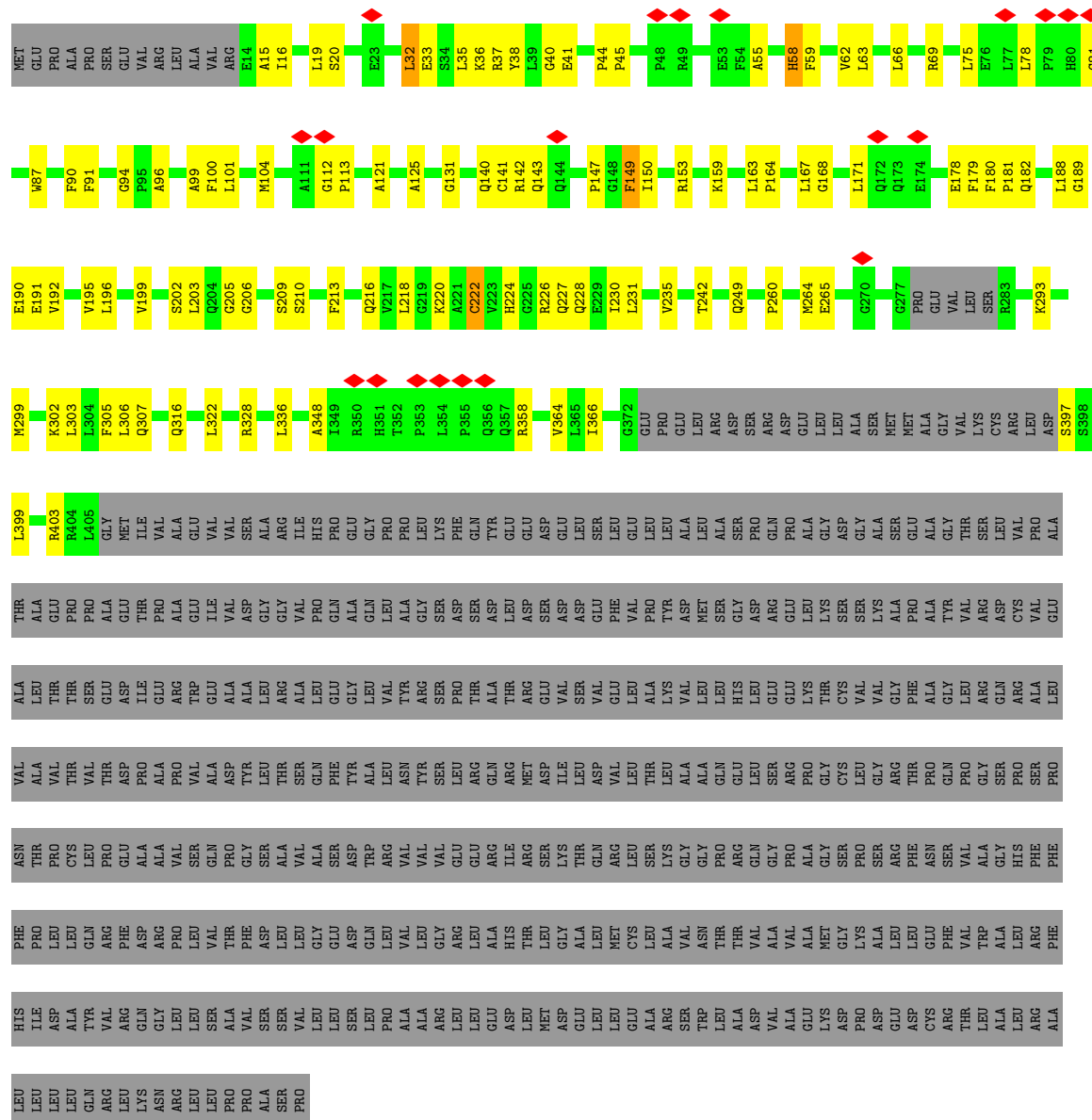
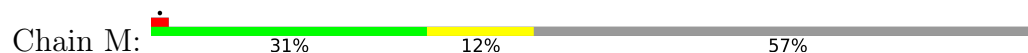


Category	Percentage
Very bad	58%
Bad	23%
Good	1%
Very good	18%

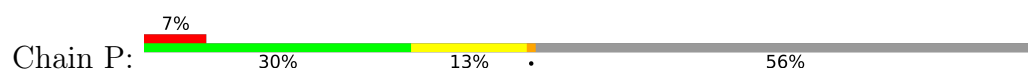


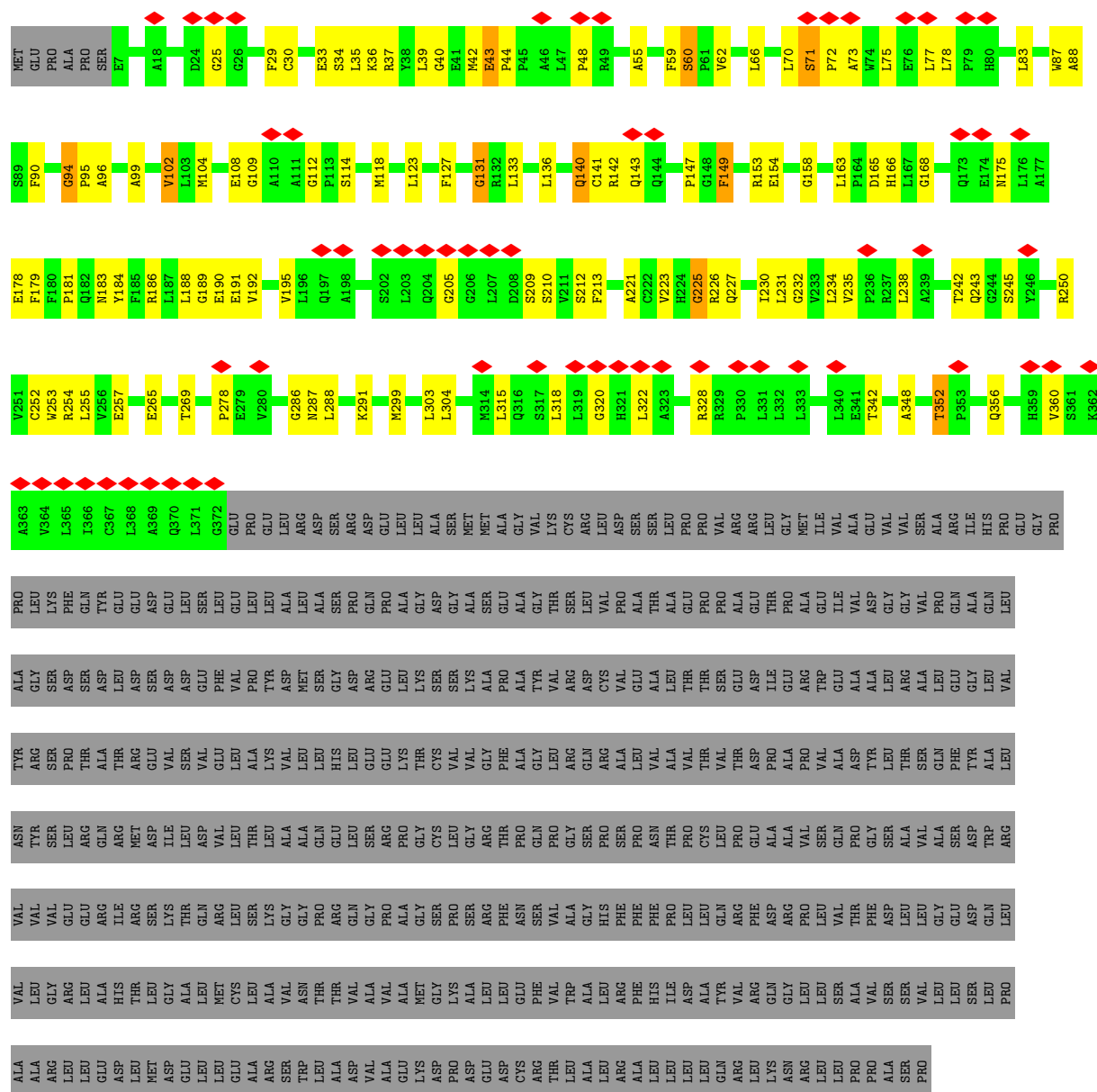


- Molecule 3: Telomere length regulation protein TEL2 homolog

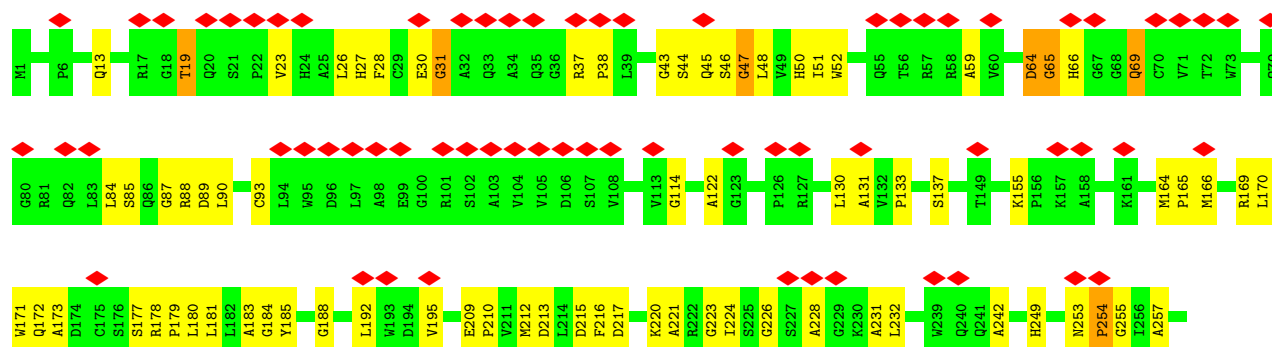


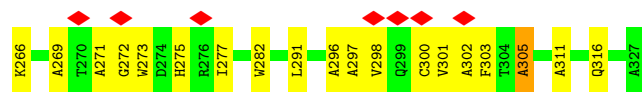
- Molecule 3: Telomere length regulation protein TEL2 homolog





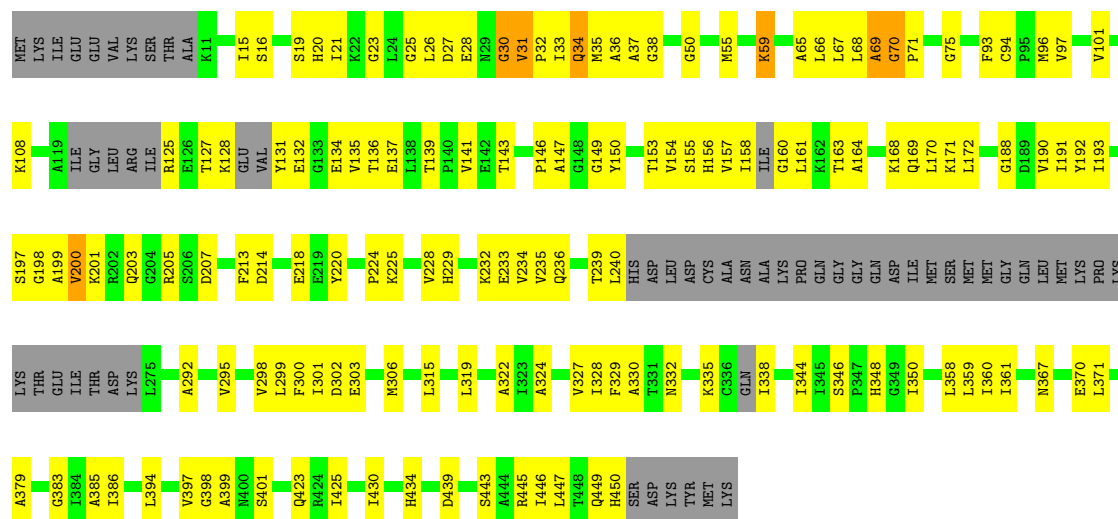
• Molecule 4: Guanine nucleotide-binding protein subunit beta-like protein 1





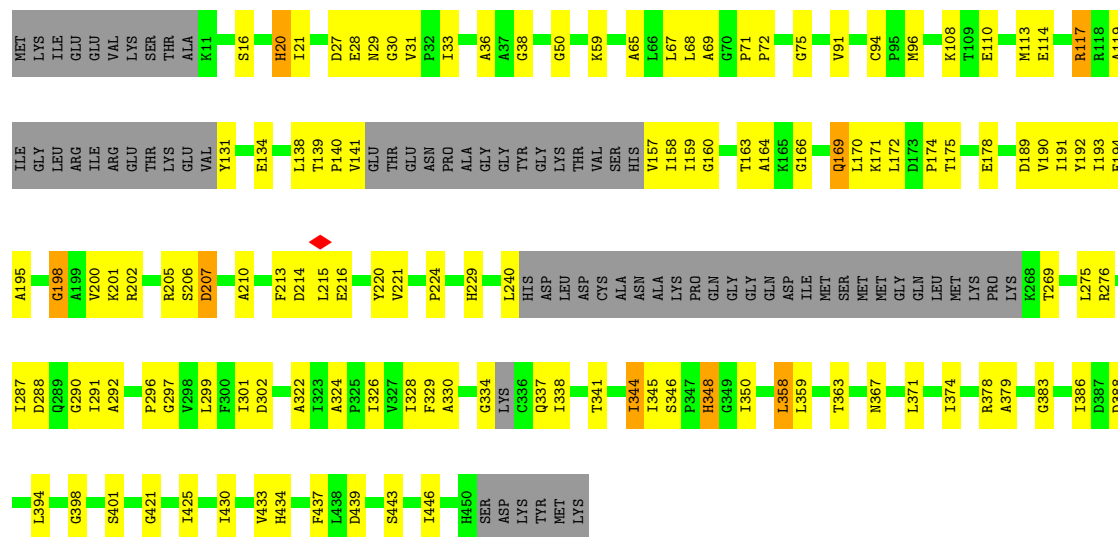
• Molecule 5: RuvB-like helicase

Chain D: 55% 30% 13%



• Molecule 5: RuvB-like helicase

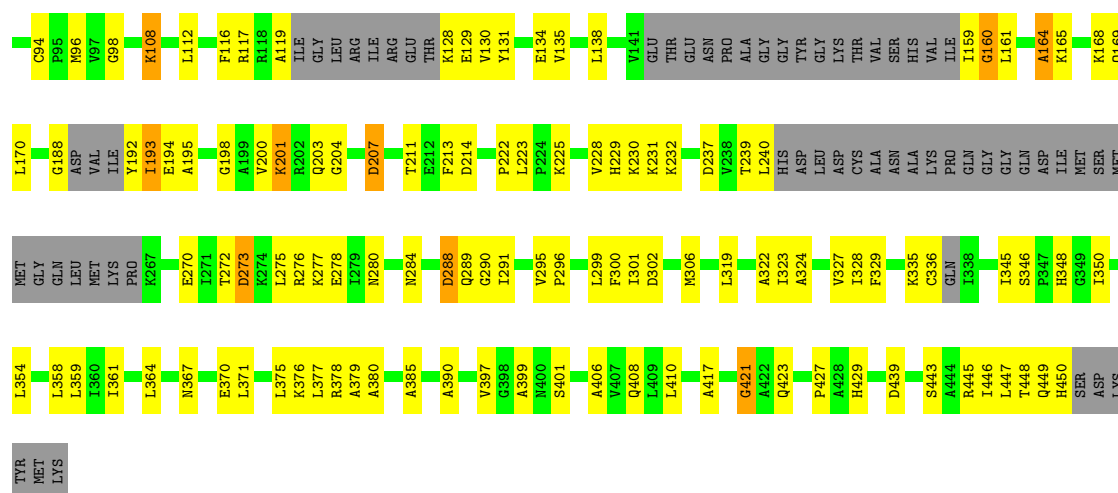
Chain F: 57% 25% 15%



• Molecule 5: RuvB-like helicase

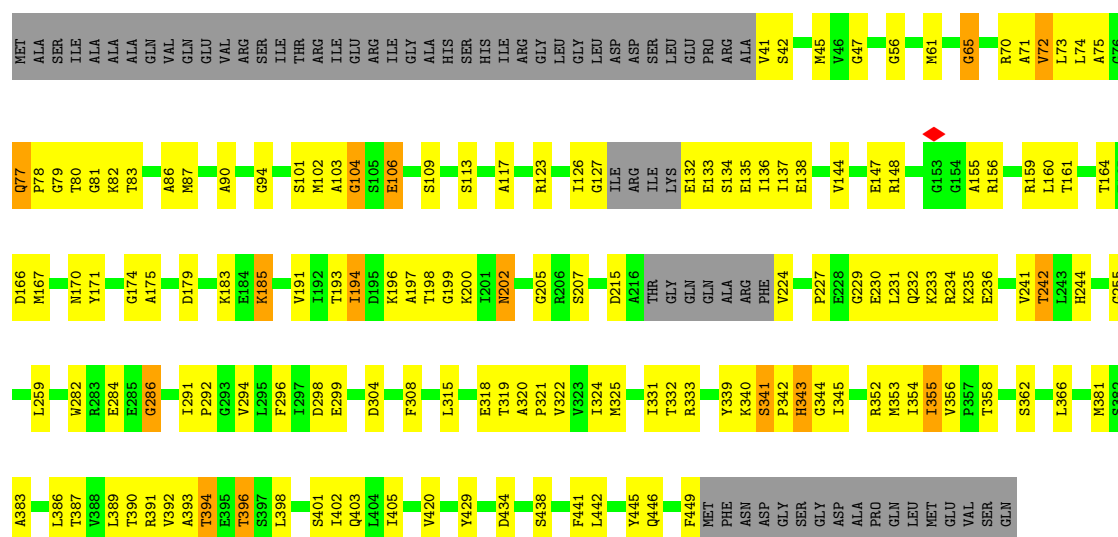
Chain H: 52% 30% 16%





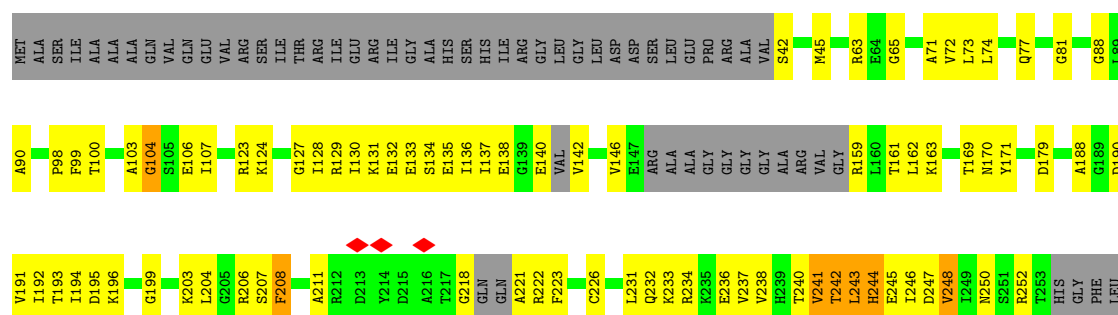
• Molecule 6: RuvB-like helicase

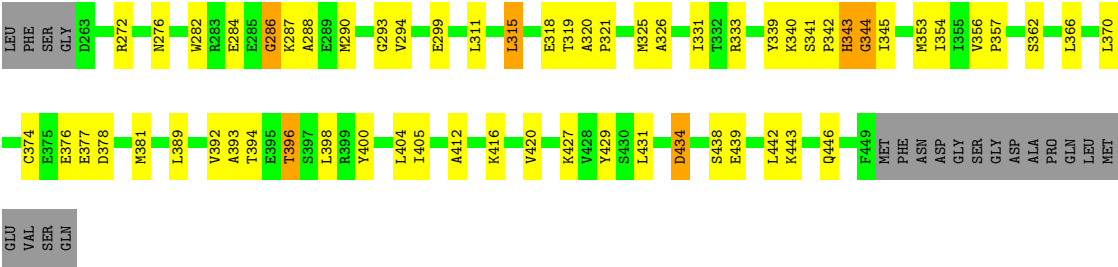
Chain E: 53% 29% 15%



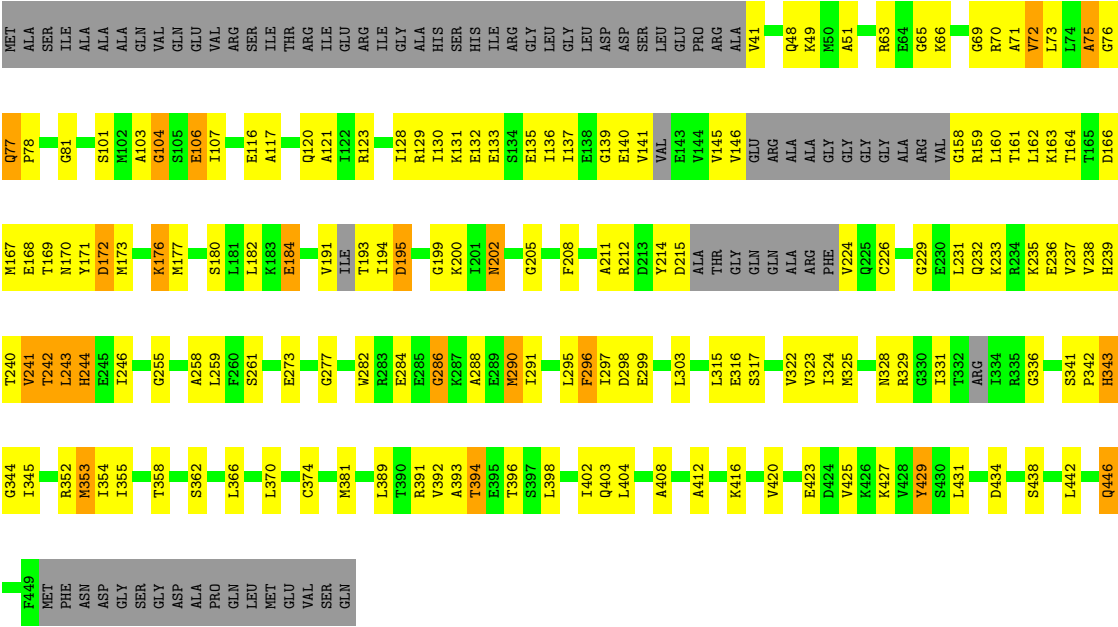
• Molecule 6: RuvB-like helicase

Chain G: 52% 28% 17%





● Molecule 6: RuvB-like helicase



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	46453	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOCONTINUUM (6k x 4k)	Depositor
Maximum map value	1.150	Depositor
Minimum map value	-0.548	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.042	Depositor
Recommended contour level	0.152	Depositor
Map size (Å)	428.00003, 428.00003, 428.00003	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	0.95	0/4368	1.40	81/6082 (1.3%)
1	K	0.65	0/3936	1.10	42/5476 (0.8%)
1	N	0.59	0/4248	0.99	19/5911 (0.3%)
2	B	0.83	0/2373	1.30	27/3298 (0.8%)
2	L	0.65	0/2365	1.09	24/3292 (0.7%)
2	O	0.62	0/2336	1.04	21/3244 (0.6%)
3	C	0.88	0/3384	1.35	55/4708 (1.2%)
3	M	0.60	0/1788	1.06	20/2484 (0.8%)
3	P	0.61	0/1805	1.17	29/2511 (1.2%)
4	J	0.45	0/1608	0.98	17/2232 (0.8%)
5	D	0.85	0/1949	1.38	34/2701 (1.3%)
5	F	0.89	0/1898	1.40	30/2633 (1.1%)
5	H	0.88	0/1892	1.46	43/2623 (1.6%)
6	E	0.88	0/1955	1.38	33/2713 (1.2%)
6	G	0.92	0/1894	1.42	31/2628 (1.2%)
6	I	0.91	0/1901	1.55	48/2635 (1.8%)
All	All	0.78	0/39700	1.26	554/55171 (1.0%)

There are no bond length outliers.

All (554) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L	45	GLY	N-CA-C	13.63	129.09	112.73
6	G	242	THR	N-CA-C	-13.20	93.93	111.74
3	C	415	ALA	N-CA-C	12.67	125.09	111.28
6	I	242	THR	N-CA-C	-12.52	94.12	111.39
6	I	243	LEU	N-CA-C	12.24	124.62	111.28
3	C	206	GLY	N-CA-C	-11.27	99.77	115.32
5	F	28	GLU	N-CA-C	-10.54	99.79	111.28
6	I	173	MET	N-CA-C	10.11	122.30	111.28
5	D	198	GLY	N-CA-C	-10.09	100.78	115.30
1	N	683	GLY	N-CA-C	-10.02	102.03	115.36
5	H	75	GLY	N-CA-C	-10.01	101.38	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	F	75	GLY	N-CA-C	-9.94	101.48	115.30
5	F	198	GLY	N-CA-C	-9.82	101.64	115.30
6	I	65	GLY	N-CA-C	-9.60	102.59	115.36
5	H	31	VAL	N-CA-C	-9.53	100.16	109.02
1	A	362	LYS	N-CA-C	-9.49	100.10	112.24
2	B	195	GLU	N-CA-C	-9.20	101.25	111.28
1	A	921	ASP	N-CA-C	9.09	122.06	110.33
5	D	139	THR	CA-C-N	-9.09	110.02	119.83
5	D	139	THR	C-N-CA	-9.09	110.02	119.83
5	H	71	PRO	CA-C-N	-9.08	110.41	119.76
5	H	71	PRO	C-N-CA	-9.08	110.41	119.76
1	A	687	LEU	N-CA-C	-9.01	101.46	111.28
2	B	338	HIS	N-CA-C	-8.96	101.51	111.28
6	E	104	GLY	N-CA-C	-8.90	102.05	112.73
6	E	242	THR	N-CA-C	-8.86	96.91	110.10
6	I	241	VAL	N-CA-C	8.86	119.67	110.72
1	K	362	LYS	N-CA-C	-8.82	99.83	111.74
6	G	65	GLY	N-CA-C	-8.80	103.66	115.36
6	E	65	GLY	N-CA-C	-8.78	103.09	115.30
1	A	454	ASP	N-CA-C	8.76	120.83	111.28
5	D	75	GLY	N-CA-C	-8.70	103.21	115.30
5	H	28	GLU	N-CA-C	-8.69	101.80	111.28
6	E	81	GLY	N-CA-C	-8.68	103.23	115.30
3	P	225	GLY	N-CA-C	-8.67	103.35	115.32
6	I	81	GLY	N-CA-C	-8.53	103.45	115.30
6	G	104	GLY	N-CA-C	-8.52	102.50	112.73
6	I	195	ASP	N-CA-C	-8.47	97.94	110.23
5	F	346	SER	CA-C-N	-8.43	110.72	119.83
5	F	346	SER	C-N-CA	-8.43	110.72	119.83
3	C	762	ILE	N-CA-C	8.28	120.03	111.00
6	G	243	LEU	N-CA-C	8.27	120.30	111.28
1	K	322	SER	N-CA-C	8.26	120.28	111.28
5	F	358	LEU	N-CA-C	8.26	121.58	110.35
6	G	341	SER	CA-C-N	-8.23	111.25	119.90
6	G	341	SER	C-N-CA	-8.23	111.25	119.90
3	C	722	LEU	N-CA-C	-8.19	102.35	111.28
2	B	64	PHE	N-CA-C	8.18	120.19	111.28
5	D	346	SER	CA-C-N	-8.17	111.34	119.76
5	D	346	SER	C-N-CA	-8.17	111.34	119.76
5	D	200	VAL	N-CA-C	8.15	119.65	107.75
3	P	149	PHE	N-CA-C	-8.09	99.35	110.35
1	A	452	ASN	N-CA-C	8.08	120.08	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	F	290	GLY	N-CA-C	-8.04	104.76	115.21
3	M	224	HIS	N-CA-C	-7.95	102.69	111.36
1	A	1068	HIS	N-CA-C	-7.93	102.59	111.71
3	P	94	GLY	CA-C-N	-7.91	111.62	119.76
3	P	94	GLY	C-N-CA	-7.91	111.62	119.76
1	A	952	VAL	N-CA-C	-7.87	102.59	110.62
5	F	207	ASP	N-CA-C	-7.81	102.76	111.28
5	H	198	GLY	N-CA-C	-7.81	104.44	115.30
6	I	286	GLY	N-CA-C	-7.77	104.50	115.30
3	P	62	VAL	N-CA-C	7.72	118.50	110.62
1	A	942	ASP	N-CA-C	-7.71	102.88	111.28
2	B	332	GLY	N-CA-C	-7.66	103.12	111.93
5	H	59	LYS	N-CA-C	-7.64	102.94	113.56
4	J	65	GLY	N-CA-C	-7.63	103.57	112.73
6	E	286	GLY	N-CA-C	-7.63	104.69	115.30
3	M	205	GLY	N-CA-C	-7.63	106.28	114.67
2	B	377	THR	N-CA-C	-7.63	102.10	111.33
6	I	104	GLY	N-CA-C	-7.60	103.61	112.73
1	A	330	GLY	N-CA-C	-7.55	105.64	115.22
3	M	112	GLY	CA-C-N	-7.53	112.01	119.76
3	M	112	GLY	C-N-CA	-7.53	112.01	119.76
5	F	31	VAL	N-CA-C	-7.50	100.70	108.96
6	G	244	HIS	N-CA-C	-7.48	103.12	111.28
5	H	278	GLU	N-CA-C	-7.47	103.14	111.28
5	H	29	ASN	N-CA-C	-7.45	103.16	111.28
3	C	398	SER	N-CA-C	7.39	119.34	111.28
3	C	163	LEU	CA-C-N	-7.38	110.86	119.05
3	C	163	LEU	C-N-CA	-7.38	110.86	119.05
6	I	172	ASP	N-CA-C	7.37	119.39	111.36
3	M	78	LEU	CA-C-N	-7.35	112.19	119.76
3	M	78	LEU	C-N-CA	-7.35	112.19	119.76
6	G	345	ILE	CA-C-N	-7.31	112.23	119.76
6	G	345	ILE	C-N-CA	-7.31	112.23	119.76
1	K	323	GLN	N-CA-C	-7.28	103.35	111.28
2	L	38	ALA	N-CA-C	7.26	120.12	110.53
1	A	210	LEU	CA-C-N	-7.21	111.05	119.05
1	A	210	LEU	C-N-CA	-7.21	111.05	119.05
5	D	70	GLY	CA-C-N	-7.20	112.97	120.38
5	D	70	GLY	C-N-CA	-7.20	112.97	120.38
6	I	341	SER	CA-C-N	-7.17	112.38	119.90
6	I	341	SER	C-N-CA	-7.17	112.38	119.90
3	P	131	GLY	N-CA-C	-7.16	105.84	115.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	998	ASP	N-CA-C	-7.15	102.09	111.74
5	F	344	ILE	N-CA-C	7.14	118.58	108.36
5	D	146	PRO	N-CA-C	-7.14	103.61	113.53
6	I	244	HIS	N-CA-C	-7.13	103.50	111.28
5	F	29	ASN	N-CA-C	-7.11	103.53	111.28
6	G	241	VAL	N-CA-C	7.09	117.85	110.62
1	A	1072	GLY	N-CA-C	7.07	124.76	115.36
2	B	144	HIS	N-CA-C	7.05	118.61	111.07
1	A	990	LEU	N-CA-C	7.04	118.96	111.28
6	I	394	THR	N-CA-C	-7.04	103.60	111.28
6	G	286	GLY	N-CA-C	-7.03	105.53	115.30
4	J	166	MET	N-CA-C	-7.00	103.64	111.28
4	J	45	GLN	N-CA-C	-6.99	103.66	111.28
6	E	72	VAL	N-CA-C	-6.95	100.62	109.58
1	K	526	LEU	N-CA-C	-6.92	103.74	111.28
1	K	189	ASP	N-CA-C	-6.91	103.74	111.28
5	H	193	ILE	N-CA-C	-6.91	100.61	109.80
3	M	226	ARG	N-CA-C	-6.91	103.83	111.36
2	B	148	GLY	N-CA-C	-6.89	106.46	115.22
6	I	176	LYS	N-CA-C	-6.88	99.84	110.10
1	A	998	ASP	N-CA-C	-6.88	102.19	111.54
4	J	31	GLY	N-CA-C	6.88	119.41	111.36
5	D	399	ALA	N-CA-C	-6.87	103.79	111.28
5	F	421	GLY	N-CA-C	-6.87	105.75	115.30
5	H	421	GLY	N-CA-C	-6.86	106.23	115.36
3	C	348	ALA	N-CA-C	-6.86	103.80	111.28
3	C	59	PHE	N-CA-C	-6.86	103.81	111.28
6	G	81	GLY	N-CA-C	-6.84	105.79	115.30
5	H	31	VAL	CA-C-N	-6.82	112.94	119.76
5	H	31	VAL	C-N-CA	-6.82	112.94	119.76
5	H	204	GLY	N-CA-C	6.82	121.69	111.18
6	E	106	GLU	N-CA-C	-6.82	103.84	111.28
3	C	715	ASP	N-CA-C	-6.82	97.79	108.90
5	H	164	ALA	N-CA-C	-6.82	103.85	111.28
1	K	523	ALA	N-CA-C	-6.78	103.89	111.28
3	C	149	PHE	N-CA-C	-6.77	100.41	110.23
6	G	77	GLN	CA-C-N	-6.77	112.78	119.76
6	G	77	GLN	C-N-CA	-6.77	112.78	119.76
1	N	228	GLY	N-CA-C	6.76	124.33	112.83
6	E	174	GLY	N-CA-C	6.75	120.73	111.54
1	N	1075	ASN	CA-C-N	-6.74	111.57	119.05
1	N	1075	ASN	C-N-CA	-6.74	111.57	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	P	112	GLY	CA-C-N	-6.74	112.82	119.76
3	P	112	GLY	C-N-CA	-6.74	112.82	119.76
5	H	399	ALA	N-CA-C	-6.73	103.94	111.28
6	I	345	ILE	CA-C-N	-6.70	112.86	119.76
6	I	345	ILE	C-N-CA	-6.70	112.86	119.76
1	A	385	LEU	CA-C-N	-6.70	111.62	119.05
1	A	385	LEU	C-N-CA	-6.70	111.62	119.05
3	C	246	TYR	N-CA-C	-6.70	103.98	111.28
3	C	558	LYS	N-CA-C	-6.68	104.00	111.28
3	C	759	ARG	N-CA-C	-6.68	104.00	111.28
6	I	66	LYS	N-CA-C	-6.68	104.00	111.28
5	F	205	ARG	N-CA-C	-6.66	101.11	110.50
5	H	378	ARG	N-CA-C	-6.66	103.94	111.07
1	A	450	ARG	N-CA-C	6.64	119.39	110.35
2	B	94	ALA	CA-C-N	-6.64	111.53	119.84
2	B	94	ALA	C-N-CA	-6.64	111.53	119.84
3	M	293	LYS	N-CA-C	-6.63	104.05	111.28
4	J	305	ALA	N-CA-C	-6.63	104.05	111.28
2	B	379	ARG	N-CA-C	-6.62	104.06	111.28
2	B	202	ARG	N-CA-C	-6.62	103.99	111.07
1	A	650	MET	N-CA-C	-6.59	104.09	111.28
4	J	164	MET	CA-C-N	-6.59	112.71	119.83
4	J	164	MET	C-N-CA	-6.59	112.71	119.83
2	L	334	ARG	CA-C-N	-6.58	112.98	119.76
2	L	334	ARG	C-N-CA	-6.58	112.98	119.76
6	I	261	SER	N-CA-C	-6.55	104.14	111.28
2	B	190	GLY	N-CA-C	-6.55	104.87	112.73
5	H	364	LEU	CA-C-N	-6.52	113.04	119.76
5	H	364	LEU	C-N-CA	-6.52	113.04	119.76
2	L	94	ALA	CA-C-N	-6.52	113.04	119.76
2	L	94	ALA	C-N-CA	-6.52	113.04	119.76
2	B	197	GLU	N-CA-C	-6.49	104.21	111.28
6	I	329	ARG	N-CA-C	6.48	119.62	110.23
6	I	353	MET	N-CA-C	6.47	119.61	110.23
3	C	78	LEU	CA-C-N	-6.46	113.11	119.76
3	C	78	LEU	C-N-CA	-6.46	113.11	119.76
4	J	177	SER	N-CA-C	-6.46	104.24	111.28
6	G	77	GLN	N-CA-C	-6.46	101.44	109.64
6	G	429	TYR	N-CA-C	-6.45	104.25	111.28
5	D	35	MET	N-CA-C	-6.45	97.89	108.41
3	P	35	LEU	N-CA-C	-6.45	104.25	111.28
5	D	71	PRO	N-CA-C	-6.42	102.87	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	G	344	GLY	N-CA-C	-6.42	106.82	115.36
2	B	302	THR	CA-C-N	-6.39	111.85	119.84
2	B	302	THR	C-N-CA	-6.39	111.85	119.84
6	I	72	VAL	N-CA-C	-6.38	101.35	109.58
5	D	350	ILE	N-CA-C	6.38	115.20	107.61
2	L	202	ARG	N-CA-C	-6.37	104.34	111.28
3	P	226	ARG	N-CA-C	-6.35	104.36	111.28
1	A	550	PRO	N-CA-C	-6.34	104.71	113.53
1	A	936	LEU	N-CA-C	-6.33	104.38	111.28
3	C	562	HIS	N-CA-C	6.33	118.18	111.28
1	K	1038	ASP	CA-C-N	-6.32	112.04	119.05
1	K	1038	ASP	C-N-CA	-6.32	112.04	119.05
5	D	31	VAL	CA-C-N	-6.30	113.48	119.85
5	D	31	VAL	C-N-CA	-6.30	113.48	119.85
5	H	71	PRO	N-CA-C	-6.29	103.84	110.58
6	E	345	ILE	CA-C-N	-6.29	113.28	119.76
6	E	345	ILE	C-N-CA	-6.29	113.28	119.76
1	A	1049	LEU	N-CA-C	6.25	118.10	109.29
3	C	560	LEU	N-CA-C	-6.22	104.50	111.28
1	K	343	GLU	N-CA-C	6.22	118.06	111.28
1	N	911	TRP	CA-C-N	-6.22	112.14	119.05
1	N	911	TRP	C-N-CA	-6.22	112.14	119.05
5	F	350	ILE	N-CA-C	6.22	114.80	109.02
3	C	235	VAL	CA-C-N	-6.21	112.15	119.05
3	C	235	VAL	C-N-CA	-6.21	112.15	119.05
4	J	46	SER	N-CA-C	-6.21	104.50	111.28
6	E	355	ILE	N-CA-C	6.21	117.25	108.36
5	H	275	LEU	N-CA-C	6.20	120.45	113.02
1	K	1056	THR	N-CA-C	-6.19	99.99	109.64
1	N	998	ASP	N-CA-C	-6.19	103.39	111.74
6	E	394	THR	N-CA-C	-6.18	103.69	111.11
1	A	457	ASN	N-CA-C	-6.17	104.55	111.28
1	A	144	GLU	CA-C-N	-6.16	112.21	119.05
1	A	144	GLU	C-N-CA	-6.16	112.21	119.05
5	D	50	GLY	N-CA-C	-6.16	105.35	112.50
2	O	338	HIS	N-CA-C	-6.12	104.61	111.28
6	I	199	GLY	N-CA-C	-6.12	106.49	115.30
5	H	291	ILE	N-CA-C	-6.11	104.39	110.62
5	D	34	GLN	N-CA-C	-6.10	104.63	111.28
3	C	606	LEU	N-CA-C	-6.10	104.63	111.28
2	L	338	HIS	N-CA-C	-6.10	104.63	111.28
6	E	341	SER	CA-C-N	-6.09	113.67	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	E	341	SER	C-N-CA	-6.09	113.67	119.76
5	H	290	GLY	N-CA-C	-6.08	106.84	115.30
3	C	235	VAL	CB-CA-C	-6.08	107.91	114.35
6	E	343	HIS	N-CA-C	-6.07	104.47	112.24
1	A	460	PRO	N-CA-C	-6.07	105.09	113.53
6	I	202	ASN	N-CA-C	-6.07	99.30	109.07
1	A	909	GLN	N-CA-C	-6.07	104.67	111.28
2	L	148	GLY	CA-C-N	-6.06	112.32	119.05
2	L	148	GLY	C-N-CA	-6.06	112.32	119.05
3	C	131	GLY	N-CA-C	-6.06	106.88	115.30
6	E	345	ILE	N-CA-C	6.06	114.82	107.61
2	O	334	ARG	CA-C-N	-6.05	114.31	120.85
2	O	334	ARG	C-N-CA	-6.05	114.31	120.85
6	I	343	HIS	N-CA-C	-6.05	104.49	112.24
2	B	423	CYS	N-CA-C	-6.04	104.69	111.28
6	G	394	THR	N-CA-C	-6.04	104.69	111.28
2	B	470	GLN	N-CA-C	-6.04	103.58	111.74
1	K	1018	LYS	N-CA-C	-6.03	104.71	111.28
3	C	346	SER	N-CA-C	-6.02	104.72	111.28
1	K	1056	THR	CA-C-N	-6.01	114.19	120.38
1	K	1056	THR	C-N-CA	-6.01	114.19	120.38
5	F	31	VAL	CA-C-N	-6.01	112.33	119.84
5	F	31	VAL	C-N-CA	-6.01	112.33	119.84
3	P	212	SER	N-CA-C	5.99	117.81	111.28
2	L	188	VAL	N-CA-C	-5.98	104.52	110.62
4	J	64	ASP	N-CA-C	5.97	118.25	108.52
2	B	142	GLY	N-CA-C	-5.97	105.57	112.73
1	A	468	TRP	N-CA-C	-5.96	104.78	111.28
6	I	184	GLU	N-CA-C	5.96	117.78	111.28
1	K	633	GLY	N-CA-C	-5.96	105.58	112.73
1	K	522	ALA	N-CA-C	5.95	117.77	111.28
1	N	227	GLN	N-CA-C	-5.95	104.79	111.28
1	A	465	THR	CA-C-N	-5.95	117.39	123.10
1	A	465	THR	C-N-CA	-5.95	117.39	123.10
2	B	78	MET	CA-C-N	-5.95	112.45	119.05
2	B	78	MET	C-N-CA	-5.95	112.45	119.05
1	N	304	TRP	N-CA-C	-5.94	104.80	111.28
4	J	254	PRO	N-CA-C	5.94	120.41	111.14
1	A	221	ILE	N-CA-C	-5.93	104.57	110.62
1	K	532	GLY	N-CA-C	-5.93	105.61	112.73
1	N	904	LEU	CA-C-N	-5.93	112.47	119.05
1	N	904	LEU	C-N-CA	-5.93	112.47	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	P	60	SER	CA-C-N	-5.91	112.49	119.05
3	P	60	SER	C-N-CA	-5.91	112.49	119.05
5	H	289	GLN	N-CA-C	-5.91	104.84	111.28
3	C	60	SER	CA-C-N	-5.91	112.49	119.05
3	C	60	SER	C-N-CA	-5.91	112.49	119.05
2	O	126	LYS	N-CA-C	-5.91	104.84	111.28
1	A	743	ALA	N-CA-C	-5.90	104.84	111.28
6	G	208	PHE	N-CA-C	-5.90	104.84	111.28
4	J	19	THR	N-CA-C	-5.90	104.85	111.28
3	M	94	GLY	CA-C-N	-5.89	113.69	119.76
3	M	94	GLY	C-N-CA	-5.89	113.69	119.76
1	A	893	VAL	N-CA-C	-5.89	104.61	110.62
3	P	205	GLY	N-CA-C	-5.89	107.03	114.16
2	L	222	ASN	CA-C-N	-5.88	112.52	119.05
2	L	222	ASN	C-N-CA	-5.88	112.52	119.05
6	G	90	ALA	N-CA-C	-5.88	104.78	111.07
5	F	214	ASP	N-CA-C	-5.87	104.88	111.28
3	C	105	GLU	N-CA-C	-5.87	104.88	111.28
5	F	401	SER	N-CA-C	5.87	118.77	110.50
1	A	390	ASN	N-CA-C	-5.87	104.89	111.28
1	A	449	ARG	CB-CA-C	-5.84	109.86	116.63
5	H	201	LYS	N-CA-C	-5.84	100.47	109.52
1	N	633	GLY	N-CA-C	-5.83	105.74	112.73
6	E	284	GLU	N-CA-C	-5.82	104.93	111.28
1	N	958	GLY	N-CA-C	-5.82	105.74	112.73
1	A	1076	PRO	N-CA-C	-5.82	105.44	113.53
3	M	190	GLU	N-CA-C	-5.81	104.95	111.28
3	P	163	LEU	CA-C-N	-5.80	112.61	119.05
3	P	163	LEU	C-N-CA	-5.80	112.61	119.05
1	K	366	GLY	N-CA-C	-5.79	105.79	112.73
3	C	413	VAL	N-CA-C	-5.79	104.72	110.62
6	I	106	GLU	N-CA-C	-5.78	104.98	111.28
1	A	360	ASP	N-CA-C	-5.77	104.99	111.28
2	O	488	LYS	N-CA-C	5.77	117.57	111.28
2	L	148	GLY	O-C-N	5.76	123.14	121.07
6	I	429	TYR	N-CA-C	-5.76	105.00	111.28
1	A	160	GLY	N-CA-C	-5.76	105.82	112.73
2	O	319	PHE	CA-C-N	-5.76	112.66	119.05
2	O	319	PHE	C-N-CA	-5.76	112.66	119.05
3	C	718	GLY	N-CA-C	-5.75	105.83	112.73
6	E	94	GLY	CA-C-N	-5.75	112.65	119.84
6	E	94	GLY	C-N-CA	-5.75	112.65	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	M	222	CYS	N-CA-C	5.74	117.53	111.28
4	J	88	ARG	N-CA-C	-5.73	105.03	111.28
5	F	348	HIS	N-CA-C	-5.72	105.61	113.56
5	H	345	ILE	N-CA-C	-5.72	97.44	109.34
6	G	315	LEU	N-CA-C	-5.72	105.05	111.28
3	C	399	LEU	N-CA-C	5.69	119.44	108.45
1	A	392	GLN	N-CA-C	5.67	118.50	110.50
3	P	71	SER	CA-C-N	-5.67	112.76	119.05
3	P	71	SER	C-N-CA	-5.67	112.76	119.05
5	F	169	GLN	N-CA-C	-5.66	101.90	110.28
3	C	432	GLU	N-CA-C	-5.66	105.11	111.28
4	J	47	GLY	N-CA-C	-5.65	107.47	115.43
6	G	398	LEU	N-CA-C	-5.64	105.13	111.28
2	O	90	GLU	N-CA-C	5.64	117.43	111.28
6	I	284	GLU	N-CA-C	-5.63	105.14	111.28
3	P	352	THR	CA-C-N	-5.63	113.96	119.76
3	P	352	THR	C-N-CA	-5.63	113.96	119.76
1	K	413	PRO	N-CA-C	-5.63	105.71	113.53
1	N	1075	ASN	N-CA-C	-5.63	101.72	108.25
6	I	296	PHE	CA-C-N	-5.62	115.62	123.10
6	I	296	PHE	C-N-CA	-5.62	115.62	123.10
3	M	58	HIS	N-CA-C	5.62	120.13	112.88
5	H	108	LYS	N-CA-C	-5.62	105.16	111.28
3	P	102	VAL	CB-CA-C	-5.61	104.56	112.14
5	F	108	LYS	N-CA-C	-5.61	105.16	111.28
1	A	247	MET	N-CA-C	5.61	117.84	111.11
5	D	31	VAL	N-CA-C	5.58	113.97	107.89
3	M	182	GLN	N-CA-C	5.57	117.36	111.28
1	A	1086	LYS	N-CA-C	-5.57	105.21	111.28
6	I	303	LEU	N-CA-C	5.57	118.15	110.35
2	L	142	GLY	N-CA-C	-5.56	106.06	112.73
2	O	212	PRO	N-CA-C	-5.56	105.80	113.53
6	I	296	PHE	N-CA-C	-5.56	100.72	109.50
1	K	211	PRO	N-CA-C	-5.56	105.81	113.53
5	H	42	GLN	N-CA-C	-5.55	104.25	111.74
5	F	288	ASP	N-CA-C	-5.55	105.23	111.28
2	B	148	GLY	O-C-N	5.54	123.06	121.07
1	A	224	ASP	N-CA-C	-5.53	105.25	111.28
3	C	566	LYS	N-CA-C	-5.53	105.34	111.36
6	E	391	ARG	N-CA-C	-5.52	105.26	111.28
1	K	890	ASP	N-CA-C	-5.52	105.26	111.28
6	I	315	LEU	N-CA-C	-5.52	105.27	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	H	319	LEU	N-CA-C	-5.52	105.27	111.28
2	O	161	GLN	CA-C-N	-5.51	113.03	119.32
2	O	161	GLN	C-N-CA	-5.51	113.03	119.32
2	O	356	LEU	N-CA-C	-5.51	105.27	111.28
6	I	291	ILE	CA-C-N	-5.50	114.26	119.76
6	I	291	ILE	C-N-CA	-5.50	114.26	119.76
1	A	709	LEU	N-CA-C	-5.50	105.28	111.28
1	A	366	GLY	N-CA-C	-5.49	106.14	112.73
3	C	308	SER	N-CA-C	-5.49	106.35	113.16
3	C	269	THR	N-CA-C	-5.49	105.29	111.28
2	O	397	GLY	CA-C-N	-5.48	112.97	119.05
2	O	397	GLY	C-N-CA	-5.48	112.97	119.05
1	A	534	ALA	N-CA-C	-5.46	105.32	111.28
1	A	975	SER	N-CA-C	-5.46	105.33	111.28
2	B	33	ILE	N-CA-C	-5.46	105.05	110.62
1	A	532	GLY	N-CA-C	-5.46	106.18	112.73
5	H	57	ARG	N-CA-C	-5.46	105.33	111.28
6	E	56	GLY	N-CA-C	-5.45	106.18	112.50
6	I	77	GLN	CA-C-N	-5.45	113.03	119.84
6	I	77	GLN	C-N-CA	-5.45	113.03	119.84
4	J	87	GLY	N-CA-C	5.45	120.94	111.14
6	I	446	GLN	N-CA-C	-5.45	105.24	111.07
1	A	329	ALA	N-CA-C	5.44	117.21	111.28
1	A	409	LYS	N-CA-C	-5.44	105.25	111.07
3	C	756	TRP	N-CA-C	-5.44	105.35	111.28
2	L	261	THR	N-CA-C	-5.44	105.46	111.71
1	K	210	LEU	CA-C-N	-5.44	113.02	119.05
1	K	210	LEU	C-N-CA	-5.44	113.02	119.05
1	A	690	LEU	N-CA-C	-5.43	105.36	111.28
2	B	24	SER	N-CA-C	-5.43	105.36	111.28
1	N	947	ARG	N-CA-C	5.43	117.20	111.28
6	G	396	THR	N-CA-C	5.43	118.27	109.86
1	A	964	ALA	CA-C-N	-5.42	113.03	119.05
1	A	964	ALA	C-N-CA	-5.42	113.03	119.05
3	C	226	ARG	N-CA-C	-5.42	106.72	113.38
2	L	109	ALA	N-CA-C	-5.42	105.37	111.28
6	I	297	ILE	N-CA-C	5.41	115.65	107.75
1	A	958	GLY	N-CA-C	-5.41	106.24	112.73
1	A	693	GLN	N-CA-C	-5.40	105.39	111.28
1	A	951	ASP	N-CA-C	-5.40	104.45	111.74
1	K	1075	ASN	CA-C-N	-5.40	113.06	119.05
1	K	1075	ASN	C-N-CA	-5.40	113.06	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	712	HIS	N-CA-C	5.39	116.49	109.64
5	F	291	ILE	N-CA-C	-5.39	105.12	110.62
5	D	69	ALA	N-CA-C	-5.39	100.40	109.07
3	M	150	ILE	N-CA-C	5.38	116.11	110.62
5	D	200	VAL	CB-CA-C	-5.38	103.14	110.77
3	C	725	GLY	N-CA-C	-5.38	106.28	112.73
5	D	147	ALA	N-CA-C	-5.38	105.42	111.28
5	H	207	ASP	N-CA-C	-5.37	105.43	111.28
3	C	259	VAL	N-CA-C	5.37	114.86	108.96
5	H	429	HIS	N-CA-C	-5.37	105.43	111.28
2	O	400	GLU	N-CA-C	-5.37	104.50	111.74
3	C	146	GLN	CA-C-N	-5.36	114.24	119.76
3	C	146	GLN	C-N-CA	-5.36	114.24	119.76
5	D	30	GLY	CA-C-N	-5.36	117.53	123.43
5	D	30	GLY	C-N-CA	-5.36	117.53	123.43
5	F	20	HIS	CA-C-N	-5.36	116.16	123.12
5	F	20	HIS	C-N-CA	-5.36	116.16	123.12
6	E	429	TYR	N-CA-C	-5.35	105.45	111.28
6	G	284	GLU	N-CA-C	-5.35	105.45	111.28
5	D	201	LYS	N-CA-C	-5.34	103.34	110.55
3	C	158	GLY	N-CA-C	-5.34	106.31	112.50
1	A	552	GLU	N-CA-C	-5.32	105.48	111.28
3	P	252	CYS	N-CA-C	-5.32	105.48	111.28
1	A	972	PRO	N-CA-C	-5.32	106.13	113.53
3	C	714	PHE	N-CA-C	5.32	117.64	109.07
1	K	1043	TRP	N-CA-C	5.31	117.07	111.28
1	K	371	ALA	CB-CA-C	-5.31	110.47	116.63
6	E	396	THR	N-CA-C	5.30	117.74	109.52
1	A	736	ASP	N-CA-C	-5.30	105.50	111.28
3	C	283	ARG	N-CA-C	-5.30	105.50	111.28
3	M	35	LEU	N-CA-C	-5.30	105.50	111.28
1	A	368	LYS	N-CA-C	5.30	117.06	111.28
5	H	295	VAL	CB-CA-C	-5.29	105.70	110.88
6	E	179	ASP	N-CA-C	-5.28	105.52	111.28
6	G	400	TYR	N-CA-C	-5.28	105.52	111.28
1	K	884	LYS	N-CA-C	-5.28	105.52	111.28
6	E	77	GLN	CA-C-N	-5.28	113.24	119.84
6	E	77	GLN	C-N-CA	-5.28	113.24	119.84
1	A	633	GLY	N-CA-C	-5.28	106.40	112.73
5	H	370	GLU	N-CA-C	-5.28	105.53	111.28
5	H	408	GLN	N-CA-C	-5.28	105.53	111.28
1	K	208	SER	N-CA-C	-5.27	105.70	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	132	ARG	N-CA-C	-5.27	105.53	111.28
3	C	172	GLN	CB-CA-C	-5.27	110.52	116.63
6	I	182	LEU	N-CA-C	-5.27	105.53	111.28
6	E	202	ASN	CA-C-N	-5.27	115.67	123.05
6	E	202	ASN	C-N-CA	-5.27	115.67	123.05
5	H	63	GLY	N-CA-C	-5.27	104.28	113.76
6	G	248	VAL	N-CA-C	-5.26	105.26	110.62
1	A	144	GLU	N-CA-C	-5.25	102.63	110.20
2	O	148	GLY	O-C-N	5.25	122.96	121.07
5	H	296	PRO	CA-C-N	-5.25	117.85	122.73
5	H	296	PRO	C-N-CA	-5.25	117.85	122.73
6	E	185	LYS	N-CA-C	-5.25	104.66	111.74
1	K	214	SER	N-CA-C	-5.25	105.56	111.28
5	D	108	LYS	N-CA-C	-5.25	105.56	111.28
5	D	30	GLY	N-CA-C	5.24	122.59	115.30
3	M	32	LEU	N-CA-C	-5.24	105.57	111.28
5	F	50	GLY	N-CA-C	-5.24	106.44	112.73
5	H	350	ILE	N-CA-C	5.24	113.85	107.61
6	E	315	LEU	N-CA-C	-5.24	105.57	111.28
1	A	756	PHE	N-CA-C	-5.23	105.58	111.28
2	L	208	GLY	N-CA-C	-5.23	106.45	112.73
3	P	255	LEU	N-CA-C	-5.23	105.58	111.28
3	P	140	GLN	N-CA-C	-5.23	105.58	111.28
6	I	403	GLN	N-CA-C	-5.22	105.59	111.28
1	A	563	GLU	N-CA-C	-5.21	105.60	111.28
6	E	403	GLN	N-CA-C	-5.21	105.60	111.28
1	A	328	CYS	N-CA-C	5.21	116.96	111.28
1	A	683	GLY	N-CA-C	-5.21	108.43	115.36
1	A	1080	ASN	N-CA-C	-5.21	105.61	111.28
3	C	262	ARG	N-CA-C	-5.21	105.61	111.28
6	I	75	ALA	N-CA-C	-5.21	102.68	110.23
1	A	924	LEU	N-CA-C	-5.21	105.61	111.28
1	A	327	GLU	N-CA-C	-5.20	105.61	111.28
5	F	446	ILE	N-CA-C	-5.20	105.42	110.42
1	K	991	GLY	N-CA-C	-5.20	108.61	115.22
1	K	370	LEU	N-CA-C	-5.20	107.00	113.19
6	I	290	MET	CA-C-N	-5.19	118.81	123.33
6	I	290	MET	C-N-CA	-5.19	118.81	123.33
1	A	703	SER	N-CA-C	-5.19	105.62	111.28
1	A	1049	LEU	CB-CA-C	-5.19	107.91	114.40
2	O	76	ARG	N-CA-C	-5.19	105.62	111.28
1	A	764	MET	N-CA-C	-5.19	105.31	110.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	911	TRP	CA-C-N	-5.19	113.29	119.05
1	K	911	TRP	C-N-CA	-5.19	113.29	119.05
2	L	255	ILE	N-CA-C	-5.18	105.33	110.62
1	K	1068	HIS	N-CA-C	-5.18	105.63	111.28
1	N	921	ASP	N-CA-C	5.18	117.74	110.23
3	C	221	ALA	N-CA-C	-5.17	105.64	111.28
1	A	699	VAL	N-CA-C	-5.17	105.35	110.62
1	N	944	LEU	N-CA-C	-5.17	105.65	111.28
1	A	935	THR	N-CA-C	-5.17	105.65	111.28
6	G	88	GLY	N-CA-C	-5.16	106.54	112.73
1	K	950	LYS	N-CA-C	-5.16	105.66	111.28
3	C	272	VAL	N-CA-C	-5.15	105.36	110.62
1	A	419	LEU	N-CA-C	-5.15	105.67	111.28
2	L	43	ARG	N-CA-C	5.15	116.89	111.28
3	M	149	PHE	N-CA-C	-5.15	102.77	110.23
3	C	168	GLY	N-CA-C	-5.14	106.56	112.73
5	D	163	THR	N-CA-C	-5.14	101.37	109.50
1	K	336	LEU	N-CA-C	-5.14	105.67	111.28
1	A	730	LEU	N-CA-C	-5.14	105.68	111.28
3	C	108	GLU	N-CA-C	-5.14	105.68	111.28
1	K	978	LEU	N-CA-C	5.14	116.88	111.28
3	C	130	GLU	N-CA-C	-5.14	105.68	111.28
1	A	625	TRP	N-CA-C	-5.14	105.68	111.28
6	I	391	ARG	N-CA-C	-5.14	105.68	111.28
1	N	286	LYS	N-CA-C	-5.13	105.69	111.28
4	J	69	GLN	N-CA-C	-5.13	100.53	108.90
1	K	647	LEU	N-CA-C	-5.13	105.69	111.28
1	A	510	GLU	N-CA-C	-5.12	105.69	111.28
3	P	235	VAL	CA-C-N	-5.12	113.37	119.05
3	P	235	VAL	C-N-CA	-5.12	113.37	119.05
5	D	155	SER	N-CA-C	-5.12	105.70	111.28
2	O	415	GLN	N-CA-C	-5.12	105.70	111.28
6	E	194	ILE	CA-C-N	-5.11	115.90	123.05
6	E	194	ILE	C-N-CA	-5.11	115.90	123.05
6	G	434	ASP	N-CA-C	-5.11	103.79	110.53
2	B	494	ARG	N-CA-C	-5.10	105.72	111.28
1	A	991	GLY	N-CA-C	-5.10	108.74	115.22
2	B	375	ILE	N-CA-C	5.10	115.25	108.11
2	B	25	ALA	N-CA-C	-5.10	105.72	111.28
3	M	235	VAL	CB-CA-C	-5.10	108.94	114.35
3	P	109	GLY	N-CA-C	5.10	118.85	112.73
5	H	160	GLY	N-CA-C	-5.10	105.39	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	970	ALA	N-CA-C	5.09	117.62	110.23
2	B	295	ALA	N-CA-C	-5.09	105.73	111.28
5	F	388	ASP	N-CA-C	-5.08	105.74	111.28
5	D	137	GLU	CA-C-N	-5.08	115.94	123.05
5	D	137	GLU	C-N-CA	-5.08	115.94	123.05
5	D	370	GLU	N-CA-C	-5.08	105.75	111.28
1	K	921	ASP	N-CA-C	5.07	117.59	110.23
6	I	336	GLY	N-CA-C	-5.07	108.62	115.36
1	A	304	TRP	N-CA-C	-5.07	105.76	111.28
2	L	78	MET	CA-C-N	-5.06	113.51	119.84
2	L	78	MET	C-N-CA	-5.06	113.51	119.84
5	D	59	LYS	N-CA-C	-5.06	103.16	113.29
6	G	345	ILE	N-CA-C	5.06	113.73	109.02
6	G	343	HIS	N-CA-C	-5.05	103.18	113.29
1	A	1070	ALA	N-CA-C	-5.05	105.77	111.28
5	H	448	THR	N-CA-C	-5.05	105.77	111.28
3	P	232	GLY	N-CA-C	-5.05	106.67	112.73
3	C	816	LEU	N-CA-C	-5.05	105.78	111.28
1	K	498	TYR	N-CA-C	-5.04	105.86	111.36
4	J	13	GLN	N-CA-C	-5.04	105.79	111.28
3	C	204	GLN	N-CA-C	-5.03	105.80	111.28
6	G	63	ARG	N-CA-C	-5.03	105.69	111.07
2	O	480	ILE	CB-CA-C	-5.02	109.02	114.35
3	C	140	GLN	N-CA-C	-5.02	105.81	111.28
5	F	117	ARG	N-CA-C	-5.02	105.70	111.07
3	C	326	SER	N-CA-C	-5.02	105.81	111.28
6	I	63	ARG	N-CA-C	-5.02	105.81	111.28
2	O	480	ILE	CA-C-N	-5.02	114.41	119.83
2	O	480	ILE	C-N-CA	-5.02	114.41	119.83
1	A	696	ASP	N-CA-C	-5.01	105.81	111.28
5	D	360	ILE	N-CA-C	5.01	115.46	108.84
2	L	94	ALA	N-CA-C	-5.01	102.87	109.84
1	K	750	ASP	N-CA-C	-5.01	105.82	111.28
2	L	332	GLY	N-CA-C	-5.01	104.78	112.85
5	H	288	ASP	N-CA-C	-5.01	105.82	111.28
5	F	59	LYS	N-CA-C	-5.01	103.09	113.31
5	H	81	LEU	N-CA-C	-5.01	105.82	111.28
3	M	140	GLN	N-CA-C	-5.01	105.82	111.28
3	P	223	VAL	N-CA-C	-5.00	105.52	110.62

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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	4374	0	1953	176	0
1	K	3945	0	1759	169	0
1	N	4257	0	1898	192	0
2	B	2376	0	1078	89	0
2	L	2366	0	1075	82	0
2	O	2342	0	1056	122	0
3	C	3389	0	1576	101	0
3	M	1791	0	821	65	0
3	P	1806	0	833	71	0
4	J	1609	606	758	79	0
5	D	1955	0	927	110	0
5	F	1903	0	901	87	0
5	H	1898	0	898	91	0
6	E	1958	0	920	95	0
6	G	1899	0	877	115	0
6	I	1907	0	879	107	0
All	All	39775	606	18209	1688	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 29.

All (1688) 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)
5:D:160:GLY:HA2	5:D:169:GLN:HA	1.33	1.04
1:K:437:GLU:HA	1:K:518:TYR:HA	1.37	1.03
1:A:438:LEU:HA	1:A:476:PHE:HA	1.40	1.00
1:N:200:LYS:HA	1:N:251:GLN:HA	1.44	0.99
5:F:160:GLY:HA2	5:F:170:LEU:H	1.24	0.99
1:N:1062:LEU:HA	2:O:415:GLN:HA	1.45	0.99
6:G:222:ARG:HA	2:O:286:TYR:HA	1.47	0.95
5:H:129:GLU:HA	5:H:231:LYS:HA	1.48	0.95
5:D:193:ILE:HA	5:D:200:VAL:HA	1.49	0.94
4:J:173:ALA:HB2	4:J:180:LEU:CB	1.96	0.94
3:P:29:PHE:HA	3:P:83:LEU:HA	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:635:GLY:HA2	1:K:677:ASP:HA	1.50	0.93
5:F:207:ASP:HA	5:F:220:TYR:HA	1.49	0.92
5:D:26:LEU:HA	5:D:32:PRO:HA	1.52	0.92
5:H:193:ILE:HA	5:H:200:VAL:HA	1.48	0.91
2:L:474:LYS:HA	2:L:497:GLN:HA	1.51	0.91
6:I:381:MET:HA	6:I:420:VAL:H	1.37	0.90
1:K:533:ALA:HB1	1:K:553:LEU:HA	1.53	0.90
5:F:160:GLY:HA2	5:F:170:LEU:N	1.87	0.90
6:E:333:ARG:HA	6:E:340:LYS:HA	1.50	0.89
2:O:147:ALA:HB1	2:O:179:LEU:HA	1.53	0.89
6:E:135:GLU:HA	6:E:234:ARG:HA	1.52	0.88
2:O:305:HIS:HA	2:O:358:LEU:HA	1.55	0.88
5:D:125:ARG:HA	5:D:235:VAL:HA	1.56	0.88
1:N:628:CYS:HA	1:N:670:VAL:HA	1.56	0.87
3:C:732:GLY:HA2	3:C:773:ALA:HA	1.54	0.87
5:D:131:TYR:HA	5:D:229:HIS:HA	1.56	0.86
5:D:160:GLY:HA2	5:D:169:GLN:CA	2.05	0.86
6:G:133:GLU:HA	6:G:236:GLU:HA	1.57	0.86
2:O:265:ILE:HA	2:O:307:LEU:HA	1.55	0.86
3:P:96:ALA:HB1	3:P:133:LEU:HA	1.58	0.86
2:O:128:GLU:HA	2:O:182:VAL:HA	1.58	0.85
1:K:512:TYR:HA	1:K:519:ARG:HA	1.58	0.85
1:A:368:LYS:HA	1:A:371:ALA:HB3	1.59	0.85
1:N:512:TYR:HA	1:N:519:ARG:HA	1.59	0.85
2:L:262:GLU:HA	2:L:307:LEU:HA	1.59	0.85
5:F:141:VAL:H	5:F:157:VAL:HA	1.41	0.84
5:D:386:ILE:HA	5:D:425:ILE:H	1.42	0.84
4:J:131:ALA:HB2	4:J:170:LEU:CB	2.08	0.84
1:N:735:ALA:HB2	1:N:766:ALA:HB1	1.60	0.83
1:N:305:LYS:HA	1:N:347:ILE:HA	1.61	0.83
4:J:257:ALA:HB3	4:J:300:CYS:CB	2.08	0.83
6:G:333:ARG:HA	6:G:340:LYS:HA	1.60	0.83
1:N:638:ALA:HB1	1:N:681:ALA:HB2	1.58	0.83
6:I:136:ILE:HA	6:I:195:ASP:HA	1.59	0.82
3:M:36:LYS:HA	3:M:90:PHE:HA	1.61	0.82
2:B:256:SER:HA	2:B:264:LYS:HA	1.62	0.82
1:N:162:ALA:HB1	1:N:171:LYS:HA	1.60	0.82
2:B:20:GLU:HA	2:B:72:GLY:HA3	1.60	0.82
5:F:189:ASP:HA	5:F:206:SER:HA	1.62	0.82
6:E:144:VAL:HA	6:E:161:THR:CB	2.10	0.82
1:N:797:ALA:HB2	1:N:1032:LEU:HA	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:679:CYS:HA	1:K:690:LEU:CB	2.11	0.81
1:K:991:GLY:CA	1:K:1030:VAL:HA	2.10	0.80
1:N:288:THR:HA	1:N:328:CYS:HA	1.62	0.80
3:C:529:GLU:H	3:C:567:THR:CB	1.95	0.80
6:E:160:LEU:O	6:E:170:ASN:HA	1.80	0.80
3:C:568:CYS:CB	4:J:296:ALA:HB1	2.12	0.80
6:G:136:ILE:HA	6:G:195:ASP:HA	1.62	0.80
6:I:123:ARG:HA	6:I:244:HIS:CB	2.12	0.79
1:N:1062:LEU:CA	2:O:415:GLN:HA	2.12	0.79
2:O:280:ALA:HA	2:O:321:ILE:HA	1.64	0.79
5:F:65:ALA:HB3	5:F:358:LEU:HA	1.64	0.78
1:K:423:ALA:CB	3:M:348:ALA:HA	2.14	0.78
1:K:128:SER:HA	1:K:177:CYS:HA	1.65	0.78
5:H:335:LYS:CB	5:H:348:HIS:H	1.96	0.78
3:P:342:THR:HA	3:P:348:ALA:HB3	1.64	0.78
6:E:207:SER:HA	6:E:224:VAL:N	1.99	0.77
6:G:192:ILE:HA	6:G:204:LEU:H	1.49	0.77
5:D:191:ILE:HA	5:D:203:GLN:H	1.49	0.77
6:E:164:THR:HA	6:E:227:PRO:O	1.85	0.77
3:M:143:GLN:H	3:M:209:SER:HA	1.49	0.76
5:F:193:ILE:HA	5:F:200:VAL:HA	1.66	0.76
1:K:1016:SER:HA	1:K:1077:TYR:HA	1.66	0.76
5:D:134:GLU:HA	5:D:190:VAL:HA	1.66	0.76
6:E:381:MET:HA	6:E:420:VAL:H	1.50	0.76
5:D:65:ALA:HB1	5:D:328:ILE:HA	1.68	0.76
2:O:283:LEU:HA	2:O:288:ARG:CB	2.16	0.75
6:G:222:ARG:HA	2:O:286:TYR:CA	2.17	0.75
6:I:131:LYS:HA	6:I:238:VAL:HA	1.67	0.75
3:M:142:ARG:HA	3:M:209:SER:HA	1.66	0.75
2:O:192:LEU:O	2:O:201:GLY:HA3	1.86	0.75
2:O:429:LEU:HA	2:O:462:LEU:HA	1.67	0.74
3:C:732:GLY:CA	3:C:773:ALA:HA	2.17	0.74
6:G:142:VAL:HA	6:G:188:ALA:HA	1.70	0.74
3:C:528:ILE:CB	3:C:567:THR:H	2.00	0.74
1:N:256:SER:O	1:N:276:GLU:HA	1.88	0.73
1:K:473:ARG:HA	1:K:482:GLU:H	1.53	0.73
1:N:896:LEU:CB	1:N:903:LEU:HA	2.18	0.73
5:D:158:ILE:HA	5:D:170:LEU:O	1.89	0.73
3:C:516:ARG:H	3:C:548:ALA:HB1	1.53	0.73
1:K:200:LYS:HA	1:K:251:GLN:HA	1.70	0.73
1:K:439:ASP:H	1:K:476:PHE:HA	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:991:GLY:HA3	1:K:1030:VAL:HA	1.69	0.73
6:E:159:ARG:HA	6:E:171:TYR:O	1.89	0.72
4:J:28:PHE:N	4:J:302:ALA:HB1	2.03	0.72
1:A:798:ALA:HA	1:A:1089:GLN:OXT	1.90	0.72
6:E:132:GLU:O	6:E:236:GLU:HA	1.89	0.72
5:D:16:SER:O	5:D:20:HIS:N	2.23	0.72
1:A:106:SER:HA	2:L:43:ARG:H	1.53	0.72
6:I:128:ILE:HA	6:I:290:MET:HA	1.71	0.72
1:K:798:ALA:HA	1:K:1088:LEU:HA	1.71	0.72
5:F:160:GLY:CA	5:F:169:GLN:HA	2.20	0.72
3:P:257:GLU:HA	3:P:288:LEU:HA	1.71	0.71
2:L:83:GLY:HA2	2:L:146:LEU:CB	2.19	0.71
1:N:186:ASP:HA	1:N:194:LEU:H	1.54	0.71
1:A:453:SER:H	1:A:462:THR:CB	2.03	0.71
6:E:147:GLU:C	6:E:156:ARG:HA	2.15	0.71
6:G:190:ASP:HA	6:G:207:SER:HA	1.71	0.71
5:D:160:GLY:CA	5:D:169:GLN:HA	2.16	0.71
5:H:130:VAL:HA	5:H:194:GLU:HA	1.73	0.71
1:K:423:ALA:HB2	3:M:348:ALA:HA	1.73	0.71
6:G:208:PHE:HA	6:G:223:PHE:CB	2.21	0.71
1:K:444:LYS:O	1:K:474:ARG:HA	1.91	0.71
2:O:90:GLU:HA	2:O:93:ALA:HB3	1.71	0.71
1:N:445:ILE:CB	1:N:622:SER:HA	2.20	0.71
2:O:350:MET:HA	2:O:359:ARG:HA	1.72	0.71
5:D:335:LYS:HA	5:D:348:HIS:H	1.56	0.70
2:O:128:GLU:HA	2:O:182:VAL:CA	2.20	0.70
3:C:556:LEU:HA	3:C:559:VAL:CB	2.20	0.70
3:C:559:VAL:HA	3:C:562:HIS:CB	2.22	0.70
5:F:158:ILE:CB	5:F:171:LYS:HA	2.22	0.70
6:I:211:ALA:HB1	2:L:288:ARG:HA	1.73	0.70
1:A:224:ASP:HA	1:A:232:VAL:HA	1.73	0.70
4:J:275:HIS:H	4:J:297:ALA:HB2	1.55	0.70
2:B:110:ALA:HB1	2:B:168:SER:CB	2.21	0.70
6:I:158:GLY:N	6:I:176:LYS:HA	2.06	0.70
2:L:305:HIS:HA	2:L:358:LEU:HA	1.73	0.70
4:J:210:PRO:O	4:J:228:ALA:HB2	1.91	0.70
1:A:207:ALA:HB3	1:A:273:VAL:O	1.92	0.69
3:M:37:ARG:CB	3:M:45:PRO:HA	2.22	0.69
2:O:305:HIS:HA	2:O:358:LEU:CA	2.21	0.69
1:K:635:GLY:CA	1:K:677:ASP:HA	2.22	0.69
6:I:141:VAL:CB	6:I:162:LEU:HA	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:265:ILE:CA	2:O:307:LEU:HA	2.23	0.69
3:C:25:GLY:HA2	3:C:78:LEU:HA	1.74	0.68
6:G:136:ILE:O	6:G:232:GLN:HA	1.92	0.68
6:G:140:GLU:CB	6:G:226:CYS:HA	2.23	0.68
3:C:40:GLY:HA2	3:C:48:PRO:HA	1.74	0.68
6:G:133:GLU:HA	6:G:236:GLU:CA	2.23	0.68
4:J:31:GLY:HA3	4:J:37:ARG:O	1.93	0.68
3:M:113:PRO:CA	3:M:171:LEU:HA	2.22	0.68
1:N:389:MET:CB	1:N:478:PHE:HA	2.24	0.68
2:B:478:ALA:HA	2:B:497:GLN:HA	1.75	0.68
6:I:145:VAL:O	6:I:160:LEU:HA	1.94	0.68
1:N:534:ALA:HB2	1:N:640:ALA:HB1	1.75	0.68
3:C:413:VAL:HA	3:C:418:HIS:CB	2.24	0.68
5:F:27:ASP:C	5:F:30:GLY:H	2.02	0.68
1:K:132:HIS:O	1:K:191:PRO:HA	1.93	0.68
1:K:512:TYR:HA	1:K:519:ARG:CA	2.22	0.68
1:N:817:LEU:CB	2:O:486:ASP:H	2.07	0.67
5:D:193:ILE:HA	5:D:200:VAL:CA	2.23	0.67
1:K:207:ALA:HB1	1:K:275:ARG:H	1.59	0.67
1:N:200:LYS:HA	1:N:251:GLN:CA	2.20	0.67
1:N:134:ALA:HB3	1:N:151:LEU:CB	2.24	0.67
1:N:645:PHE:C	1:N:681:ALA:HB1	2.19	0.67
1:N:810:GLU:HA	2:O:480:ILE:HA	1.76	0.67
2:B:469:SER:CB	2:B:473:VAL:H	2.07	0.67
5:F:207:ASP:HA	5:F:220:TYR:CA	2.25	0.67
5:H:192:TYR:N	5:H:203:GLN:H	1.93	0.67
5:H:301:ILE:O	5:H:329:PHE:HA	1.94	0.67
2:L:114:ALA:HA	2:L:168:SER:HA	1.76	0.67
1:N:175:LEU:HA	1:N:219:ARG:CB	2.25	0.67
6:G:222:ARG:CA	2:O:286:TYR:HA	2.22	0.67
5:D:67:LEU:HA	5:D:329:PHE:O	1.95	0.66
5:D:335:LYS:HA	5:D:348:HIS:N	2.09	0.66
5:F:337:GLN:HA	5:F:345:ILE:HA	1.76	0.66
5:H:135:VAL:O	5:H:188:GLY:HA2	1.94	0.66
5:F:160:GLY:HA2	5:F:169:GLN:HA	1.76	0.66
5:D:240:LEU:C	5:D:295:VAL:HA	2.20	0.66
6:E:333:ARG:CA	6:E:340:LYS:HA	2.24	0.66
6:I:136:ILE:O	6:I:232:GLN:HA	1.96	0.66
5:F:191:ILE:HA	5:F:202:ARG:HA	1.78	0.66
5:H:25:GLY:HA3	5:H:36:ALA:HB1	1.77	0.66
3:C:278:PRO:CB	3:C:320:GLY:HA3	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:165:PRO:CB	4:J:184:GLY:HA3	2.26	0.66
6:E:135:GLU:O	6:E:197:ALA:HB2	1.97	0.65
4:J:257:ALA:HB3	4:J:300:CYS:CA	2.26	0.65
6:I:132:GLU:O	6:I:236:GLU:HA	1.96	0.65
2:O:147:ALA:HB1	2:O:179:LEU:CA	2.26	0.65
6:I:130:ILE:C	6:I:238:VAL:HA	2.22	0.65
1:K:945:ARG:O	1:K:949:CYS:N	2.29	0.65
6:I:133:GLU:HA	6:I:235:LYS:O	1.96	0.65
1:K:679:CYS:CB	1:K:687:LEU:HA	2.25	0.65
5:D:69:ALA:HA	5:D:332:ASN:HA	1.78	0.65
1:A:103:CYS:O	2:L:42:ALA:HB2	1.97	0.65
3:P:269:THR:HA	3:P:303:LEU:HA	1.78	0.65
1:A:691:ILE:O	1:A:695:SER:N	2.30	0.65
4:J:173:ALA:HB2	4:J:180:LEU:CA	2.27	0.65
6:I:158:GLY:HA3	6:I:177:MET:H	1.61	0.65
1:N:1059:HIS:H	2:O:418:TRP:CB	2.10	0.65
6:I:71:ALA:H	6:I:353:MET:HA	1.62	0.65
6:I:75:ALA:HB3	6:I:358:THR:H	1.61	0.65
2:L:128:GLU:HA	2:L:182:VAL:HA	1.79	0.64
3:P:96:ALA:CB	3:P:133:LEU:HA	2.26	0.64
1:A:90:GLN:CB	1:A:142:PHE:HA	2.26	0.64
5:D:131:TYR:CA	5:D:229:HIS:HA	2.25	0.64
6:G:137:ILE:N	6:G:194:ILE:O	2.30	0.64
3:P:322:LEU:HA	3:P:328:ARG:CB	2.27	0.64
5:D:141:VAL:CB	5:D:157:VAL:HA	2.27	0.64
1:K:213:ILE:CB	1:K:239:PHE:HA	2.27	0.64
1:K:806:ALA:HB2	2:L:476:LEU:HA	1.78	0.64
1:A:458:ALA:O	1:A:462:THR:N	2.30	0.64
1:A:649:LEU:HA	1:A:652:ALA:HB3	1.79	0.64
4:J:27:HIS:C	4:J:302:ALA:HB1	2.22	0.64
6:G:331:ILE:HA	6:G:343:HIS:H	1.61	0.64
1:K:638:ALA:HB1	1:K:681:ALA:N	2.12	0.64
3:P:342:THR:HA	3:P:348:ALA:CB	2.26	0.64
5:D:127:THR:CB	5:D:233:GLU:HA	2.28	0.64
6:E:73:LEU:HA	6:E:325:MET:O	1.98	0.64
1:K:570:TRP:CB	1:K:655:PRO:HA	2.26	0.64
2:L:26:PHE:HA	2:L:61:ALA:HB3	1.79	0.64
1:N:312:GLU:HA	1:N:354:VAL:HA	1.80	0.64
1:N:438:LEU:HA	1:N:475:TYR:O	1.98	0.64
1:N:1062:LEU:CB	2:O:415:GLN:HA	2.28	0.64
2:O:53:LYS:HA	2:O:119:LEU:CB	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:173:ALA:HB2	4:J:180:LEU:N	2.13	0.64
6:G:133:GLU:CA	6:G:236:GLU:HA	2.26	0.64
5:H:168:LYS:CB	1:K:451:TRP:HA	2.28	0.63
5:H:335:LYS:HA	5:H:348:HIS:HA	1.80	0.63
6:E:137:ILE:H	6:E:196:LYS:H	1.45	0.63
3:M:168:GLY:HA3	3:M:180:PHE:HA	1.80	0.63
3:M:303:LEU:HA	3:M:307:GLN:CB	2.28	0.63
4:J:188:GLY:CA	4:J:210:PRO:HA	2.28	0.63
3:M:113:PRO:HA	3:M:171:LEU:HA	1.78	0.63
1:N:284:GLY:HA3	1:N:324:SER:O	1.98	0.63
4:J:192:LEU:H	4:J:242:ALA:HB2	1.63	0.63
2:B:283:LEU:CB	2:B:289:ALA:HB2	2.29	0.63
5:H:98:GLY:HA3	5:H:306:MET:CB	2.28	0.63
1:K:209:PHE:O	1:K:213:ILE:N	2.31	0.63
6:E:75:ALA:HB3	6:E:358:THR:H	1.64	0.63
6:I:131:LYS:HA	6:I:237:VAL:C	2.24	0.63
5:D:68:LEU:H	5:D:330:ALA:CB	2.11	0.63
2:O:192:LEU:HA	2:O:204:SER:H	1.63	0.63
1:K:524:MET:CB	1:K:630:GLN:HA	2.29	0.63
3:M:143:GLN:N	3:M:210:SER:H	1.97	0.63
5:F:33:ILE:CB	5:F:36:ALA:HB2	2.29	0.62
6:G:127:GLY:HA2	6:G:243:LEU:H	1.64	0.62
2:L:363:ALA:CB	2:L:402:ALA:HA	2.29	0.62
1:N:1059:HIS:HA	2:O:467:ARG:C	2.24	0.62
2:B:378:VAL:O	2:B:382:LYS:N	2.31	0.62
6:G:331:ILE:HA	6:G:342:PRO:HA	1.81	0.62
2:L:64:PHE:O	2:L:130:ALA:HA	2.00	0.62
3:P:227:GLN:O	3:P:231:LEU:N	2.32	0.62
5:F:68:LEU:N	5:F:329:PHE:O	2.32	0.62
3:M:104:MET:HA	3:M:163:LEU:HA	1.79	0.62
3:P:178:GLU:HA	3:P:183:ASN:CB	2.29	0.62
5:H:165:LYS:H	5:H:225:LYS:HA	1.65	0.62
6:G:137:ILE:HA	6:G:231:LEU:C	2.24	0.62
6:G:192:ILE:CB	6:G:203:LYS:HA	2.29	0.62
1:K:1054:GLN:HA	1:K:1070:ALA:HB1	1.82	0.62
3:P:242:THR:HA	3:P:245:SER:O	2.00	0.62
1:A:106:SER:HA	2:L:43:ARG:N	2.15	0.62
1:A:467:PRO:HA	1:A:470:ARG:CB	2.30	0.62
6:E:101:SER:HA	6:E:296:PHE:O	2.00	0.62
1:A:1088:LEU:O	1:A:1089:GLN:C	2.43	0.62
6:I:158:GLY:CA	6:I:177:MET:H	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:103:LEU:O	3:C:107:ILE:N	2.30	0.62
6:I:73:LEU:CB	6:I:355:ILE:HA	2.29	0.62
6:I:101:SER:HA	6:I:296:PHE:O	2.00	0.62
6:I:129:ARG:HA	6:I:240:THR:HA	1.81	0.62
3:M:16:ILE:CB	3:M:32:LEU:HA	2.28	0.62
1:N:171:LYS:C	1:N:223:GLY:HA2	2.25	0.62
3:P:142:ARG:HA	3:P:210:SER:H	1.65	0.62
6:I:137:ILE:O	6:I:193:THR:HA	2.00	0.61
1:K:207:ALA:CB	1:K:275:ARG:H	2.13	0.61
5:H:439:ASP:O	5:H:443:SER:N	2.32	0.61
3:M:189:GLY:HA3	3:M:230:ILE:CB	2.31	0.61
1:A:698:LEU:O	1:A:702:ILE:N	2.33	0.61
6:I:140:GLU:H	6:I:226:CYS:HA	1.64	0.61
1:K:474:ARG:H	1:K:482:GLU:H	1.47	0.61
5:H:67:LEU:HA	5:H:329:PHE:O	2.00	0.61
6:G:140:GLU:HA	6:G:190:ASP:O	1.98	0.61
6:I:163:LYS:HA	6:I:168:GLU:CB	2.30	0.61
1:N:574:THR:HA	1:N:624:ILE:CB	2.30	0.61
1:A:455:ASP:O	1:A:459:SER:N	2.32	0.61
3:C:38:TYR:O	3:C:55:ALA:HB2	2.00	0.61
3:C:602:LEU:HA	3:C:712:VAL:CB	2.30	0.61
6:I:131:LYS:HA	6:I:238:VAL:CA	2.31	0.61
1:A:438:LEU:CA	1:A:477:ARG:H	2.13	0.61
3:M:36:LYS:HA	3:M:90:PHE:CA	2.29	0.61
1:N:691:ILE:O	1:N:695:SER:N	2.32	0.61
1:A:1051:CYS:CB	1:A:1069:GLY:HA3	2.31	0.61
5:F:21:ILE:HA	5:F:38:GLY:HA3	1.82	0.61
1:N:158:LEU:HA	1:N:161:LEU:CB	2.31	0.61
1:N:779:HIS:HA	1:N:934:ARG:O	1.99	0.61
2:O:203:LEU:O	2:O:207:LEU:N	2.33	0.61
1:A:445:ILE:O	1:A:447:GLU:HG2	2.01	0.61
2:O:463:ILE:HA	2:O:496:VAL:HA	1.82	0.61
1:K:656:VAL:HA	1:K:671:ALA:HA	1.83	0.60
3:C:106:THR:O	3:C:110:ALA:N	2.35	0.60
4:J:65:GLY:HA3	4:J:85:SER:CB	2.31	0.60
5:D:131:TYR:HA	5:D:228:VAL:O	2.00	0.60
1:K:438:LEU:HA	1:K:477:ARG:H	1.66	0.60
2:O:384:LEU:O	2:O:388:ILE:N	2.34	0.60
1:A:222:THR:O	1:A:226:LYS:N	2.33	0.60
1:N:978:LEU:O	1:N:982:LEU:N	2.32	0.60
5:H:96:MET:CB	5:H:302:ASP:H	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:73:LEU:HA	6:G:325:MET:O	2.00	0.60
1:A:798:ALA:CA	1:A:1089:GLN:OXT	2.50	0.60
2:B:97:LYS:H	2:B:222:ASN:HA	1.67	0.60
1:K:207:ALA:HB3	1:K:274:TYR:HA	1.83	0.60
1:N:797:ALA:HB3	1:N:1087:GLU:CB	2.31	0.60
3:P:168:GLY:HA2	3:P:175:ASN:CB	2.32	0.60
2:O:280:ALA:CA	2:O:321:ILE:HA	2.29	0.60
1:A:213:ILE:HA	1:A:216:ALA:HB3	1.84	0.60
5:F:190:VAL:H	5:F:221:VAL:CB	2.14	0.60
5:H:207:ASP:CB	5:H:222:PRO:HA	2.32	0.60
3:P:257:GLU:CA	3:P:288:LEU:HA	2.31	0.60
1:A:187:CYS:O	1:A:188:GLN:C	2.45	0.60
5:F:301:ILE:N	5:F:328:ILE:O	2.34	0.60
1:K:885:VAL:O	1:K:889:LEU:N	2.34	0.60
1:N:474:ARG:H	1:N:482:GLU:CB	2.14	0.60
1:N:1014:TYR:CB	1:N:1027:ALA:HB2	2.31	0.60
2:O:154:ALA:HB1	2:O:172:ALA:O	2.01	0.60
1:A:438:LEU:HA	1:A:476:PHE:CA	2.25	0.60
1:K:256:SER:O	1:K:276:GLU:HA	2.02	0.60
3:P:96:ALA:HB3	3:P:136:LEU:CB	2.32	0.60
1:K:474:ARG:H	1:K:482:GLU:N	1.99	0.59
2:O:107:SER:HA	2:O:163:TRP:O	2.02	0.59
3:P:25:GLY:HA3	3:P:78:LEU:N	2.17	0.59
5:D:335:LYS:CA	5:D:348:HIS:H	2.15	0.59
6:E:133:GLU:HA	6:E:236:GLU:HA	1.84	0.59
6:I:145:VAL:H	6:I:161:THR:H	1.49	0.59
1:A:732:PRO:O	1:A:735:ALA:HB3	2.02	0.59
1:N:659:LYS:CB	1:N:671:ALA:HB2	2.32	0.59
5:H:33:ILE:O	5:H:34:GLN:C	2.46	0.59
6:E:318:GLU:C	6:E:320:ALA:H	2.10	0.59
6:I:139:GLY:O	6:I:191:VAL:HA	2.02	0.59
1:N:820:LYS:CB	2:O:438:ASP:HA	2.32	0.59
5:H:129:GLU:CA	5:H:231:LYS:HA	2.28	0.59
5:H:335:LYS:HA	5:H:348:HIS:CA	2.33	0.59
6:E:166:ASP:CB	6:E:229:GLY:HA2	2.32	0.59
1:N:281:LYS:HA	1:N:324:SER:O	2.02	0.59
5:H:192:TYR:N	5:H:201:LYS:O	2.36	0.59
6:G:331:ILE:CB	6:G:342:PRO:HA	2.33	0.59
6:I:162:LEU:N	6:I:169:THR:O	2.35	0.59
5:D:134:GLU:HA	5:D:190:VAL:CA	2.33	0.59
1:N:810:GLU:CB	2:O:480:ILE:HA	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:63:LEU:HA	3:M:90:PHE:CB	2.33	0.58
2:B:250:PRO:CB	6:E:215:ASP:HA	2.33	0.58
5:D:125:ARG:HA	5:D:236:GLN:H	1.68	0.58
6:G:123:ARG:HA	6:G:244:HIS:CB	2.32	0.58
6:G:206:ARG:CB	6:G:221:ALA:HB3	2.33	0.58
1:K:319:LEU:CB	1:K:361:GLN:HA	2.34	0.58
1:K:817:LEU:CB	2:L:485:GLU:H	2.15	0.58
1:A:106:SER:CA	2:L:43:ARG:H	2.16	0.58
1:N:946:SER:HA	1:N:997:LEU:O	2.03	0.58
3:P:33:GLU:O	3:P:37:ARG:N	2.36	0.58
3:P:141:CYS:HA	3:P:213:PHE:CB	2.33	0.58
1:A:645:PHE:O	1:A:649:LEU:N	2.36	0.58
6:E:74:LEU:HA	6:E:356:VAL:O	2.04	0.58
6:G:140:GLU:HA	6:G:190:ASP:C	2.29	0.58
4:J:277:ILE:CB	4:J:311:ALA:HB2	2.33	0.58
5:D:207:ASP:HA	5:D:220:TYR:CA	2.33	0.58
5:F:386:ILE:HA	5:F:425:ILE:H	1.68	0.58
6:E:148:ARG:CA	6:E:156:ARG:HA	2.34	0.58
2:L:157:HIS:CB	2:L:169:ARG:HA	2.34	0.58
3:M:322:LEU:HA	3:M:328:ARG:CB	2.33	0.58
1:N:512:TYR:HA	1:N:519:ARG:CA	2.31	0.58
1:N:686:SER:CB	1:N:689:HIS:CB	2.82	0.58
1:A:364:VAL:O	1:A:368:LYS:N	2.37	0.58
5:D:25:GLY:HA3	5:D:36:ALA:HB1	1.85	0.58
6:I:72:VAL:CB	6:I:324:ILE:HA	2.34	0.58
4:J:28:PHE:CB	4:J:303:PHE:C	2.76	0.57
2:O:336:THR:HA	2:O:376:LEU:O	2.04	0.57
3:C:41:GLU:HA	3:C:46:ALA:O	2.04	0.57
5:H:138:LEU:HA	5:H:159:ILE:CB	2.34	0.57
2:O:432:LEU:O	2:O:458:ALA:HB1	2.04	0.57
2:B:48:LYS:HA	1:N:169:GLN:O	2.05	0.57
4:J:188:GLY:HA2	4:J:210:PRO:HA	1.85	0.57
3:M:265:GLU:CB	3:M:299:MET:HA	2.34	0.57
1:N:394:ASP:CB	1:N:481:ASP:H	2.17	0.57
3:C:143:GLN:O	3:C:144:GLN:C	2.46	0.57
1:A:447:GLU:HA	5:D:171:LYS:O	2.05	0.57
5:F:160:GLY:HA3	5:F:169:GLN:HA	1.85	0.57
2:L:437:CYS:HA	2:L:486:ASP:CB	2.35	0.57
3:P:190:GLU:HA	3:P:234:LEU:HA	1.86	0.57
1:A:328:CYS:O	1:A:332:LEU:N	2.37	0.57
5:D:131:TYR:HA	5:D:229:HIS:CA	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:638:ALA:HB1	1:K:681:ALA:HB2	1.87	0.57
4:J:155:LYS:N	4:J:183:ALA:HB2	2.19	0.57
5:H:272:THR:O	5:H:273:ASP:C	2.45	0.57
6:E:135:GLU:HA	6:E:234:ARG:CA	2.32	0.57
1:K:571:TYR:CB	1:K:659:LYS:HA	2.34	0.57
3:M:121:ALA:HB1	3:M:179:PHE:O	2.05	0.57
1:N:738:VAL:O	1:N:742:LEU:N	2.36	0.57
1:A:439:ASP:H	1:A:475:TYR:C	2.13	0.57
1:A:447:GLU:OE2	5:D:172:LEU:HA	2.04	0.57
6:G:318:GLU:C	6:G:320:ALA:H	2.11	0.57
6:I:146:VAL:HA	6:I:177:MET:CB	2.35	0.57
1:N:534:ALA:CB	1:N:640:ALA:HB1	2.35	0.57
1:N:679:CYS:CB	1:N:687:LEU:HA	2.35	0.57
6:G:136:ILE:HA	6:G:196:LYS:H	1.69	0.57
6:G:222:ARG:HA	2:O:286:TYR:CB	2.35	0.57
2:L:242:SER:HA	2:L:278:VAL:CB	2.35	0.57
1:N:968:ALA:HA	1:N:1019:GLN:N	2.19	0.57
3:C:96:ALA:HB2	3:C:133:LEU:HA	1.87	0.57
5:F:299:LEU:O	5:F:328:ILE:N	2.38	0.57
5:H:322:ALA:C	5:H:324:ALA:H	2.12	0.57
1:N:752:ARG:O	1:N:756:PHE:N	2.36	0.57
3:C:516:ARG:N	3:C:548:ALA:HB1	2.20	0.56
5:D:93:PHE:HA	5:D:298:VAL:O	2.05	0.56
6:G:132:GLU:C	6:G:236:GLU:HA	2.30	0.56
2:O:252:SER:CB	2:O:267:GLY:HA2	2.35	0.56
1:A:731:LEU:O	1:A:735:ALA:N	2.38	0.56
1:A:1081:VAL:O	1:A:1085:LEU:N	2.36	0.56
5:D:132:GLU:CB	5:D:192:TYR:HA	2.35	0.56
6:I:75:ALA:HB3	6:I:358:THR:N	2.19	0.56
1:K:801:LYS:CB	2:L:423:CYS:HA	2.35	0.56
1:N:626:GLN:O	1:N:630:GLN:N	2.34	0.56
2:O:249:LEU:HA	2:O:270:CYS:CB	2.35	0.56
1:A:162:ALA:HA	1:A:174:ALA:HB3	1.87	0.56
1:A:367:ASN:O	1:A:371:ALA:N	2.35	0.56
1:A:447:GLU:C	1:A:449:ARG:H	2.11	0.56
2:B:46:ASN:HA	1:N:124:ILE:CB	2.35	0.56
6:I:158:GLY:C	6:I:172:ASP:HA	2.30	0.56
3:M:336:LEU:HA	3:M:364:VAL:HA	1.87	0.56
1:N:390:ASN:HA	1:N:477:ARG:O	2.05	0.56
2:O:93:ALA:HA	2:O:113:ALA:O	2.05	0.56
1:A:248:ALA:HB3	1:A:251:GLN:CB	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:467:PRO:O	1:A:471:ILE:N	2.36	0.56
1:A:943:PHE:O	1:A:947:ARG:N	2.31	0.56
6:I:73:LEU:HA	6:I:325:MET:O	2.06	0.56
1:A:206:PHE:O	1:A:210:LEU:N	2.38	0.56
2:B:20:GLU:O	2:B:24:SER:N	2.37	0.56
3:C:51:LYS:O	3:C:55:ALA:N	2.37	0.56
5:H:27:ASP:C	5:H:30:GLY:H	2.13	0.56
2:L:110:ALA:HB1	2:L:165:THR:CB	2.35	0.56
2:L:262:GLU:HA	2:L:307:LEU:CA	2.34	0.56
2:O:436:ILE:HA	2:O:455:LEU:HA	1.87	0.56
1:A:738:VAL:O	1:A:742:LEU:N	2.36	0.56
6:E:381:MET:HA	6:E:420:VAL:N	2.17	0.56
6:G:71:ALA:H	6:G:353:MET:HA	1.69	0.56
1:K:325:LEU:O	1:K:329:ALA:N	2.39	0.56
3:M:142:ARG:HA	3:M:209:SER:CA	2.35	0.56
1:N:186:ASP:HA	1:N:193:SER:HA	1.87	0.56
3:P:88:ALA:HA	3:P:123:LEU:CB	2.35	0.56
4:J:217:ASP:CB	4:J:223:GLY:HA2	2.36	0.56
1:K:948:PHE:O	1:K:952:VAL:N	2.36	0.56
1:N:200:LYS:CA	1:N:251:GLN:HA	2.28	0.56
1:N:797:ALA:HB2	1:N:1032:LEU:CA	2.34	0.56
2:B:20:GLU:CA	2:B:72:GLY:HA3	2.34	0.56
2:B:478:ALA:HA	2:B:497:GLN:CA	2.35	0.56
5:D:128:LYS:O	5:D:232:LYS:N	2.31	0.56
5:F:193:ILE:CA	5:F:200:VAL:HA	2.34	0.56
6:I:128:ILE:O	6:I:241:VAL:N	2.33	0.56
3:M:143:GLN:N	3:M:209:SER:HA	2.19	0.56
2:O:110:ALA:HA	2:O:113:ALA:HB3	1.87	0.56
2:O:261:THR:CB	2:O:304:GLU:H	2.18	0.56
2:B:158:SER:HA	2:B:169:ARG:CB	2.35	0.56
4:J:228:ALA:O	4:J:255:GLY:HA2	2.06	0.56
6:G:136:ILE:CA	6:G:195:ASP:HA	2.36	0.56
1:K:645:PHE:C	1:K:681:ALA:HB1	2.31	0.56
2:L:29:ALA:HB3	2:L:58:LEU:HA	1.88	0.56
3:M:222:CYS:HA	3:M:228:GLN:CB	2.36	0.56
2:O:272:HIS:CB	2:O:314:CYS:HA	2.36	0.56
2:B:478:ALA:CA	2:B:497:GLN:HA	2.35	0.56
5:H:134:GLU:CB	5:H:223:LEU:HA	2.36	0.56
6:G:129:ARG:CB	6:G:240:THR:HA	2.36	0.56
1:N:1054:GLN:HA	1:N:1070:ALA:O	2.04	0.56
2:O:367:PRO:HA	2:O:409:THR:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:GLY:HA2	1:A:227:GLN:H	1.71	0.55
5:D:322:ALA:C	5:D:324:ALA:H	2.13	0.55
6:E:155:ALA:HB3	6:E:175:ALA:O	2.05	0.55
6:I:70:ARG:HA	6:I:352:ARG:O	2.05	0.55
6:I:381:MET:HA	6:I:420:VAL:N	2.15	0.55
2:L:148:GLY:HA3	2:L:202:ARG:CB	2.36	0.55
1:N:663:GLN:O	1:N:664:THR:C	2.49	0.55
5:F:65:ALA:HB3	5:F:358:LEU:CA	2.33	0.55
5:H:119:ALA:HA	5:H:237:ASP:O	2.05	0.55
6:I:76:GLY:O	6:I:328:ASN:HA	2.06	0.55
6:I:282:TRP:O	6:I:286:GLY:N	2.37	0.55
2:L:474:LYS:HA	2:L:497:GLN:CA	2.31	0.55
2:O:93:ALA:HB3	2:O:153:PHE:CB	2.36	0.55
1:A:694:ASN:O	1:A:698:LEU:N	2.35	0.55
3:C:598:GLN:HA	3:C:601:ALA:HB2	1.87	0.55
4:J:51:ILE:C	4:J:59:ALA:HB2	2.30	0.55
1:K:125:GLN:N	1:K:173:ALA:HB1	2.20	0.55
1:K:423:ALA:HB3	3:M:348:ALA:HA	1.89	0.55
1:N:468:TRP:CB	1:N:483:ARG:HA	2.36	0.55
1:N:893:VAL:O	1:N:897:GLN:N	2.36	0.55
6:E:331:ILE:HA	6:E:343:HIS:N	2.22	0.55
6:G:131:LYS:HA	6:G:237:VAL:C	2.30	0.55
2:L:90:GLU:HA	2:L:93:ALA:HB3	1.88	0.55
1:N:508:PHE:O	1:N:522:ALA:HB1	2.06	0.55
5:F:157:VAL:CB	5:F:174:PRO:HA	2.36	0.55
5:H:160:GLY:HA2	5:H:169:GLN:HA	1.89	0.55
1:K:896:LEU:CB	1:K:903:LEU:HA	2.36	0.55
2:L:381:LEU:O	2:L:385:GLU:N	2.39	0.55
1:N:281:LYS:HA	1:N:324:SER:HA	1.88	0.55
2:O:283:LEU:CB	2:O:289:ALA:HB2	2.37	0.55
1:A:453:SER:CB	1:A:458:ALA:HB1	2.37	0.55
1:A:933:LEU:O	1:A:937:GLY:N	2.40	0.55
5:D:156:HIS:HA	5:D:172:LEU:O	2.05	0.55
6:E:148:ARG:N	6:E:156:ARG:HA	2.21	0.55
1:K:321:CYS:O	1:K:325:LEU:N	2.40	0.55
1:K:322:SER:O	1:K:326:VAL:N	2.40	0.55
1:K:821:ASP:HA	2:L:441:ARG:CB	2.37	0.55
1:N:394:ASP:HA	1:N:479:PHE:HA	1.88	0.55
2:O:98:GLU:HA	2:O:106:HIS:CB	2.37	0.55
5:F:240:LEU:HA	5:F:296:PRO:O	2.07	0.55
5:F:297:GLY:O	5:F:326:ILE:N	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:162:LEU:N	6:G:169:THR:O	2.39	0.55
6:I:135:GLU:HA	6:I:233:LYS:C	2.32	0.55
1:A:894:VAL:O	1:A:895:VAL:C	2.48	0.55
6:G:223:PHE:H	2:O:286:TYR:HA	1.72	0.55
1:N:1048:GLU:CB	2:O:334:ARG:H	2.19	0.55
2:O:381:LEU:O	2:O:385:GLU:N	2.33	0.55
1:N:512:TYR:CA	1:N:519:ARG:HA	2.33	0.55
3:P:37:ARG:HA	3:P:40:GLY:O	2.07	0.55
1:A:204:ASP:HA	1:A:273:VAL:O	2.08	0.54
3:C:25:GLY:CA	3:C:78:LEU:HA	2.37	0.54
5:D:439:ASP:O	5:D:443:SER:N	2.35	0.54
5:F:193:ILE:CB	5:F:200:VAL:HA	2.36	0.54
6:I:131:LYS:CA	6:I:238:VAL:HA	2.35	0.54
1:K:1016:SER:HA	1:K:1077:TYR:CA	2.35	0.54
2:L:147:ALA:HA	2:L:179:LEU:CB	2.37	0.54
1:A:226:LYS:O	1:A:227:GLN:C	2.48	0.54
6:E:41:VAL:HA	6:E:45:MET:O	2.08	0.54
5:D:207:ASP:HA	5:D:220:TYR:CB	2.38	0.54
5:F:96:MET:CB	5:F:302:ASP:H	2.20	0.54
5:H:94:CYS:CB	5:H:300:PHE:H	2.18	0.54
1:A:216:ALA:O	1:A:220:LEU:N	2.35	0.54
1:A:895:VAL:O	1:A:896:LEU:C	2.49	0.54
4:J:52:TRP:N	4:J:59:ALA:HB2	2.22	0.54
5:H:135:VAL:HA	5:H:161:LEU:HA	1.90	0.54
2:O:93:ALA:O	2:O:113:ALA:HB1	2.07	0.54
2:O:147:ALA:HB2	2:O:182:VAL:CB	2.37	0.54
1:A:1062:LEU:CB	2:B:415:GLN:HA	2.38	0.54
2:B:424:ARG:O	2:B:428:LEU:N	2.37	0.54
4:J:253:ASN:C	4:J:272:GLY:HA2	2.33	0.54
6:I:295:LEU:N	6:I:322:VAL:O	2.41	0.54
1:K:523:ALA:HB3	1:K:630:GLN:CB	2.37	0.54
2:L:440:ALA:HB3	2:L:486:ASP:CB	2.37	0.54
5:D:207:ASP:HA	5:D:220:TYR:HA	1.90	0.54
1:K:206:PHE:O	1:K:210:LEU:N	2.41	0.54
2:O:99:GLU:H	2:O:106:HIS:CB	2.21	0.54
5:H:131:TYR:CB	5:H:229:HIS:HA	2.37	0.54
6:I:137:ILE:HA	6:I:231:LEU:C	2.33	0.54
3:C:96:ALA:O	3:C:100:PHE:N	2.34	0.54
3:C:367:CYS:O	3:C:371:LEU:N	2.41	0.54
6:I:131:LYS:HA	6:I:238:VAL:N	2.22	0.54
3:M:242:THR:CB	3:M:249:GLN:HA	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:15:ILE:O	5:D:19:SER:N	2.33	0.54
6:E:137:ILE:HA	6:E:231:LEU:C	2.33	0.54
1:A:567:GLN:O	1:A:568:GLU:C	2.47	0.54
3:C:278:PRO:HA	3:C:317:SER:HA	1.90	0.54
6:G:73:LEU:N	6:G:354:ILE:O	2.41	0.54
6:G:208:PHE:HA	6:G:223:PHE:CA	2.37	0.54
6:I:331:ILE:CB	6:I:343:HIS:H	2.21	0.54
3:M:188:LEU:O	3:M:192:VAL:N	2.40	0.54
1:N:170:ILE:H	1:N:227:GLN:CB	2.21	0.54
1:N:860:ILE:HA	1:N:895:VAL:CB	2.38	0.54
6:G:142:VAL:HA	6:G:188:ALA:CA	2.38	0.53
1:A:797:ALA:N	1:A:1088:LEU:HA	2.24	0.53
5:H:129:GLU:HA	5:H:231:LYS:CA	2.32	0.53
6:I:392:VAL:O	6:I:396:THR:N	2.41	0.53
1:K:745:LEU:O	1:K:746:ASP:C	2.51	0.53
3:M:113:PRO:CB	3:M:171:LEU:HA	2.38	0.53
2:B:339:CYS:O	2:B:343:LEU:N	2.40	0.53
5:F:439:ASP:O	5:F:443:SER:N	2.34	0.53
6:E:137:ILE:HA	6:E:231:LEU:O	2.08	0.53
1:K:879:LEU:HA	1:K:925:ALA:HB2	1.91	0.53
3:M:397:SER:CB	3:M:403:ARG:HA	2.37	0.53
1:A:371:ALA:O	1:A:375:SER:N	2.34	0.53
2:B:22:SER:H	2:B:66:ARG:CB	2.21	0.53
5:D:298:VAL:HA	5:D:327:VAL:CB	2.39	0.53
6:E:104:GLY:H	6:E:299:GLU:CB	2.21	0.53
6:I:136:ILE:C	6:I:232:GLN:HA	2.33	0.53
1:K:896:LEU:HA	1:K:902:GLN:C	2.33	0.53
1:N:172:ILE:N	1:N:223:GLY:HA2	2.23	0.53
1:N:810:GLU:CA	2:O:480:ILE:HA	2.37	0.53
1:N:1048:GLU:O	1:N:1069:GLY:HA3	2.09	0.53
3:P:104:MET:HA	3:P:166:HIS:CB	2.38	0.53
1:A:205:LEU:HA	1:A:272:MET:N	2.23	0.53
4:J:254:PRO:N	4:J:272:GLY:HA2	2.24	0.53
5:F:160:GLY:HA2	5:F:169:GLN:CA	2.36	0.53
6:I:104:GLY:H	6:I:299:GLU:CB	2.21	0.53
1:K:417:PHE:O	1:K:421:SER:N	2.42	0.53
3:M:66:LEU:CB	3:M:87:TRP:HA	2.39	0.53
1:N:435:VAL:HA	1:N:476:PHE:CB	2.38	0.53
3:P:142:ARG:HA	3:P:209:SER:HA	1.90	0.53
1:N:937:GLY:O	1:N:941:GLY:N	2.41	0.53
2:O:265:ILE:CB	2:O:307:LEU:HA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:253:ASN:CB	4:J:272:GLY:HA3	2.39	0.53
6:E:434:ASP:O	6:E:438:SER:N	2.35	0.53
1:N:756:PHE:O	1:N:760:LEU:N	2.39	0.53
1:A:210:LEU:O	1:A:214:SER:N	2.41	0.53
2:B:154:ALA:HA	2:B:172:ALA:HB1	1.91	0.53
5:D:164:ALA:HB3	5:D:225:LYS:HA	1.91	0.53
6:E:333:ARG:HA	6:E:339:TYR:O	2.08	0.53
1:A:470:ARG:O	1:A:474:ARG:N	2.41	0.53
6:G:130:ILE:HA	6:G:288:ALA:HA	1.91	0.53
6:I:41:VAL:N	6:I:49:LYS:HA	2.23	0.53
2:L:478:ALA:HB2	2:L:497:GLN:CB	2.39	0.53
1:N:936:LEU:O	1:N:937:GLY:C	2.52	0.53
2:O:305:HIS:HA	2:O:358:LEU:CB	2.39	0.53
3:P:269:THR:HA	3:P:303:LEU:CA	2.39	0.53
1:A:512:TYR:HA	1:A:519:ARG:CB	2.39	0.53
5:D:68:LEU:HA	5:D:361:ILE:O	2.09	0.53
5:H:159:ILE:N	5:H:170:LEU:O	2.42	0.53
6:G:439:GLU:O	6:G:443:LYS:N	2.41	0.53
6:I:136:ILE:CA	6:I:195:ASP:HA	2.36	0.53
1:K:628:CYS:HA	1:K:670:VAL:HA	1.91	0.53
1:N:937:GLY:HA2	1:N:944:LEU:CB	2.39	0.53
3:P:42:MET:O	3:P:43:GLU:C	2.51	0.53
3:C:166:HIS:O	3:C:170:ARG:N	2.38	0.52
6:E:331:ILE:CB	6:E:342:PRO:HA	2.39	0.52
6:G:206:ARG:N	6:G:222:ARG:O	2.42	0.52
6:G:242:THR:O	6:G:246:ILE:N	2.38	0.52
6:I:71:ALA:N	6:I:353:MET:HA	2.24	0.52
6:I:381:MET:HA	6:I:420:VAL:CB	2.39	0.52
2:B:346:ILE:O	2:B:350:MET:N	2.38	0.52
5:H:371:LEU:O	5:H:375:LEU:N	2.41	0.52
6:I:140:GLU:HA	6:I:191:VAL:HA	1.92	0.52
1:N:151:LEU:CB	1:N:181:LEU:HA	2.38	0.52
1:N:155:VAL:CB	1:N:178:LEU:HA	2.39	0.52
1:N:248:ALA:HB3	1:N:251:GLN:CB	2.39	0.52
1:A:209:PHE:O	1:A:213:ILE:N	2.38	0.52
1:A:911:TRP:O	1:A:915:VAL:N	2.39	0.52
5:F:322:ALA:C	5:F:324:ALA:H	2.17	0.52
5:H:284:ASN:O	5:H:288:ASP:N	2.40	0.52
2:L:121:LEU:CB	2:L:175:VAL:HA	2.39	0.52
3:C:25:GLY:O	3:C:29:PHE:N	2.39	0.52
3:C:235:VAL:O	3:C:239:ALA:N	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:255:GLY:O	6:E:259:LEU:N	2.42	0.52
6:E:282:TRP:O	6:E:286:GLY:N	2.42	0.52
6:G:293:GLY:H	6:G:321:PRO:CB	2.22	0.52
1:A:885:VAL:O	1:A:889:LEU:N	2.40	0.52
6:E:133:GLU:HA	6:E:235:LYS:O	2.09	0.52
1:K:515:SER:O	1:K:519:ARG:N	2.42	0.52
3:M:121:ALA:HB2	3:M:167:LEU:CB	2.40	0.52
1:A:741:VAL:O	1:A:745:LEU:N	2.40	0.52
3:C:34:SER:O	3:C:35:LEU:C	2.52	0.52
6:E:148:ARG:HA	6:E:156:ARG:HA	1.90	0.52
6:I:255:GLY:O	6:I:259:LEU:N	2.38	0.52
3:P:55:ALA:HB1	3:P:94:GLY:HA2	1.91	0.52
1:A:688:GLN:O	1:A:692:ASN:N	2.42	0.52
1:A:798:ALA:N	1:A:1087:GLU:O	2.42	0.52
2:B:343:LEU:O	2:B:347:LEU:N	2.43	0.52
3:C:100:PHE:O	3:C:104:MET:N	2.36	0.52
4:J:253:ASN:CB	4:J:272:GLY:CA	2.88	0.52
4:J:271:ALA:HB1	4:J:298:VAL:O	2.10	0.52
6:E:123:ARG:HA	6:E:244:HIS:CB	2.39	0.52
6:G:42:SER:N	6:G:45:MET:O	2.43	0.52
1:N:742:LEU:O	1:N:746:ASP:N	2.42	0.52
3:P:96:ALA:HA	3:P:99:ALA:HB3	1.91	0.52
3:P:186:ARG:HA	3:P:230:ILE:HA	1.92	0.52
1:A:735:ALA:O	1:A:739:GLN:N	2.34	0.52
1:A:1084:LEU:O	1:A:1088:LEU:N	2.43	0.52
2:B:283:LEU:O	2:B:288:ARG:N	2.43	0.52
3:C:515:VAL:HA	3:C:542:VAL:N	2.24	0.52
2:L:110:ALA:HB2	2:L:163:TRP:O	2.10	0.52
3:M:37:ARG:HA	3:M:40:GLY:O	2.10	0.52
5:H:112:LEU:O	5:H:116:PHE:N	2.41	0.52
5:H:169:GLN:H	1:K:451:TRP:HA	1.75	0.52
1:N:172:ILE:H	1:N:227:GLN:CB	2.22	0.52
1:N:727:ASP:O	1:N:731:LEU:N	2.37	0.52
1:N:953:LEU:O	1:N:957:ALA:N	2.39	0.52
3:P:186:ARG:HA	3:P:230:ILE:CB	2.40	0.52
2:B:191:PHE:O	2:B:201:GLY:HA2	2.10	0.51
5:H:170:LEU:CB	1:K:450:ARG:HA	2.39	0.51
6:G:129:ARG:CA	6:G:240:THR:HA	2.40	0.51
6:I:331:ILE:HA	6:I:344:GLY:H	1.75	0.51
2:B:210:LEU:O	2:B:214:LEU:N	2.42	0.51
4:J:178:ARG:CB	4:J:195:VAL:CB	2.89	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:917:ARG:O	1:K:921:ASP:N	2.37	0.51
2:B:54:ASP:O	2:B:58:LEU:N	2.34	0.51
5:D:303:GLU:O	5:D:306:MET:N	2.40	0.51
5:F:91:VAL:HA	5:F:240:LEU:H	1.75	0.51
2:L:244:HIS:O	2:L:248:VAL:N	2.41	0.51
3:M:58:HIS:O	3:M:62:VAL:N	2.38	0.51
1:N:442:ASP:HA	1:N:621:ASN:CB	2.40	0.51
1:N:907:ALA:HA	1:N:910:ALA:HB3	1.93	0.51
1:N:991:GLY:HA2	1:N:1030:VAL:HA	1.91	0.51
6:I:331:ILE:CB	6:I:342:PRO:HA	2.40	0.51
1:N:204:ASP:HA	1:N:255:ILE:HA	1.90	0.51
2:O:95:PRO:CB	2:O:157:HIS:HA	2.41	0.51
2:B:478:ALA:CB	2:B:497:GLN:HA	2.40	0.51
3:C:754:PHE:O	3:C:758:LEU:N	2.42	0.51
5:F:119:ALA:C	5:F:269:THR:H	2.18	0.51
6:G:137:ILE:HA	6:G:232:GLN:N	2.25	0.51
1:A:695:SER:HA	1:A:698:LEU:CB	2.40	0.51
2:B:486:ASP:O	2:B:490:VAL:N	2.41	0.51
3:C:34:SER:O	3:C:37:ARG:N	2.44	0.51
4:J:114:GLY:HA2	4:J:137:SER:HA	1.92	0.51
6:E:41:VAL:N	6:E:47:GLY:O	2.44	0.51
6:G:218:GLY:HA3	2:O:285:GLN:CB	2.40	0.51
2:L:396:ASP:CB	2:L:402:ALA:HB3	2.41	0.51
3:M:55:ALA:O	3:M:59:PHE:N	2.43	0.51
3:M:260:PRO:O	3:M:264:MET:N	2.36	0.51
1:N:382:ALA:HB1	1:N:428:LEU:CA	2.41	0.51
3:P:55:ALA:O	3:P:59:PHE:N	2.44	0.51
2:B:168:SER:O	2:B:172:ALA:N	2.42	0.51
3:C:202:SER:O	3:C:206:GLY:N	2.42	0.51
5:F:194:GLU:O	5:F:198:GLY:N	2.42	0.51
5:D:67:LEU:N	5:D:359:LEU:O	2.43	0.51
6:E:137:ILE:HA	6:E:232:GLN:HA	1.93	0.51
1:K:735:ALA:HB1	1:K:766:ALA:HB1	1.93	0.51
1:K:738:VAL:O	1:K:742:LEU:N	2.42	0.51
1:K:985:ALA:O	1:K:986:VAL:C	2.52	0.51
2:L:363:ALA:O	2:L:364:ARG:C	2.53	0.51
1:N:169:GLN:HA	1:N:227:GLN:N	2.26	0.51
2:O:426:VAL:HA	2:O:473:VAL:CB	2.41	0.51
3:P:30:CYS:O	3:P:34:SER:N	2.39	0.51
1:A:388:LEU:O	1:A:392:GLN:N	2.40	0.51
2:B:365:ASN:O	2:B:369:PHE:N	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:28:PHE:CB	4:J:302:ALA:HB1	2.40	0.51
5:D:94:CYS:H	5:D:299:LEU:HA	1.76	0.51
5:H:280:ASN:O	5:H:284:ASN:N	2.42	0.51
6:G:133:GLU:HA	6:G:236:GLU:N	2.26	0.51
6:G:137:ILE:HA	6:G:232:GLN:CA	2.41	0.51
1:N:423:ALA:HB1	3:P:352:THR:N	2.26	0.51
4:J:271:ALA:HB2	4:J:301:VAL:N	2.26	0.51
5:D:205:ARG:H	5:D:218:GLU:CB	2.24	0.51
5:H:131:TYR:H	5:H:194:GLU:HA	1.76	0.51
1:K:1042:THR:O	1:K:1046:LEU:N	2.41	0.51
1:N:162:ALA:HB3	1:N:222:THR:CB	2.41	0.51
1:N:340:VAL:CB	1:N:406:GLY:HA3	2.41	0.51
1:N:445:ILE:HA	1:N:473:ARG:O	2.10	0.51
2:O:350:MET:CA	2:O:359:ARG:HA	2.40	0.51
3:P:265:GLU:CB	3:P:299:MET:HA	2.40	0.51
3:C:34:SER:HA	3:C:37:ARG:CB	2.41	0.50
6:I:241:VAL:O	6:I:242:THR:C	2.54	0.50
1:K:219:ARG:O	1:K:223:GLY:N	2.44	0.50
1:K:439:ASP:H	1:K:476:PHE:CA	2.22	0.50
2:L:480:ILE:O	2:L:484:CYS:N	2.42	0.50
1:N:1048:GLU:CB	2:O:333:ALA:HA	2.42	0.50
3:P:304:LEU:HA	3:P:318:LEU:CB	2.40	0.50
1:N:571:TYR:HA	1:N:659:LYS:HA	1.93	0.50
2:O:213:ASP:HA	2:O:218:SER:CB	2.42	0.50
5:D:135:VAL:O	5:D:136:THR:C	2.53	0.50
5:F:69:ALA:HB3	5:F:363:THR:N	2.25	0.50
5:F:171:LYS:N	1:N:449:ARG:O	2.42	0.50
5:F:430:ILE:O	5:F:434:HIS:N	2.42	0.50
5:H:213:PHE:O	5:H:214:ASP:C	2.54	0.50
6:G:124:LYS:HA	6:G:245:GLU:CB	2.41	0.50
1:K:318:LEU:O	1:K:322:SER:N	2.44	0.50
1:K:764:MET:CB	1:K:888:VAL:HA	2.41	0.50
2:L:275:VAL:C	2:L:277:ASN:N	2.68	0.50
2:L:351:GLU:HA	2:L:391:TYR:HA	1.92	0.50
1:A:798:ALA:HA	1:A:1088:LEU:O	2.11	0.50
4:J:122:ALA:HB3	4:J:172:GLN:CB	2.42	0.50
5:H:65:ALA:O	5:H:359:LEU:N	2.39	0.50
6:G:318:GLU:C	6:G:320:ALA:N	2.66	0.50
6:I:205:GLY:HA3	6:I:224:VAL:CB	2.42	0.50
2:L:256:SER:HA	2:L:264:LYS:CB	2.42	0.50
3:M:101:LEU:HA	3:M:159:LYS:CB	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:132:HIS:HA	1:N:180:VAL:CB	2.42	0.50
1:A:385:LEU:O	1:A:389:MET:N	2.39	0.50
5:D:27:ASP:H	5:D:31:VAL:C	2.20	0.50
5:D:143:THR:O	5:D:153:THR:N	2.44	0.50
6:G:248:VAL:O	6:G:252:ARG:N	2.45	0.50
6:I:193:THR:N	6:I:202:ASN:O	2.43	0.50
1:N:806:ALA:HA	2:O:476:LEU:HA	1.94	0.50
3:C:275:ALA:HB3	3:C:280:VAL:CB	2.41	0.50
5:F:71:PRO:O	5:F:72:PRO:C	2.52	0.50
5:H:128:LYS:N	5:H:232:LYS:O	2.43	0.50
6:G:140:GLU:O	6:G:163:LYS:N	2.44	0.50
2:L:20:GLU:N	2:L:66:ARG:HA	2.26	0.50
3:M:143:GLN:H	3:M:210:SER:H	1.59	0.50
3:P:66:LEU:CB	3:P:87:TRP:HA	2.42	0.50
3:C:804:VAL:O	3:C:808:ASP:N	2.45	0.50
4:J:69:GLN:CB	4:J:89:ASP:CB	2.89	0.50
5:D:367:ASN:O	5:D:371:LEU:N	2.41	0.50
5:F:113:MET:O	5:F:117:ARG:N	2.41	0.50
5:F:131:TYR:N	5:F:195:ALA:H	2.09	0.50
6:E:318:GLU:C	6:E:320:ALA:N	2.69	0.50
1:K:1063:HIS:N	2:L:415:GLN:O	2.44	0.50
1:N:475:TYR:HA	1:N:480:THR:O	2.11	0.50
2:O:86:ALA:O	2:O:90:GLU:N	2.41	0.50
2:O:158:SER:HA	2:O:169:ARG:HA	1.94	0.50
1:A:978:LEU:O	1:A:982:LEU:N	2.38	0.50
1:A:1078:THR:O	1:A:1082:LEU:N	2.40	0.50
2:B:465:LEU:O	2:B:469:SER:N	2.44	0.50
5:D:164:ALA:N	5:D:224:PRO:O	2.42	0.50
5:D:322:ALA:C	5:D:324:ALA:N	2.70	0.50
6:I:389:LEU:O	6:I:393:ALA:N	2.43	0.50
3:M:302:LYS:O	3:M:306:LEU:N	2.45	0.50
1:N:732:PRO:CB	1:N:770:TRP:HA	2.42	0.50
1:N:1051:CYS:O	1:N:1072:GLY:HA3	2.11	0.50
3:C:66:LEU:O	3:C:70:LEU:N	2.45	0.50
3:C:597:SER:O	3:C:601:ALA:N	2.44	0.50
4:J:275:HIS:N	4:J:297:ALA:HB2	2.24	0.50
5:D:143:THR:CB	5:D:154:VAL:HA	2.41	0.50
6:E:332:THR:O	6:E:341:SER:N	2.45	0.50
6:G:162:LEU:O	6:G:169:THR:N	2.40	0.50
1:A:381:LEU:O	1:A:385:LEU:N	2.42	0.49
4:J:65:GLY:HA2	4:J:93:CYS:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:H:397:VAL:O	5:H:401:SER:N	2.44	0.49
6:E:73:LEU:CB	6:E:355:ILE:HA	2.42	0.49
6:E:103:ALA:HB3	6:E:106:GLU:H	1.76	0.49
6:G:99:PHE:HA	6:G:294:VAL:CB	2.42	0.49
1:N:1014:TYR:HA	1:N:1019:GLN:CB	2.42	0.49
4:J:30:GLU:CB	4:J:305:ALA:HB3	2.42	0.49
5:D:335:LYS:CB	5:D:348:HIS:H	2.25	0.49
6:E:241:VAL:O	6:E:242:THR:C	2.53	0.49
3:M:218:LEU:O	3:M:222:CYS:N	2.43	0.49
1:N:162:ALA:HB2	1:N:174:ALA:HB3	1.93	0.49
3:M:38:TYR:O	3:M:55:ALA:HB2	2.11	0.49
1:N:204:ASP:HA	1:N:255:ILE:CA	2.42	0.49
1:N:879:LEU:CB	1:N:925:ALA:HA	2.43	0.49
3:P:39:LEU:HA	3:P:55:ALA:HB2	1.94	0.49
1:A:701:GLY:O	1:A:705:ASN:N	2.45	0.49
3:C:545:SER:O	3:C:549:THR:N	2.44	0.49
5:D:96:MET:CB	5:D:302:ASP:H	2.25	0.49
1:K:1078:THR:O	1:K:1082:LEU:N	2.41	0.49
3:P:75:LEU:HA	3:P:83:LEU:CB	2.43	0.49
3:C:90:PHE:O	3:C:94:GLY:N	2.46	0.49
5:F:65:ALA:O	5:F:359:LEU:N	2.38	0.49
6:E:393:ALA:O	6:E:394:THR:C	2.55	0.49
6:I:103:ALA:O	6:I:107:ILE:N	2.43	0.49
6:I:160:LEU:O	6:I:170:ASN:HA	2.13	0.49
3:P:188:LEU:O	3:P:192:VAL:N	2.43	0.49
5:F:131:TYR:CB	5:F:229:HIS:HA	2.42	0.49
6:E:198:THR:C	6:E:200:LYS:N	2.66	0.49
6:I:164:THR:HA	6:I:226:CYS:CB	2.42	0.49
1:K:533:ALA:CB	1:K:553:LEU:HA	2.35	0.49
1:N:877:LYS:O	1:N:878:ASN:C	2.56	0.49
1:N:926:VAL:O	1:N:930:PHE:N	2.46	0.49
1:N:966:ILE:O	1:N:970:ALA:N	2.45	0.49
2:B:216:LYS:C	2:B:218:SER:N	2.71	0.49
3:C:99:ALA:O	3:C:103:LEU:N	2.42	0.49
5:D:338:ILE:N	5:D:344:ILE:O	2.45	0.49
6:I:434:ASP:O	6:I:438:SER:N	2.32	0.49
1:N:766:ALA:O	1:N:770:TRP:N	2.44	0.49
1:N:917:ARG:O	1:N:921:ASP:N	2.40	0.49
6:G:282:TRP:O	6:G:286:GLY:N	2.45	0.49
1:K:212:GLY:O	1:K:216:ALA:N	2.44	0.49
1:K:1067:LEU:O	1:K:1070:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:192:LEU:O	2:L:203:LEU:N	2.38	0.49
1:N:985:ALA:O	1:N:986:VAL:C	2.54	0.49
3:P:60:SER:HA	3:P:102:VAL:CB	2.43	0.49
2:B:29:ALA:HB1	2:B:58:LEU:CB	2.43	0.49
4:J:232:LEU:CB	4:J:249:HIS:CB	2.91	0.49
6:G:331:ILE:CA	6:G:342:PRO:HA	2.42	0.49
6:I:398:LEU:O	6:I:402:ILE:N	2.39	0.49
1:N:288:THR:CA	1:N:328:CYS:HA	2.38	0.49
3:C:260:PRO:O	3:C:264:MET:N	2.44	0.49
5:D:301:ILE:CB	5:D:329:PHE:HA	2.43	0.49
6:G:72:VAL:HA	6:G:354:ILE:CB	2.43	0.49
1:K:409:LYS:CB	1:K:541:LEU:H	2.26	0.49
1:N:1049:LEU:CB	2:O:333:ALA:HB2	2.43	0.49
2:O:124:LEU:O	2:O:128:GLU:N	2.46	0.49
1:A:195:ASP:O	1:A:199:GLN:N	2.41	0.48
3:C:40:GLY:CA	3:C:48:PRO:HA	2.42	0.48
5:D:97:VAL:O	5:D:101:VAL:N	2.45	0.48
2:O:482:GLN:H	2:O:490:VAL:CB	2.25	0.48
2:B:97:LYS:N	2:B:221:ASN:O	2.46	0.48
3:C:16:ILE:O	3:C:20:SER:N	2.40	0.48
5:D:240:LEU:N	5:D:295:VAL:HA	2.29	0.48
1:K:505:VAL:HA	1:K:526:LEU:HA	1.94	0.48
1:K:991:GLY:HA2	1:K:1030:VAL:HA	1.93	0.48
1:A:121:LEU:O	1:A:124:ILE:N	2.46	0.48
2:B:64:PHE:O	2:B:68:PHE:N	2.42	0.48
5:F:131:TYR:N	5:F:195:ALA:N	2.61	0.48
1:K:363:VAL:O	1:K:367:ASN:N	2.36	0.48
1:K:574:THR:HA	1:K:621:ASN:N	2.28	0.48
1:N:382:ALA:HB1	1:N:428:LEU:N	2.27	0.48
2:O:58:LEU:O	2:O:61:ALA:HB3	2.14	0.48
3:P:165:ASP:CB	3:P:181:PRO:HA	2.43	0.48
4:J:188:GLY:HA3	4:J:209:GLU:O	2.13	0.48
6:I:145:VAL:H	6:I:161:THR:N	2.12	0.48
6:I:214:TYR:O	6:I:215:ASP:C	2.55	0.48
2:L:86:ALA:HB3	2:L:146:LEU:CB	2.43	0.48
3:M:40:GLY:O	3:M:41:GLU:C	2.56	0.48
1:N:718:VAL:O	1:N:722:MET:N	2.41	0.48
5:F:16:SER:O	5:F:20:HIS:N	2.44	0.48
5:F:138:LEU:HA	5:F:159:ILE:CB	2.43	0.48
5:H:131:TYR:HA	5:H:229:HIS:HA	1.96	0.48
5:H:301:ILE:N	5:H:328:ILE:O	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:H:446:ILE:O	5:H:450:HIS:N	2.41	0.48
6:E:392:VAL:O	6:E:396:THR:N	2.43	0.48
1:K:195:ASP:O	1:K:199:GLN:N	2.39	0.48
3:M:96:ALA:O	3:M:100:PHE:N	2.44	0.48
2:O:436:ILE:CB	2:O:455:LEU:HA	2.44	0.48
3:P:114:SER:O	3:P:118:MET:N	2.42	0.48
2:B:28:GLN:O	2:B:32:LYS:N	2.44	0.48
3:C:75:LEU:O	3:C:81:GLY:HA2	2.14	0.48
3:C:289:VAL:HA	3:C:296:GLN:CB	2.43	0.48
3:C:322:LEU:HA	3:C:328:ARG:CB	2.43	0.48
4:J:52:TRP:CA	4:J:59:ALA:HB2	2.44	0.48
5:D:213:PHE:O	5:D:214:ASP:C	2.54	0.48
5:H:164:ALA:HB3	5:H:225:LYS:CB	2.44	0.48
6:I:73:LEU:N	6:I:354:ILE:O	2.47	0.48
6:I:295:LEU:O	6:I:323:VAL:HA	2.14	0.48
3:M:191:GLU:O	3:M:195:VAL:N	2.43	0.48
1:N:734:VAL:O	1:N:738:VAL:N	2.42	0.48
2:O:148:GLY:HA3	2:O:205:VAL:CB	2.44	0.48
3:P:189:GLY:HA3	3:P:230:ILE:CB	2.43	0.48
1:A:219:ARG:O	1:A:223:GLY:N	2.41	0.48
1:A:686:SER:CB	1:A:689:HIS:H	2.27	0.48
1:A:891:LEU:O	1:A:895:VAL:N	2.44	0.48
2:B:65:ASP:HA	2:B:133:SER:CB	2.43	0.48
1:K:1011:CYS:O	1:K:1015:LEU:N	2.46	0.48
2:L:305:HIS:HA	2:L:358:LEU:CA	2.43	0.48
1:N:911:TRP:O	1:N:912:PRO:C	2.56	0.48
1:A:495:LEU:O	1:A:499:GLY:N	2.47	0.48
1:A:663:GLN:O	1:A:664:THR:C	2.56	0.48
2:L:363:ALA:HB2	2:L:402:ALA:HA	1.95	0.48
1:N:745:LEU:O	1:N:749:TYR:N	2.46	0.48
1:N:929:ALA:O	1:N:933:LEU:N	2.44	0.48
3:P:304:LEU:O	3:P:315:LEU:HA	2.14	0.48
1:A:202:LEU:O	1:A:206:PHE:N	2.39	0.48
2:B:58:LEU:O	2:B:62:THR:N	2.43	0.48
2:B:203:LEU:O	2:B:207:LEU:N	2.45	0.48
2:B:376:LEU:O	2:B:377:THR:C	2.54	0.48
3:C:278:PRO:CA	3:C:317:SER:HA	2.44	0.48
5:D:96:MET:CB	5:D:301:ILE:HA	2.44	0.48
5:F:169:GLN:O	1:N:451:TRP:HA	2.14	0.48
5:F:337:GLN:HA	5:F:344:ILE:O	2.13	0.48
5:H:131:TYR:N	5:H:193:ILE:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:42:SER:H	6:E:45:MET:CB	2.26	0.48
6:E:126:ILE:O	6:E:242:THR:HA	2.13	0.48
6:E:134:SER:O	6:E:234:ARG:HA	2.14	0.48
6:I:162:LEU:O	6:I:169:THR:N	2.47	0.48
1:K:367:ASN:HA	1:K:374:LEU:CB	2.43	0.48
1:K:414:LYS:O	1:K:418:VAL:N	2.46	0.48
2:L:253:LEU:O	2:L:257:ASP:N	2.47	0.48
1:N:305:LYS:CA	1:N:347:ILE:HA	2.39	0.48
1:N:890:ASP:O	1:N:894:VAL:N	2.45	0.48
1:N:991:GLY:CA	1:N:1030:VAL:HA	2.44	0.48
2:O:42:ALA:HB3	2:O:47:VAL:CB	2.44	0.48
1:A:213:ILE:O	1:A:217:LEU:N	2.39	0.48
1:A:496:GLY:HA3	1:A:532:GLY:HA3	1.96	0.48
2:B:274:ILE:O	2:B:275:VAL:C	2.55	0.48
6:E:331:ILE:HA	6:E:343:HIS:H	1.79	0.48
6:E:438:SER:O	6:E:442:LEU:N	2.40	0.48
1:N:159:LEU:HA	1:N:219:ARG:HA	1.96	0.48
3:P:154:GLU:O	3:P:158:GLY:N	2.46	0.48
2:B:478:ALA:HB2	2:B:497:GLN:HA	1.96	0.47
3:C:434:SER:O	3:C:438:LEU:N	2.42	0.47
4:J:298:VAL:CB	4:J:311:ALA:HB1	2.44	0.47
6:E:83:THR:O	6:E:87:MET:N	2.43	0.47
2:L:157:HIS:CB	2:L:172:ALA:HB3	2.44	0.47
1:A:368:LYS:HA	1:A:371:ALA:CB	2.39	0.47
1:A:438:LEU:HA	1:A:477:ARG:H	1.77	0.47
5:H:335:LYS:CA	5:H:348:HIS:H	2.26	0.47
6:E:167:MET:CB	6:E:230:GLU:HA	2.43	0.47
6:I:362:SER:O	6:I:366:LEU:N	2.41	0.47
3:M:15:ALA:O	3:M:19:LEU:N	2.46	0.47
1:N:987:LEU:CB	1:N:1027:ALA:HA	2.43	0.47
3:P:149:PHE:O	3:P:153:ARG:N	2.37	0.47
3:C:47:LEU:O	3:C:51:LYS:N	2.33	0.47
5:F:68:LEU:CB	5:F:330:ALA:HB2	2.44	0.47
5:H:272:THR:O	5:H:276:ARG:N	2.47	0.47
6:E:61:MET:O	6:E:65:GLY:N	2.47	0.47
6:G:129:ARG:HA	6:G:240:THR:HA	1.96	0.47
6:G:243:LEU:HA	6:G:246:ILE:CB	2.44	0.47
2:L:206:ILE:O	2:L:210:LEU:N	2.44	0.47
2:O:238:ARG:HA	2:O:239:PRO:C	2.39	0.47
1:A:106:SER:HA	2:L:42:ALA:HA	1.94	0.47
2:B:337:THR:CB	2:B:340:ASP:H	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:176:LEU:O	3:C:180:PHE:N	2.46	0.47
3:C:320:GLY:O	3:C:324:MET:N	2.47	0.47
4:J:271:ALA:HB2	4:J:300:CYS:C	2.39	0.47
5:F:374:ILE:O	5:F:378:ARG:N	2.40	0.47
6:E:135:GLU:CA	6:E:234:ARG:HA	2.36	0.47
6:E:331:ILE:CA	6:E:343:HIS:H	2.28	0.47
1:K:797:ALA:N	1:K:1039:PRO:HA	2.30	0.47
1:N:670:VAL:O	1:N:674:THR:N	2.44	0.47
3:P:242:THR:O	3:P:243:GLN:C	2.56	0.47
6:I:180:SER:O	6:I:184:GLU:N	2.45	0.47
1:K:132:HIS:HA	1:K:191:PRO:HA	1.96	0.47
3:P:186:ARG:HA	3:P:230:ILE:CA	2.44	0.47
5:D:299:LEU:H	5:D:327:VAL:CB	2.27	0.47
6:E:113:SER:O	6:E:117:ALA:N	2.41	0.47
6:E:127:GLY:O	6:E:291:ILE:N	2.47	0.47
6:I:243:LEU:HA	6:I:246:ILE:CB	2.45	0.47
1:K:445:ILE:N	1:K:475:TYR:H	2.13	0.47
1:K:512:TYR:CA	1:K:519:ARG:HA	2.39	0.47
1:K:698:LEU:O	1:K:702:ILE:N	2.44	0.47
1:K:806:ALA:CB	2:L:476:LEU:HA	2.45	0.47
2:L:377:THR:O	2:L:381:LEU:N	2.42	0.47
1:A:94:GLN:CB	1:A:143:TYR:HA	2.45	0.47
1:A:199:GLN:O	1:A:203:GLY:N	2.39	0.47
1:A:917:ARG:O	1:A:921:ASP:N	2.46	0.47
1:A:990:LEU:O	1:A:994:CYS:N	2.43	0.47
5:H:164:ALA:N	5:H:225:LYS:HA	2.30	0.47
6:G:195:ASP:O	6:G:199:GLY:N	2.42	0.47
1:K:756:PHE:O	1:K:760:LEU:N	2.41	0.47
2:L:93:ALA:HB1	2:L:117:GLY:HA2	1.97	0.47
1:N:162:ALA:HB2	1:N:174:ALA:CB	2.45	0.47
1:N:297:CYS:O	1:N:298:VAL:C	2.58	0.47
1:N:702:ILE:O	1:N:706:LEU:N	2.47	0.47
1:N:1011:CYS:O	1:N:1027:ALA:HB1	2.14	0.47
3:P:143:GLN:H	3:P:209:SER:CA	2.28	0.47
3:P:191:GLU:O	3:P:195:VAL:N	2.44	0.47
1:A:904:LEU:O	1:A:908:HIS:N	2.46	0.47
1:A:1008:ALA:O	1:A:1009:ASP:C	2.57	0.47
5:D:21:ILE:HA	5:D:38:GLY:HA3	1.97	0.47
5:H:335:LYS:HA	5:H:348:HIS:N	2.30	0.47
3:M:36:LYS:HA	3:M:90:PHE:CB	2.45	0.47
2:O:93:ALA:HB1	2:O:117:GLY:HA2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:436:ILE:CB	2:O:458:ALA:HB3	2.45	0.47
1:A:394:ASP:O	1:A:398:PHE:N	2.42	0.47
1:A:452:ASN:H	1:A:463:SER:H	1.63	0.47
1:A:550:PRO:O	1:A:554:ARG:N	2.43	0.47
1:A:929:ALA:O	1:A:933:LEU:N	2.45	0.47
3:C:227:GLN:O	3:C:228:GLN:C	2.57	0.47
4:J:19:THR:CB	4:J:316:GLN:CB	2.93	0.47
6:E:362:SER:O	6:E:366:LEU:N	2.43	0.47
3:M:216:GLN:O	3:M:220:LYS:N	2.42	0.47
1:A:336:LEU:O	1:A:340:VAL:N	2.46	0.47
2:B:495:LYS:O	2:B:499:VAL:N	2.39	0.47
5:D:66:LEU:HA	5:D:359:LEU:O	2.14	0.47
5:H:270:GLU:O	5:H:276:ARG:HA	2.15	0.47
6:I:130:ILE:O	6:I:238:VAL:HA	2.14	0.47
1:K:389:MET:HA	1:K:397:LYS:HA	1.96	0.47
2:L:440:ALA:HA	2:L:451:LYS:CB	2.44	0.47
1:A:679:CYS:O	1:A:683:GLY:N	2.47	0.46
1:A:744:THR:O	1:A:748:PHE:N	2.46	0.46
1:A:888:VAL:O	1:A:892:CYS:N	2.42	0.46
2:B:180:LEU:O	2:B:184:GLU:N	2.45	0.46
5:F:215:LEU:O	5:F:216:GLU:C	2.57	0.46
6:I:140:GLU:HA	6:I:191:VAL:CA	2.45	0.46
1:K:199:GLN:O	1:K:203:GLY:N	2.48	0.46
1:K:638:ALA:HB1	1:K:681:ALA:CA	2.45	0.46
1:K:731:LEU:O	1:K:735:ALA:N	2.47	0.46
2:L:171:VAL:O	2:L:175:VAL:N	2.44	0.46
1:N:290:LEU:O	1:N:294:ILE:N	2.45	0.46
5:D:55:MET:O	5:D:59:LYS:N	2.49	0.46
5:F:386:ILE:HA	5:F:425:ILE:CB	2.45	0.46
5:H:21:ILE:HA	5:H:38:GLY:HA3	1.97	0.46
6:G:130:ILE:HA	6:G:287:LYS:O	2.16	0.46
1:K:529:LEU:O	1:K:533:ALA:N	2.48	0.46
1:N:748:PHE:O	1:N:749:TYR:C	2.57	0.46
1:N:759:VAL:O	1:N:763:LEU:N	2.39	0.46
1:A:257:LYS:CB	1:A:276:GLU:HA	2.45	0.46
1:A:799:LEU:N	1:A:1089:GLN:OXT	2.48	0.46
2:B:154:ALA:CA	2:B:172:ALA:HB1	2.45	0.46
2:B:385:GLU:O	2:B:389:ILE:N	2.47	0.46
4:J:48:LEU:N	4:J:64:ASP:CB	2.78	0.46
5:H:55:MET:O	5:H:59:LYS:N	2.45	0.46
6:G:104:GLY:H	6:G:299:GLU:CB	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:130:ILE:O	6:G:238:VAL:HA	2.16	0.46
3:M:227:GLN:O	3:M:231:LEU:N	2.38	0.46
1:N:968:ALA:HA	1:N:1019:GLN:CA	2.45	0.46
3:P:221:ALA:O	3:P:225:GLY:N	2.49	0.46
1:A:184:GLN:O	1:A:185:CYS:C	2.59	0.46
1:A:452:ASN:H	1:A:463:SER:N	2.12	0.46
1:A:1067:LEU:C	1:A:1069:GLY:N	2.69	0.46
2:B:441:ARG:O	2:B:442:ASP:C	2.58	0.46
3:C:814:ARG:O	3:C:818:LEU:N	2.40	0.46
4:J:114:GLY:HA3	4:J:133:PRO:CB	2.46	0.46
5:D:23:GLY:O	5:D:37:ALA:HB3	2.16	0.46
5:D:68:LEU:H	5:D:330:ALA:HB2	1.81	0.46
5:D:157:VAL:C	5:D:172:LEU:H	2.23	0.46
5:F:134:GLU:HA	5:F:189:ASP:O	2.16	0.46
5:F:334:GLY:C	5:F:348:HIS:H	2.23	0.46
5:H:16:SER:O	5:H:20:HIS:N	2.48	0.46
5:H:385:ALA:HB3	5:H:423:GLN:O	2.16	0.46
1:K:329:ALA:HB1	1:K:363:VAL:HA	1.98	0.46
1:K:745:LEU:O	1:K:749:TYR:N	2.37	0.46
1:N:332:LEU:HA	1:N:335:ALA:HB3	1.98	0.46
1:N:936:LEU:C	1:N:938:SER:N	2.70	0.46
1:A:963:GLN:O	1:A:967:SER:N	2.44	0.46
3:C:720:ASP:HA	3:C:724:LEU:CB	2.45	0.46
5:D:157:VAL:N	5:D:172:LEU:H	2.13	0.46
5:D:445:ARG:O	5:D:449:GLN:N	2.45	0.46
5:F:96:MET:CB	5:F:301:ILE:HA	2.45	0.46
5:F:322:ALA:C	5:F:324:ALA:N	2.72	0.46
1:K:128:SER:CA	1:K:177:CYS:HA	2.42	0.46
1:K:753:ALA:O	1:K:757:VAL:N	2.45	0.46
1:K:764:MET:HA	1:K:866:VAL:CB	2.45	0.46
3:P:66:LEU:O	3:P:70:LEU:N	2.45	0.46
1:A:953:LEU:O	1:A:957:ALA:N	2.46	0.46
3:C:287:ASN:O	3:C:291:LYS:N	2.44	0.46
2:O:137:PRO:HA	2:O:195:GLU:CB	2.45	0.46
2:O:183:THR:CB	2:O:191:PHE:HA	2.46	0.46
5:F:94:CYS:CB	5:F:299:LEU:HA	2.46	0.46
6:E:79:GLY:O	6:E:80:THR:C	2.59	0.46
1:K:422:VAL:HA	3:M:305:PHE:CB	2.45	0.46
1:K:1054:GLN:CA	1:K:1070:ALA:HB1	2.45	0.46
2:L:349:HIS:O	2:L:353:GLU:N	2.48	0.46
3:M:20:SER:CB	3:M:69:ARG:HA	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:75:LEU:O	3:M:81:GLY:HA2	2.16	0.46
1:N:764:MET:CB	1:N:888:VAL:HA	2.46	0.46
1:N:922:ALA:O	1:N:926:VAL:N	2.35	0.46
2:O:161:GLN:O	2:O:162:PRO:C	2.54	0.46
4:J:26:LEU:C	4:J:302:ALA:HB2	2.41	0.46
5:D:386:ILE:HA	5:D:425:ILE:N	2.22	0.46
5:F:175:THR:HA	5:F:178:GLU:CB	2.46	0.46
6:E:191:VAL:O	6:E:205:GLY:N	2.45	0.46
6:G:100:THR:N	6:G:294:VAL:O	2.48	0.46
6:I:255:GLY:H	6:I:258:ALA:HB3	1.80	0.46
1:A:561:LEU:O	1:A:565:THR:N	2.47	0.46
5:D:70:GLY:H	5:D:332:ASN:HA	1.80	0.46
5:H:207:ASP:O	5:H:211:THR:N	2.41	0.46
5:H:406:ALA:O	5:H:410:LEU:N	2.44	0.46
6:I:129:ARG:HA	6:I:239:HIS:O	2.16	0.46
1:K:735:ALA:CB	1:K:766:ALA:HB1	2.45	0.46
2:B:26:PHE:HA	2:B:62:THR:CB	2.46	0.46
2:B:216:LYS:O	2:B:217:GLU:C	2.59	0.46
6:E:73:LEU:N	6:E:354:ILE:O	2.47	0.46
6:E:77:GLN:O	6:E:78:PRO:C	2.55	0.46
6:G:333:ARG:HA	6:G:339:TYR:O	2.16	0.46
6:I:211:ALA:O	6:I:215:ASP:N	2.44	0.46
3:M:316:GLN:HA	3:M:366:ILE:CB	2.46	0.46
2:O:109:ALA:O	2:O:113:ALA:N	2.48	0.46
2:O:340:ASP:CB	2:O:377:THR:HA	2.46	0.46
1:A:866:VAL:O	1:A:870:CYS:N	2.45	0.45
4:J:212:MET:CB	4:J:257:ALA:HA	2.46	0.45
5:H:11:LYS:HA	5:H:14:ARG:C	2.42	0.45
5:H:322:ALA:O	5:H:324:ALA:N	2.49	0.45
6:G:318:GLU:O	6:G:320:ALA:N	2.49	0.45
1:K:132:HIS:HA	1:K:191:PRO:CB	2.46	0.45
1:K:256:SER:C	1:K:276:GLU:HA	2.41	0.45
1:N:382:ALA:HB1	1:N:428:LEU:CB	2.46	0.45
1:N:679:CYS:O	1:N:683:GLY:N	2.48	0.45
1:N:806:ALA:CB	2:O:476:LEU:HA	2.46	0.45
1:A:144:GLU:O	1:A:148:LEU:N	2.37	0.45
2:B:490:VAL:O	2:B:494:ARG:N	2.38	0.45
3:C:12:VAL:O	3:C:16:ILE:N	2.44	0.45
3:C:277:GLY:O	3:C:278:PRO:C	2.57	0.45
4:J:165:PRO:HA	4:J:185:TYR:C	2.41	0.45
5:D:379:ALA:O	5:D:383:GLY:N	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:381:MET:HA	6:G:420:VAL:H	1.82	0.45
6:I:132:GLU:C	6:I:236:GLU:HA	2.40	0.45
1:K:1045:LEU:O	1:K:1049:LEU:N	2.47	0.45
2:L:63:GLU:O	2:L:64:PHE:C	2.58	0.45
1:N:1059:HIS:N	2:O:468:CYS:HA	2.32	0.45
2:B:88:ALA:HB1	1:N:166:LYS:O	2.16	0.45
3:C:110:ALA:O	3:C:111:ALA:C	2.59	0.45
4:J:66:HIS:CB	4:J:69:GLN:O	2.64	0.45
5:F:170:LEU:HA	1:N:450:ARG:O	2.16	0.45
1:N:117:GLU:O	1:N:121:LEU:N	2.43	0.45
1:N:741:VAL:O	1:N:745:LEU:N	2.43	0.45
2:O:117:GLY:O	2:O:121:LEU:N	2.46	0.45
2:O:241:LEU:O	2:O:245:LEU:N	2.42	0.45
2:O:253:LEU:O	2:O:257:ASP:N	2.50	0.45
3:P:269:THR:HA	3:P:303:LEU:CB	2.47	0.45
1:A:678:VAL:O	1:A:682:CYS:N	2.39	0.45
2:B:24:SER:O	2:B:28:GLN:N	2.40	0.45
4:J:23:VAL:CB	4:J:43:GLY:HA3	2.47	0.45
5:F:67:LEU:N	5:F:359:LEU:O	2.49	0.45
5:H:130:VAL:CA	5:H:194:GLU:HA	2.45	0.45
5:H:322:ALA:C	5:H:324:ALA:N	2.71	0.45
6:I:404:LEU:O	6:I:408:ALA:N	2.46	0.45
1:K:445:ILE:HA	1:K:474:ARG:CB	2.46	0.45
1:K:666:LEU:O	1:K:670:VAL:N	2.46	0.45
1:K:771:PHE:CB	1:K:859:GLN:HA	2.46	0.45
1:N:497:TYR:O	1:N:547:LYS:HA	2.16	0.45
2:O:137:PRO:O	2:O:141:THR:N	2.47	0.45
2:O:436:ILE:CA	2:O:455:LEU:HA	2.47	0.45
1:A:745:LEU:O	1:A:749:TYR:N	2.50	0.45
1:A:813:LEU:O	1:A:817:LEU:N	2.43	0.45
2:B:22:SER:O	2:B:25:ALA:HB3	2.17	0.45
3:C:529:GLU:N	3:C:567:THR:CB	2.74	0.45
5:D:141:VAL:H	5:D:157:VAL:CB	2.30	0.45
5:H:131:TYR:H	5:H:195:ALA:N	2.14	0.45
6:E:398:LEU:O	6:E:402:ILE:N	2.41	0.45
1:K:629:ILE:O	1:K:633:GLY:N	2.45	0.45
3:M:143:GLN:H	3:M:209:SER:CA	2.23	0.45
1:N:731:LEU:O	1:N:735:ALA:N	2.44	0.45
1:N:1015:LEU:HA	1:N:1024:GLN:HA	1.98	0.45
1:A:187:CYS:O	1:A:190:HIS:N	2.50	0.45
1:A:466:GLN:O	1:A:470:ARG:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:93:ALA:HB3	2:B:153:PHE:CB	2.46	0.45
2:B:342:VAL:O	2:B:346:ILE:N	2.44	0.45
2:B:384:LEU:O	2:B:388:ILE:N	2.42	0.45
5:F:386:ILE:HA	5:F:425:ILE:N	2.32	0.45
6:E:102:MET:O	6:E:298:ASP:N	2.47	0.45
6:I:77:GLN:O	6:I:78:PRO:C	2.57	0.45
1:K:549:ASN:O	1:K:553:LEU:N	2.45	0.45
2:L:86:ALA:O	2:L:90:GLU:N	2.46	0.45
3:C:75:LEU:C	3:C:81:GLY:HA2	2.42	0.45
5:D:131:TYR:HA	5:D:228:VAL:C	2.42	0.45
5:F:110:GLU:O	5:F:114:GLU:N	2.45	0.45
5:H:169:GLN:N	1:K:450:ARG:O	2.49	0.45
2:L:209:LEU:O	2:L:213:ASP:N	2.45	0.45
2:O:269:HIS:N	2:O:310:ALA:HB1	2.32	0.45
1:A:455:ASP:O	1:A:458:ALA:HB3	2.17	0.45
1:A:567:GLN:C	1:A:569:ASN:N	2.70	0.45
2:B:36:CYS:CB	2:B:54:ASP:CB	2.95	0.45
5:H:131:TYR:HA	5:H:228:VAL:O	2.16	0.45
6:G:331:ILE:CA	6:G:343:HIS:H	2.28	0.45
6:G:427:LYS:O	6:G:431:LEU:N	2.46	0.45
3:P:94:GLY:O	3:P:95:PRO:C	2.58	0.45
3:C:405:LEU:O	3:C:409:VAL:N	2.43	0.45
5:F:27:ASP:O	5:F:30:GLY:N	2.50	0.45
5:F:164:ALA:N	5:F:224:PRO:O	2.49	0.45
6:E:71:ALA:H	6:E:353:MET:HA	1.82	0.45
6:E:383:ALA:O	6:E:387:THR:N	2.46	0.45
6:I:137:ILE:HA	6:I:231:LEU:O	2.17	0.45
1:N:646:CYS:N	1:N:681:ALA:HB1	2.32	0.45
1:A:806:ALA:HB1	2:B:476:LEU:HA	1.99	0.45
2:B:37:LEU:HA	2:B:47:VAL:O	2.17	0.45
3:C:570:VAL:C	3:C:572:PHE:H	2.24	0.45
3:C:734:LEU:O	3:C:738:ALA:N	2.49	0.45
3:C:791:MET:O	3:C:795:LEU:N	2.47	0.45
3:C:811:GLU:O	3:C:815:THR:N	2.43	0.45
4:J:269:ALA:HB2	4:J:303:PHE:HA	1.99	0.45
5:F:68:LEU:O	5:F:330:ALA:HA	2.17	0.45
1:K:798:ALA:HA	1:K:1088:LEU:CA	2.43	0.45
2:L:255:ILE:CB	2:L:267:GLY:HA3	2.46	0.45
1:N:749:TYR:O	1:N:753:ALA:N	2.50	0.45
2:O:154:ALA:O	2:O:172:ALA:HB1	2.16	0.45
2:O:259:TYR:O	2:O:260:GLN:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:751:LEU:O	3:C:755:VAL:N	2.45	0.44
4:J:31:GLY:N	4:J:38:PRO:HA	2.32	0.44
4:J:65:GLY:HA2	4:J:93:CYS:N	2.32	0.44
5:D:135:VAL:CB	5:D:188:GLY:HA2	2.47	0.44
5:H:367:ASN:O	5:H:371:LEU:N	2.43	0.44
5:H:443:SER:O	5:H:447:LEU:N	2.41	0.44
6:G:74:LEU:HA	6:G:356:VAL:CB	2.47	0.44
6:G:106:GLU:O	6:G:107:ILE:C	2.59	0.44
1:K:938:SER:O	1:K:939:LYS:C	2.59	0.44
1:A:136:GLY:H	1:A:191:PRO:HA	1.82	0.44
2:B:293:TYR:O	2:B:297:SER:N	2.49	0.44
5:D:430:ILE:O	5:D:434:HIS:N	2.48	0.44
6:G:331:ILE:HA	6:G:343:HIS:N	2.30	0.44
6:G:404:LEU:O	6:G:405:ILE:C	2.60	0.44
1:K:215:THR:O	1:K:219:ARG:N	2.46	0.44
1:K:695:SER:O	1:K:699:VAL:N	2.46	0.44
1:K:860:ILE:O	1:K:864:MET:N	2.50	0.44
1:K:1062:LEU:HA	2:L:415:GLN:HA	2.00	0.44
1:N:322:SER:O	1:N:326:VAL:N	2.51	0.44
3:C:260:PRO:O	3:C:263:ALA:HB3	2.18	0.44
5:F:140:PRO:HA	5:F:157:VAL:CB	2.47	0.44
5:F:275:LEU:O	5:F:276:ARG:C	2.60	0.44
5:H:58:SER:C	5:H:60:LYS:N	2.75	0.44
6:I:129:ARG:CA	6:I:240:THR:HA	2.46	0.44
1:K:474:ARG:N	1:K:482:GLU:H	2.15	0.44
2:L:22:SER:O	2:L:62:THR:HA	2.18	0.44
2:L:78:MET:O	2:L:79:PRO:C	2.55	0.44
2:L:265:ILE:CB	2:L:310:ALA:HB3	2.48	0.44
3:M:125:ALA:HB2	3:M:178:GLU:O	2.17	0.44
1:N:652:ALA:O	1:N:656:VAL:N	2.46	0.44
1:N:1017:VAL:O	1:N:1018:LYS:C	2.58	0.44
3:P:36:LYS:CB	3:P:90:PHE:HA	2.47	0.44
3:P:184:TYR:O	3:P:188:LEU:N	2.46	0.44
1:A:973:VAL:O	1:A:977:THR:N	2.49	0.44
6:G:138:GLU:CB	6:G:193:THR:HA	2.48	0.44
6:G:243:LEU:O	6:G:244:HIS:C	2.59	0.44
6:I:166:ASP:CB	6:I:229:GLY:H	2.30	0.44
1:K:970:ALA:HB1	1:K:974:TYR:CB	2.46	0.44
1:K:988:GLN:H	1:K:1026:ALA:HB1	1.82	0.44
3:M:192:VAL:O	3:M:196:LEU:N	2.47	0.44
1:N:984:LEU:HA	1:N:1023:LEU:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:990:LEU:O	1:N:994:CYS:N	2.46	0.44
2:O:196:ASN:H	2:O:199:GLU:CB	2.29	0.44
1:A:223:GLY:O	1:A:227:GLN:N	2.50	0.44
1:A:857:PRO:O	1:A:860:ILE:N	2.51	0.44
3:C:221:ALA:HB1	3:C:227:GLN:CB	2.48	0.44
4:J:271:ALA:CB	4:J:298:VAL:O	2.65	0.44
6:E:86:ALA:O	6:E:90:ALA:N	2.43	0.44
6:I:442:LEU:O	6:I:446:GLN:N	2.46	0.44
1:K:1016:SER:CA	1:K:1077:TYR:HA	2.41	0.44
2:L:107:SER:O	2:L:110:ALA:HB3	2.17	0.44
2:B:137:PRO:O	2:B:141:THR:N	2.47	0.44
2:B:287:ASN:O	2:B:291:VAL:N	2.47	0.44
5:D:141:VAL:H	5:D:157:VAL:CA	2.30	0.44
5:H:272:THR:H	5:H:276:ARG:CA	2.31	0.44
5:H:277:LYS:H	5:H:280:ASN:CB	2.30	0.44
6:E:135:GLU:HA	6:E:233:LYS:O	2.18	0.44
6:E:198:THR:O	6:E:199:GLY:C	2.56	0.44
6:G:211:ALA:HB3	6:G:223:PHE:CB	2.48	0.44
6:G:218:GLY:O	2:O:282:ASP:HA	2.17	0.44
6:G:223:PHE:H	2:O:286:TYR:CA	2.30	0.44
1:K:421:SER:O	1:K:422:VAL:C	2.61	0.44
2:L:356:LEU:HA	2:L:395:TYR:O	2.18	0.44
3:M:142:ARG:HA	3:M:209:SER:CB	2.48	0.44
1:N:161:LEU:O	1:N:165:GLU:N	2.49	0.44
3:P:36:LYS:HA	3:P:90:PHE:HA	1.98	0.44
1:A:176:LYS:O	1:A:180:VAL:N	2.46	0.44
1:A:375:SER:O	1:A:379:HIS:N	2.42	0.44
1:A:465:THR:O	1:A:466:GLN:C	2.61	0.44
1:A:529:LEU:O	1:A:533:ALA:N	2.47	0.44
2:B:285:GLN:C	2:B:287:ASN:N	2.74	0.44
3:C:559:VAL:O	3:C:563:LEU:N	2.47	0.44
5:D:65:ALA:H	5:D:358:LEU:HA	1.81	0.44
5:F:160:GLY:HA2	5:F:169:GLN:C	2.42	0.44
6:G:362:SER:O	6:G:366:LEU:N	2.41	0.44
2:L:436:ILE:CB	2:L:489:VAL:HA	2.48	0.44
2:L:475:GLY:O	2:L:478:ALA:HB3	2.18	0.44
3:M:358:ARG:HA	3:M:399:LEU:CB	2.47	0.44
1:N:413:PRO:O	1:N:414:LYS:C	2.60	0.44
1:A:428:LEU:O	1:A:431:ALA:HB3	2.18	0.44
1:A:649:LEU:O	1:A:653:LEU:N	2.48	0.44
1:A:798:ALA:HA	1:A:1089:GLN:C	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:125:ARG:CA	5:D:236:GLN:H	2.31	0.44
5:F:139:THR:H	5:F:159:ILE:CB	2.30	0.44
6:G:136:ILE:CB	6:G:195:ASP:HA	2.47	0.44
6:G:140:GLU:HA	6:G:191:VAL:HA	1.99	0.44
2:L:283:LEU:O	2:L:288:ARG:N	2.51	0.44
1:N:293:LYS:O	1:N:294:ILE:C	2.61	0.44
2:B:421:VAL:O	2:B:425:LEU:N	2.50	0.44
4:J:171:TRP:CB	4:J:216:PHE:O	2.66	0.44
6:G:159:ARG:HA	6:G:171:TYR:O	2.18	0.44
6:G:389:LEU:O	6:G:393:ALA:N	2.46	0.44
6:I:208:PHE:O	6:I:212:ARG:N	2.42	0.44
1:K:202:LEU:O	1:K:206:PHE:N	2.48	0.44
1:K:1007:VAL:O	1:K:1008:ALA:C	2.59	0.44
1:N:186:ASP:CA	1:N:194:LEU:H	2.25	0.44
2:O:237:THR:C	2:O:241:LEU:H	2.26	0.44
1:A:281:LYS:O	1:A:285:ASP:N	2.50	0.43
1:A:1054:GLN:H	1:A:1070:ALA:HB2	1.83	0.43
2:B:71:THR:O	2:B:72:GLY:C	2.59	0.43
3:C:96:ALA:HB2	3:C:136:LEU:CB	2.48	0.43
4:J:266:LYS:O	4:J:282:TRP:N	2.51	0.43
5:D:394:LEU:O	5:D:398:GLY:N	2.45	0.43
5:F:287:ILE:HA	5:F:292:ALA:HB3	2.00	0.43
5:H:376:LYS:O	5:H:379:ALA:HB3	2.18	0.43
6:E:401:SER:O	6:E:405:ILE:N	2.48	0.43
6:G:137:ILE:H	6:G:196:LYS:N	2.15	0.43
1:K:889:LEU:O	1:K:893:VAL:N	2.39	0.43
1:N:229:HIS:O	1:N:233:VAL:N	2.44	0.43
2:O:303:PRO:HA	2:O:353:GLU:HA	2.00	0.43
1:A:447:GLU:C	1:A:449:ARG:N	2.76	0.43
1:A:1016:SER:HA	1:A:1077:TYR:CB	2.48	0.43
4:J:23:VAL:HA	4:J:43:GLY:C	2.42	0.43
4:J:277:ILE:O	4:J:291:LEU:N	2.52	0.43
5:D:125:ARG:HA	5:D:235:VAL:CA	2.39	0.43
5:F:192:TYR:N	5:F:201:LYS:O	2.51	0.43
6:E:386:LEU:O	6:E:390:THR:N	2.44	0.43
2:O:210:LEU:O	2:O:214:LEU:N	2.43	0.43
1:A:705:ASN:O	1:A:709:LEU:N	2.44	0.43
3:C:516:ARG:H	3:C:548:ALA:CB	2.26	0.43
5:H:62:ALA:O	5:H:63:GLY:C	2.61	0.43
6:E:147:GLU:O	6:E:156:ARG:HA	2.17	0.43
6:E:389:LEU:O	6:E:393:ALA:N	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:392:VAL:O	6:G:396:THR:N	2.49	0.43
1:K:132:HIS:HA	1:K:191:PRO:CA	2.49	0.43
3:M:33:GLU:O	3:M:37:ARG:N	2.49	0.43
3:M:149:PHE:O	3:M:153:ARG:N	2.42	0.43
1:A:558:THR:O	1:A:562:GLU:N	2.49	0.43
3:C:276:LEU:O	3:C:277:GLY:C	2.61	0.43
5:D:397:VAL:O	5:D:401:SER:N	2.47	0.43
6:E:318:GLU:O	6:E:320:ALA:N	2.51	0.43
6:E:331:ILE:HA	6:E:344:GLY:H	1.84	0.43
1:K:389:MET:CA	1:K:397:LYS:HA	2.49	0.43
1:N:202:LEU:O	1:N:206:PHE:N	2.51	0.43
1:N:319:LEU:H	1:N:361:GLN:CB	2.31	0.43
1:A:857:PRO:O	1:A:858:LEU:C	2.62	0.43
5:D:27:ASP:O	5:D:30:GLY:N	2.48	0.43
5:D:69:ALA:CA	5:D:332:ASN:HA	2.48	0.43
5:D:143:THR:H	5:D:154:VAL:N	2.16	0.43
5:F:367:ASN:O	5:F:371:LEU:N	2.42	0.43
5:H:119:ALA:H	5:H:239:THR:HA	1.83	0.43
5:H:417:ALA:O	5:H:421:GLY:N	2.42	0.43
5:H:445:ARG:O	5:H:449:GLN:N	2.46	0.43
6:G:134:SER:O	6:G:234:ARG:HA	2.19	0.43
6:I:116:GLU:O	6:I:120:GLN:N	2.46	0.43
1:K:435:VAL:HA	1:K:478:PHE:CB	2.49	0.43
1:K:926:VAL:O	1:K:930:PHE:N	2.48	0.43
2:L:121:LEU:CA	2:L:175:VAL:HA	2.49	0.43
3:M:143:GLN:H	3:M:210:SER:N	2.15	0.43
3:M:202:SER:O	3:M:206:GLY:N	2.52	0.43
1:N:179:GLN:CB	1:N:235:SER:HA	2.48	0.43
2:O:280:ALA:HA	2:O:321:ILE:CA	2.43	0.43
2:B:378:VAL:O	2:B:379:ARG:C	2.62	0.43
6:E:137:ILE:N	6:E:196:LYS:H	2.12	0.43
6:E:441:PHE:O	6:E:445:TYR:N	2.44	0.43
6:G:241:VAL:O	6:G:242:THR:C	2.58	0.43
6:I:412:ALA:O	6:I:416:LYS:N	2.50	0.43
1:K:558:THR:O	1:K:562:GLU:N	2.46	0.43
2:L:360:ARG:HA	2:L:402:ALA:HB2	1.99	0.43
3:P:287:ASN:O	3:P:291:LYS:N	2.43	0.43
1:A:448:GLU:H	5:D:170:LEU:CB	2.31	0.43
2:B:23:HIS:O	2:B:27:GLY:N	2.45	0.43
2:B:95:PRO:O	2:B:224:ALA:HB3	2.18	0.43
5:F:206:SER:O	5:F:210:ALA:N	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:H:49:ALA:O	5:H:53:VAL:N	2.42	0.43
6:I:131:LYS:N	6:I:238:VAL:HA	2.34	0.43
1:N:284:GLY:HA3	1:N:325:LEU:HA	2.01	0.43
1:A:291:ILE:O	1:A:295:ILE:N	2.48	0.43
4:J:254:PRO:O	4:J:273:TRP:N	2.51	0.43
6:E:70:ARG:HA	6:E:352:ARG:O	2.18	0.43
2:L:93:ALA:CB	2:L:117:GLY:HA2	2.49	0.43
2:O:110:ALA:O	2:O:113:ALA:HB3	2.19	0.43
2:O:375:ILE:HA	2:O:416:HIS:CB	2.49	0.43
3:P:71:SER:O	3:P:72:PRO:C	2.58	0.43
3:P:127:PHE:O	3:P:131:GLY:N	2.51	0.43
2:B:86:ALA:HB3	2:B:146:LEU:CB	2.49	0.43
4:J:215:ASP:N	4:J:224:ILE:O	2.52	0.43
5:D:158:ILE:HA	5:D:170:LEU:C	2.42	0.43
5:F:91:VAL:HA	5:F:240:LEU:N	2.33	0.43
6:G:374:CYS:O	6:G:378:ASP:N	2.48	0.43
1:K:1081:VAL:O	1:K:1085:LEU:N	2.42	0.43
2:L:318:LEU:O	2:L:319:PHE:C	2.62	0.43
2:O:249:LEU:O	2:O:253:LEU:N	2.47	0.43
3:P:253:TRP:CB	3:P:286:GLY:HA3	2.49	0.43
1:A:287:LEU:O	1:A:291:ILE:N	2.50	0.43
1:A:997:LEU:O	1:A:998:ASP:C	2.60	0.43
2:B:359:ARG:O	2:B:363:ALA:N	2.45	0.43
3:C:735:MET:O	3:C:738:ALA:HB3	2.18	0.43
5:D:386:ILE:HA	5:D:425:ILE:CB	2.49	0.43
6:E:304:ASP:O	6:E:308:PHE:N	2.47	0.43
6:I:194:ILE:HA	6:I:200:LYS:O	2.19	0.43
6:I:423:GLU:O	6:I:427:LYS:N	2.46	0.43
2:O:79:PRO:CB	2:O:142:GLY:HA3	2.48	0.43
1:A:150:ARG:O	1:A:154:ALA:N	2.47	0.42
1:A:707:ARG:O	1:A:710:ALA:HB3	2.19	0.42
3:C:416:ARG:O	3:C:420:GLU:N	2.49	0.42
4:J:50:HIS:CB	4:J:59:ALA:HB3	2.50	0.42
5:F:394:LEU:O	5:F:398:GLY:N	2.46	0.42
6:G:442:LEU:O	6:G:446:GLN:N	2.45	0.42
1:K:645:PHE:O	1:K:681:ALA:HB1	2.18	0.42
1:K:679:CYS:O	1:K:683:GLY:N	2.52	0.42
1:N:186:ASP:HA	1:N:194:LEU:N	2.30	0.42
1:N:284:GLY:O	1:N:288:THR:N	2.47	0.42
1:N:442:ASP:HA	1:N:621:ASN:HA	2.01	0.42
1:N:533:ALA:HA	1:N:548:THR:CB	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:698:LEU:O	1:N:702:ILE:N	2.45	0.42
1:N:760:LEU:O	1:N:764:MET:N	2.46	0.42
1:N:942:ASP:O	1:N:946:SER:N	2.51	0.42
3:P:36:LYS:O	3:P:40:GLY:N	2.40	0.42
1:A:914:LEU:O	1:A:918:LEU:N	2.48	0.42
3:C:159:LYS:O	3:C:163:LEU:N	2.46	0.42
3:C:231:LEU:O	3:C:235:VAL:N	2.44	0.42
4:J:44:SER:C	4:J:47:GLY:H	2.26	0.42
5:D:28:GLU:C	5:D:30:GLY:H	2.27	0.42
5:D:149:GLY:O	5:D:150:TYR:C	2.61	0.42
5:D:385:ALA:HB3	5:D:423:GLN:C	2.44	0.42
5:F:131:TYR:N	5:F:193:ILE:O	2.51	0.42
5:H:117:ARG:HA	5:H:240:LEU:N	2.34	0.42
6:I:370:LEU:O	6:I:374:CYS:N	2.47	0.42
2:L:459:THR:CB	2:L:492:TYR:HA	2.49	0.42
2:B:154:ALA:HB1	2:B:172:ALA:O	2.20	0.42
5:F:433:VAL:O	5:F:437:PHE:N	2.48	0.42
5:H:335:LYS:HA	5:H:348:HIS:H	1.85	0.42
6:I:298:ASP:O	6:I:299:GLU:C	2.62	0.42
3:P:42:MET:O	3:P:43:GLU:O	2.38	0.42
3:P:168:GLY:HA3	3:P:179:PHE:C	2.45	0.42
3:P:250:ARG:O	3:P:254:ARG:N	2.49	0.42
1:A:734:VAL:O	1:A:738:VAL:N	2.48	0.42
2:B:363:ALA:HB1	2:B:402:ALA:N	2.34	0.42
2:B:425:LEU:HA	2:B:428:LEU:CB	2.49	0.42
3:C:278:PRO:O	3:C:282:SER:N	2.44	0.42
6:G:131:LYS:HA	6:G:237:VAL:O	2.19	0.42
3:M:164:PRO:CB	3:M:181:PRO:HA	2.50	0.42
2:O:78:MET:O	2:O:79:PRO:C	2.59	0.42
3:P:136:LEU:O	3:P:140:GLN:N	2.42	0.42
1:A:378:LEU:O	1:A:382:ALA:N	2.47	0.42
1:A:652:ALA:O	1:A:656:VAL:N	2.45	0.42
1:A:1085:LEU:O	1:A:1089:GLN:N	2.49	0.42
2:B:187:SER:O	2:B:191:PHE:N	2.45	0.42
2:B:389:ILE:O	2:B:393:GLU:N	2.49	0.42
3:C:209:SER:O	3:C:210:SER:C	2.62	0.42
4:J:171:TRP:O	4:J:180:LEU:N	2.52	0.42
4:J:231:ALA:HA	4:J:249:HIS:O	2.19	0.42
6:G:103:ALA:HB3	6:G:106:GLU:H	1.85	0.42
6:I:103:ALA:HB3	6:I:106:GLU:H	1.85	0.42
6:I:129:ARG:O	6:I:288:ALA:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:288:ARG:O	2:L:292:LEU:N	2.42	0.42
3:M:203:LEU:C	3:M:206:GLY:H	2.26	0.42
1:N:634:ILE:O	1:N:638:ALA:N	2.44	0.42
1:N:695:SER:O	1:N:699:VAL:N	2.39	0.42
1:N:735:ALA:O	1:N:739:GLN:N	2.46	0.42
1:A:817:LEU:O	1:A:821:ASP:N	2.42	0.42
2:B:20:GLU:HA	2:B:72:GLY:CA	2.42	0.42
2:B:247:ARG:HA	6:E:215:ASP:O	2.20	0.42
4:J:178:ARG:O	4:J:179:PRO:C	2.62	0.42
5:D:127:THR:HA	5:D:234:VAL:H	1.84	0.42
5:H:11:LYS:O	5:H:14:ARG:O	2.38	0.42
5:H:71:PRO:O	5:H:72:PRO:C	2.60	0.42
6:E:445:TYR:O	6:E:449:PHE:N	2.46	0.42
1:K:1001:GLU:O	1:K:1005:ASN:N	2.47	0.42
1:N:157:LEU:O	1:N:161:LEU:N	2.51	0.42
1:N:1078:THR:O	1:N:1082:LEU:N	2.44	0.42
2:O:398:PRO:HA	2:O:446:THR:CB	2.50	0.42
1:A:368:LYS:O	1:A:372:ASP:N	2.42	0.42
1:A:459:SER:HA	1:A:462:THR:CB	2.49	0.42
3:C:137:MET:O	3:C:141:CYS:N	2.44	0.42
3:C:363:ALA:O	3:C:364:VAL:C	2.62	0.42
4:J:47:GLY:HA3	4:J:66:HIS:CB	2.50	0.42
5:D:27:ASP:CB	5:D:31:VAL:H	2.32	0.42
5:D:161:LEU:O	5:D:168:LYS:N	2.53	0.42
5:D:443:SER:O	5:D:447:LEU:N	2.46	0.42
5:D:446:ILE:O	5:D:450:HIS:N	2.48	0.42
6:E:442:LEU:O	6:E:446:GLN:N	2.48	0.42
6:G:135:GLU:HA	6:G:233:LYS:O	2.19	0.42
6:G:434:ASP:O	6:G:438:SER:N	2.37	0.42
1:K:988:GLN:N	1:K:1026:ALA:HB1	2.34	0.42
1:K:1070:ALA:C	1:K:1072:GLY:N	2.77	0.42
3:M:141:CYS:HA	3:M:213:PHE:CB	2.50	0.42
1:N:203:GLY:HA3	1:N:251:GLN:CB	2.49	0.42
1:A:566:SER:O	1:A:570:TRP:N	2.45	0.42
4:J:89:ASP:O	4:J:90:LEU:CB	2.67	0.42
5:D:192:TYR:H	5:D:203:GLN:N	2.16	0.42
5:D:315:LEU:O	5:D:319:LEU:N	2.47	0.42
5:F:338:ILE:O	5:F:341:THR:N	2.51	0.42
6:E:183:LYS:C	6:E:185:LYS:N	2.76	0.42
6:G:223:PHE:N	2:O:286:TYR:HA	2.35	0.42
1:K:820:LYS:CB	2:L:438:ASP:HA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:205:LEU:O	1:N:209:PHE:N	2.50	0.42
2:O:152:ILE:CB	2:O:206:ILE:HA	2.50	0.42
1:A:907:ALA:O	1:A:911:TRP:N	2.48	0.42
6:E:82:LYS:O	6:E:86:ALA:N	2.41	0.42
6:E:136:ILE:N	6:E:233:LYS:O	2.40	0.42
6:E:193:THR:N	6:E:202:ASN:O	2.38	0.42
6:G:161:THR:HA	6:G:170:ASN:HA	2.02	0.42
1:K:328:CYS:O	1:K:332:LEU:N	2.46	0.42
1:K:645:PHE:CB	1:K:681:ALA:HA	2.49	0.42
1:K:1021:VAL:O	1:K:1025:GLU:N	2.43	0.42
1:A:554:ARG:O	1:A:558:THR:N	2.48	0.42
3:C:212:SER:O	3:C:216:GLN:N	2.44	0.42
3:C:219:GLY:O	3:C:223:VAL:N	2.48	0.42
3:C:598:GLN:C	3:C:600:TYR:N	2.74	0.42
4:J:27:HIS:C	4:J:302:ALA:CB	2.90	0.42
6:G:272:ARG:O	6:G:276:ASN:N	2.46	0.42
1:K:203:GLY:HA2	1:K:245:PHE:CB	2.50	0.42
1:K:438:LEU:CA	1:K:477:ARG:H	2.32	0.42
1:K:561:LEU:O	1:K:565:THR:N	2.45	0.42
1:K:649:LEU:CB	1:K:681:ALA:HB3	2.50	0.42
1:K:735:ALA:O	1:K:739:GLN:N	2.47	0.42
1:K:923:PRO:O	1:K:924:LEU:C	2.63	0.42
3:M:195:VAL:O	3:M:199:VAL:N	2.47	0.42
1:N:823:ALA:HA	2:O:445:LEU:CB	2.49	0.42
1:A:878:ASN:O	1:A:882:ARG:N	2.46	0.41
3:C:339:LEU:O	3:C:340:LEU:C	2.62	0.41
5:F:91:VAL:HA	5:F:240:LEU:C	2.45	0.41
6:G:342:PRO:C	6:G:344:GLY:H	2.28	0.41
1:K:1055:PHE:O	1:K:1065:VAL:N	2.53	0.41
1:N:135:TYR:HA	1:N:183:LEU:CB	2.50	0.41
3:P:104:MET:O	3:P:108:GLU:N	2.53	0.41
1:A:922:ALA:O	1:A:926:VAL:N	2.50	0.41
2:B:381:LEU:O	2:B:385:GLU:N	2.41	0.41
3:C:148:GLY:O	3:C:149:PHE:C	2.63	0.41
3:C:584:THR:O	3:C:585:VAL:C	2.62	0.41
4:J:51:ILE:C	4:J:59:ALA:CB	2.92	0.41
4:J:173:ALA:CB	4:J:180:LEU:CB	2.84	0.41
5:H:131:TYR:N	5:H:195:ALA:H	2.18	0.41
6:I:242:THR:O	6:I:246:ILE:N	2.47	0.41
6:I:273:GLU:O	6:I:277:GLY:N	2.45	0.41
1:K:357:HIS:O	1:K:361:GLN:N	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:645:PHE:O	1:K:649:LEU:N	2.53	0.41
2:L:89:LEU:O	2:L:93:ALA:N	2.48	0.41
2:L:94:ALA:O	2:L:95:PRO:C	2.62	0.41
1:N:933:LEU:O	1:N:937:GLY:N	2.43	0.41
2:O:207:LEU:O	2:O:211:LYS:N	2.45	0.41
2:O:349:HIS:O	2:O:350:MET:C	2.62	0.41
1:A:250:GLU:O	1:A:254:ARG:N	2.45	0.41
3:C:535:LEU:O	3:C:539:GLU:N	2.53	0.41
6:G:129:ARG:O	6:G:288:ALA:HA	2.21	0.41
6:G:132:GLU:O	6:G:236:GLU:HA	2.19	0.41
6:G:412:ALA:O	6:G:416:LYS:N	2.47	0.41
6:I:163:LYS:HA	6:I:168:GLU:HA	2.02	0.41
1:K:797:ALA:N	1:K:1035:MET:HA	2.36	0.41
1:K:1085:LEU:O	1:K:1089:GLN:N	2.53	0.41
1:A:460:PRO:HA	1:A:466:GLN:CB	2.51	0.41
1:A:727:ASP:O	1:A:731:LEU:N	2.45	0.41
2:B:369:PHE:O	2:B:373:LEU:N	2.47	0.41
2:B:376:LEU:C	2:B:378:VAL:N	2.72	0.41
5:F:213:PHE:CB	5:F:216:GLU:HA	2.50	0.41
5:F:379:ALA:O	5:F:383:GLY:N	2.48	0.41
5:H:390:ALA:HA	5:H:427:PRO:HA	2.02	0.41
6:G:74:LEU:O	6:G:326:ALA:HA	2.19	0.41
6:G:192:ILE:HA	6:G:204:LEU:N	2.25	0.41
6:G:342:PRO:C	6:G:344:GLY:N	2.79	0.41
1:K:125:GLN:CA	1:K:173:ALA:HB1	2.51	0.41
1:K:665:LEU:O	1:K:669:GLN:N	2.45	0.41
2:L:29:ALA:HB3	2:L:58:LEU:CA	2.50	0.41
1:N:863:ALA:HB1	1:N:892:CYS:HA	2.02	0.41
3:C:726:ARG:O	3:C:730:THR:N	2.48	0.41
5:H:67:LEU:O	5:H:361:ILE:N	2.53	0.41
6:G:376:GLU:O	6:G:377:GLU:C	2.63	0.41
2:O:110:ALA:CB	2:O:164:THR:HA	2.50	0.41
3:P:356:GLN:O	3:P:360:VAL:N	2.45	0.41
1:A:278:ASP:O	1:A:282:LYS:N	2.34	0.41
1:A:1027:ALA:O	1:A:1031:PHE:N	2.43	0.41
5:F:27:ASP:C	5:F:30:GLY:N	2.76	0.41
5:F:163:THR:N	5:F:166:GLY:O	2.53	0.41
6:G:128:ILE:CB	6:G:290:MET:HA	2.50	0.41
2:L:346:ILE:O	2:L:350:MET:N	2.45	0.41
2:O:280:ALA:HB1	2:O:324:LYS:CB	2.50	0.41
3:P:73:ALA:O	3:P:77:LEU:N	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:234:LEU:O	3:P:238:LEU:N	2.43	0.41
1:A:329:ALA:HA	1:A:332:LEU:CB	2.51	0.41
1:A:629:ILE:O	1:A:633:GLY:N	2.45	0.41
1:A:946:SER:O	1:A:950:LYS:N	2.47	0.41
2:B:144:HIS:O	2:B:145:HIS:C	2.63	0.41
3:C:270:GLY:O	3:C:274:ALA:N	2.49	0.41
4:J:30:GLU:CA	4:J:305:ALA:HB3	2.50	0.41
5:F:322:ALA:O	5:F:324:ALA:N	2.53	0.41
1:K:350:GLN:O	1:K:354:VAL:N	2.45	0.41
1:N:780:LEU:O	1:N:784:SER:N	2.53	0.41
1:N:949:CYS:O	1:N:953:LEU:N	2.47	0.41
1:N:1023:LEU:O	1:N:1027:ALA:N	2.50	0.41
3:C:67:ALA:O	3:C:68:SER:C	2.64	0.41
5:D:322:ALA:O	5:D:324:ALA:N	2.54	0.41
5:H:299:LEU:O	5:H:327:VAL:HA	2.20	0.41
6:E:294:VAL:HA	6:E:322:VAL:O	2.21	0.41
6:G:243:LEU:O	6:G:247:ASP:N	2.32	0.41
6:G:370:LEU:O	6:G:374:CYS:N	2.46	0.41
6:I:48:GLN:CB	6:I:51:ALA:HB3	2.51	0.41
6:I:117:ALA:O	6:I:121:ALA:N	2.49	0.41
2:O:94:ALA:HB2	2:O:153:PHE:HA	2.03	0.41
2:O:271:LEU:O	2:O:275:VAL:N	2.46	0.41
1:A:704:LEU:O	1:A:708:HIS:N	2.44	0.41
2:B:258:ASP:O	2:B:259:TYR:C	2.64	0.41
3:C:264:MET:HA	3:C:267:VAL:CB	2.51	0.41
4:J:84:LEU:N	4:J:130:LEU:CB	2.84	0.41
4:J:169:ARG:O	4:J:181:LEU:HA	2.21	0.41
4:J:213:ASP:CB	4:J:226:GLY:HA3	2.51	0.41
4:J:269:ALA:CB	4:J:303:PHE:CB	2.99	0.41
5:D:65:ALA:HB1	5:D:329:PHE:H	1.85	0.41
5:D:65:ALA:CB	5:D:328:ILE:HA	2.43	0.41
5:D:96:MET:CB	5:D:300:PHE:O	2.69	0.41
5:D:239:THR:CB	5:D:295:VAL:CB	2.99	0.41
5:H:336:CYS:O	5:H:346:SER:N	2.53	0.41
6:E:138:GLU:CB	6:E:194:ILE:H	2.34	0.41
6:G:134:SER:C	6:G:234:ARG:HA	2.46	0.41
6:I:145:VAL:CB	6:I:161:THR:H	2.34	0.41
6:I:159:ARG:HA	6:I:171:TYR:C	2.45	0.41
6:I:164:THR:N	6:I:167:MET:O	2.51	0.41
6:I:316:GLU:O	6:I:317:SER:C	2.63	0.41
6:I:393:ALA:O	6:I:394:THR:C	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:322:SER:O	1:K:323:GLN:C	2.61	0.41
1:K:346:GLU:O	1:K:350:GLN:N	2.42	0.41
1:K:534:ALA:HB3	1:K:640:ALA:HB1	2.03	0.41
1:K:638:ALA:HB1	1:K:681:ALA:CB	2.49	0.41
2:L:199:GLU:O	2:L:200:LYS:C	2.62	0.41
1:N:512:TYR:CB	1:N:519:ARG:HA	2.51	0.41
2:O:121:LEU:O	2:O:125:GLY:N	2.46	0.41
2:O:158:SER:HA	2:O:169:ARG:CA	2.51	0.41
3:P:25:GLY:HA3	3:P:77:LEU:C	2.46	0.41
1:A:147:ILE:O	1:A:151:LEU:N	2.43	0.41
1:A:452:ASN:CB	1:A:463:SER:H	2.33	0.41
1:A:814:LEU:O	1:A:818:LYS:N	2.50	0.41
2:B:190:GLY:O	2:B:194:GLY:N	2.49	0.41
2:B:356:LEU:O	2:B:360:ARG:N	2.48	0.41
2:B:388:ILE:O	2:B:392:LEU:N	2.43	0.41
5:D:33:ILE:O	5:D:34:GLN:C	2.64	0.41
5:D:157:VAL:O	5:D:172:LEU:N	2.51	0.41
6:E:292:PRO:CB	6:E:321:PRO:HA	2.51	0.41
6:G:146:VAL:HA	6:G:179:ASP:HA	2.03	0.41
6:G:311:LEU:O	6:G:315:LEU:N	2.46	0.41
2:L:59:ILE:CB	2:L:123:LEU:HA	2.51	0.41
2:O:471:GLY:HA2	2:O:474:LYS:CB	2.51	0.41
1:A:621:ASN:O	1:A:625:TRP:N	2.47	0.40
2:B:296:ILE:O	2:B:300:LEU:N	2.46	0.40
3:C:218:LEU:O	3:C:222:CYS:N	2.48	0.40
3:C:312:THR:O	3:C:316:GLN:N	2.49	0.40
3:C:438:LEU:O	3:C:441:ALA:HB3	2.21	0.40
3:C:794:LEU:O	3:C:798:ARG:N	2.50	0.40
1:K:393:ASP:O	1:K:397:LYS:N	2.47	0.40
1:K:522:ALA:O	1:K:523:ALA:C	2.63	0.40
1:K:741:VAL:O	1:K:745:LEU:N	2.50	0.40
1:N:882:ARG:O	1:N:886:LEU:N	2.50	0.40
2:O:23:HIS:CB	2:O:78:MET:CB	2.98	0.40
2:O:165:THR:O	2:O:169:ARG:N	2.45	0.40
1:A:649:LEU:O	1:A:650:MET:C	2.63	0.40
1:A:661:GLY:O	1:A:662:ASP:C	2.63	0.40
3:C:158:GLY:O	3:C:159:LYS:C	2.64	0.40
5:F:157:VAL:N	5:F:172:LEU:O	2.54	0.40
5:F:160:GLY:CA	5:F:170:LEU:H	2.11	0.40
5:H:108:LYS:O	5:H:112:LEU:N	2.47	0.40
6:E:72:VAL:CB	6:E:324:ILE:HA	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:142:VAL:CA	6:G:188:ALA:HA	2.43	0.40
1:K:745:LEU:O	1:K:748:PHE:N	2.54	0.40
3:M:91:PHE:CB	3:M:99:ALA:HB1	2.51	0.40
1:N:512:TYR:N	1:N:522:ALA:HB2	2.37	0.40
2:O:303:PRO:HA	2:O:354:HIS:H	1.85	0.40
4:J:173:ALA:HB2	4:J:180:LEU:H	1.84	0.40
4:J:220:LYS:O	4:J:221:ALA:HB3	2.20	0.40
4:J:257:ALA:HB3	4:J:300:CYS:N	2.35	0.40
6:E:160:LEU:H	6:E:171:TYR:N	2.19	0.40
6:G:246:ILE:O	6:G:250:ASN:N	2.46	0.40
6:I:161:THR:HA	6:I:170:ASN:CB	2.51	0.40
1:N:649:LEU:CB	1:N:678:VAL:HA	2.51	0.40
3:P:278:PRO:HA	3:P:320:GLY:HA3	2.03	0.40
1:A:455:ASP:HA	1:A:677:ASP:HA	2.04	0.40
1:A:897:GLN:O	1:A:899:HIS:N	2.55	0.40
2:B:347:LEU:O	2:B:351:GLU:N	2.51	0.40
3:C:62:VAL:O	3:C:66:LEU:N	2.41	0.40
6:I:427:LYS:O	6:I:431:LEU:N	2.52	0.40
1:K:389:MET:CB	1:K:397:LYS:HA	2.50	0.40
1:K:978:LEU:O	1:K:982:LEU:N	2.44	0.40
3:M:131:GLY:HA2	3:M:191:GLU:CB	2.51	0.40
1:N:932:VAL:O	1:N:936:LEU:N	2.46	0.40
2:O:407:LEU:O	2:O:411:LYS:N	2.48	0.40
2:O:410:LEU:O	2:O:414:MET:N	2.45	0.40
1:A:1082:LEU:O	1:A:1086:LYS:N	2.49	0.40
3:C:263:ALA:O	3:C:267:VAL:N	2.49	0.40
5:D:68:LEU:H	5:D:330:ALA:HB1	1.83	0.40
5:D:197:SER:C	5:D:199:ALA:N	2.78	0.40
5:F:141:VAL:N	5:F:157:VAL:HA	2.22	0.40
5:H:130:VAL:N	5:H:230:LYS:O	2.53	0.40
5:H:131:TYR:CA	5:H:229:HIS:HA	2.52	0.40
5:H:354:LEU:O	5:H:358:LEU:N	2.49	0.40
5:H:377:LEU:O	5:H:380:ALA:HB3	2.21	0.40
6:G:103:ALA:HB3	6:G:106:GLU:CB	2.52	0.40
6:I:425:VAL:O	6:I:429:TYR:N	2.49	0.40
1:K:626:GLN:O	1:K:630:GLN:N	2.50	0.40
2:O:367:PRO:HA	2:O:409:THR:CA	2.52	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	869/1089 (80%)	844 (97%)	22 (2%)	3 (0%)	36	71
1	K	777/1089 (71%)	765 (98%)	12 (2%)	0	100	100
1	N	840/1089 (77%)	820 (98%)	16 (2%)	4 (0%)	24	63
2	B	475/508 (94%)	454 (96%)	19 (4%)	2 (0%)	30	67
2	L	477/508 (94%)	472 (99%)	4 (1%)	1 (0%)	43	77
2	O	462/508 (91%)	456 (99%)	6 (1%)	0	100	100
3	C	675/837 (81%)	651 (96%)	17 (2%)	7 (1%)	12	47
3	M	357/837 (43%)	352 (99%)	3 (1%)	2 (1%)	21	58
3	P	364/837 (44%)	356 (98%)	4 (1%)	4 (1%)	11	45
4	J	325/327 (99%)	318 (98%)	7 (2%)	0	100	100
5	D	385/456 (84%)	376 (98%)	8 (2%)	1 (0%)	36	71
5	F	376/456 (82%)	361 (96%)	15 (4%)	0	100	100
5	H	373/456 (82%)	362 (97%)	9 (2%)	2 (0%)	24	63
6	E	392/466 (84%)	382 (97%)	8 (2%)	2 (0%)	24	63
6	G	375/466 (80%)	363 (97%)	9 (2%)	3 (1%)	16	53
6	I	375/466 (80%)	367 (98%)	7 (2%)	1 (0%)	36	71
All	All	7897/10395 (76%)	7699 (98%)	166 (2%)	32 (0%)	31	67

All (32) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	191	PRO
1	A	750	ASP
3	C	44	PRO
3	C	45	PRO
3	C	300	THR
3	C	400	PRO

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Mol	Chain	Res	Type
2	L	39	ARG
3	M	44	PRO
1	N	170	ILE
1	N	946	SER
3	P	43	GLU
3	P	44	PRO
2	B	303	PRO
5	H	273	ASP
6	G	357	PRO
3	C	353	PRO
3	C	416	ARG
5	D	292	ALA
6	E	319	THR
6	G	98	PRO
6	G	319	THR
3	M	147	PRO
3	C	721	GLN
1	N	749	TYR
3	P	147	PRO
1	A	898	SER
6	E	109	SER
5	H	323	ILE
6	I	69	GLY
3	P	48	PRO
2	B	442	ASP
1	N	223	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	1/969 (0%)	1 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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.

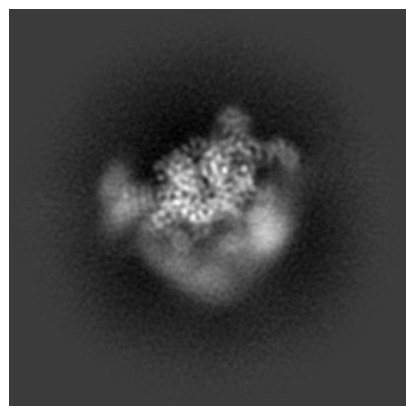
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-66022. These allow visual inspection of the internal detail of the map and identification of artifacts.

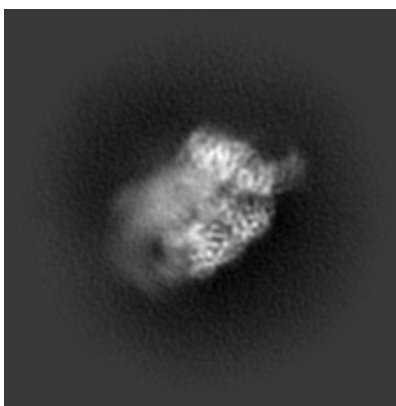
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

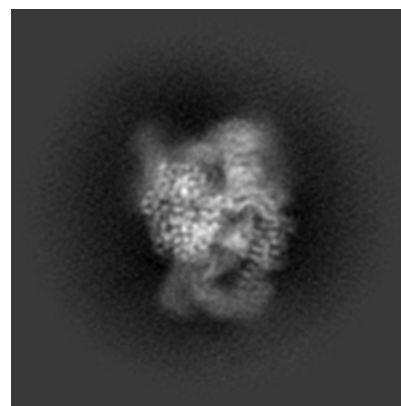
6.1.1 Primary map



X

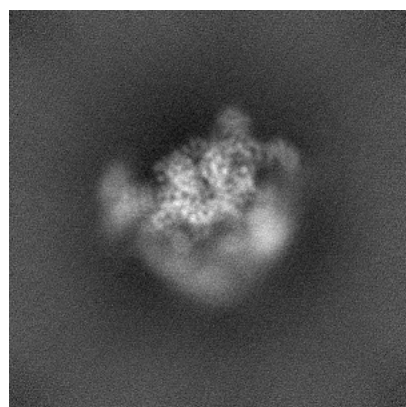


Y

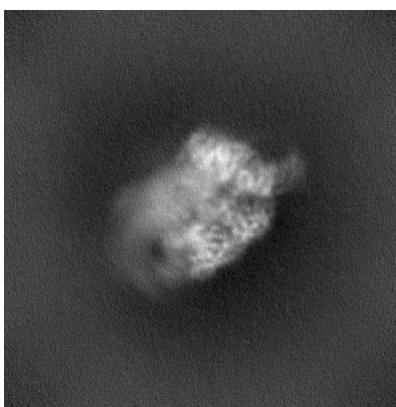


Z

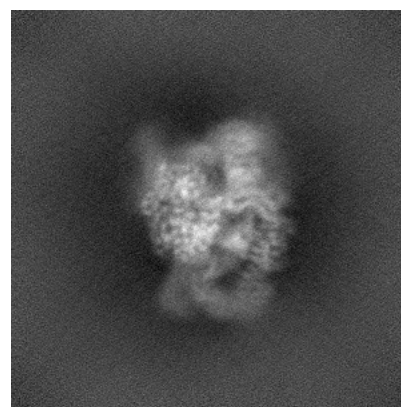
6.1.2 Raw map



X



Y

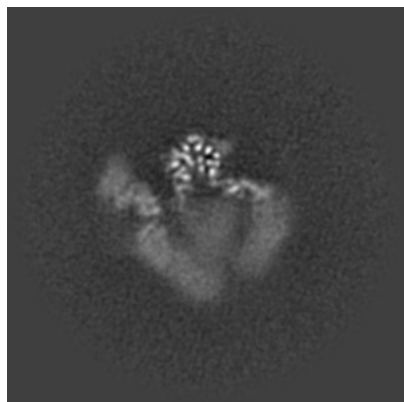


Z

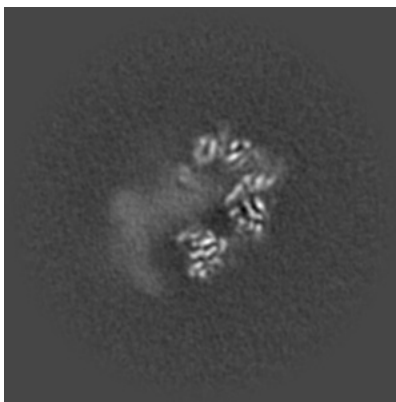
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

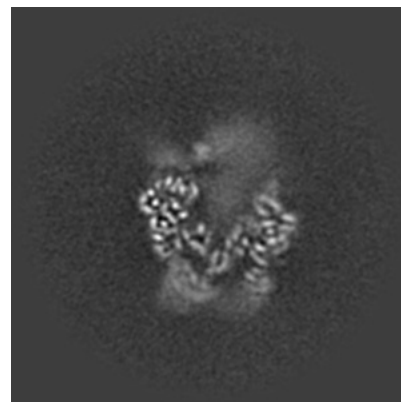
6.2.1 Primary map



X Index: 200

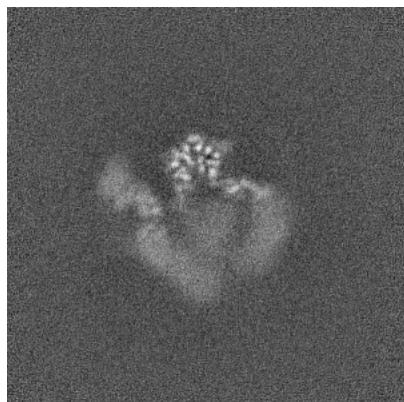


Y Index: 200

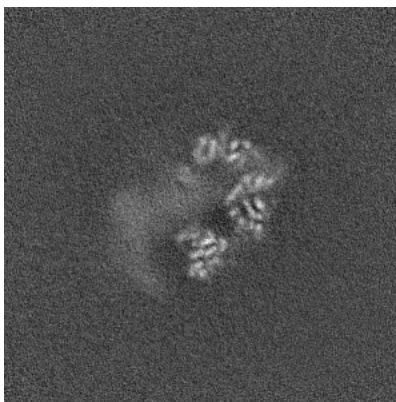


Z Index: 200

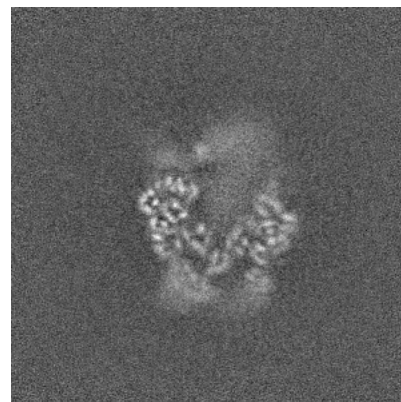
6.2.2 Raw map



X Index: 200



Y Index: 200

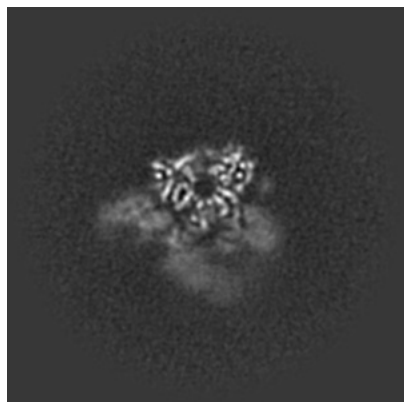


Z Index: 200

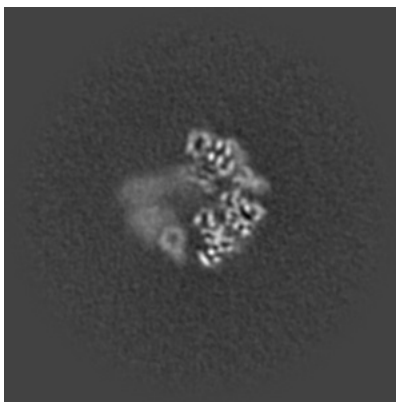
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

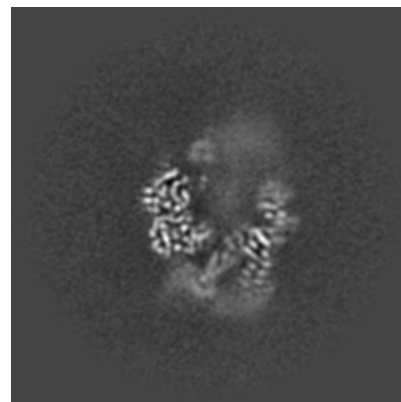
6.3.1 Primary map



X Index: 174

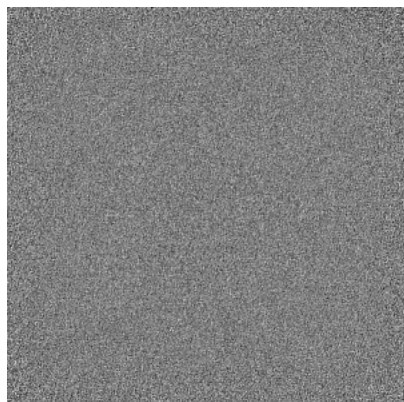


Y Index: 169

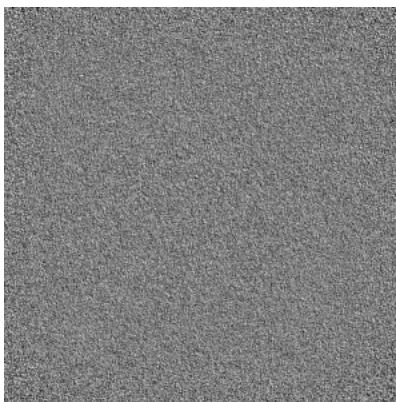


Z Index: 207

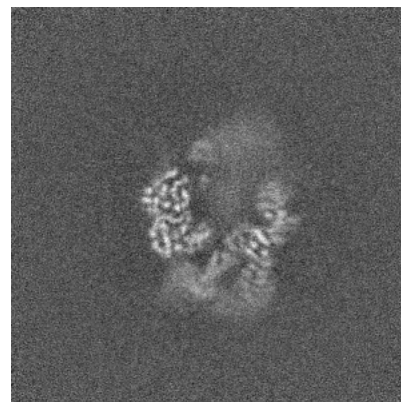
6.3.2 Raw map



X Index: 0



Y Index: 0

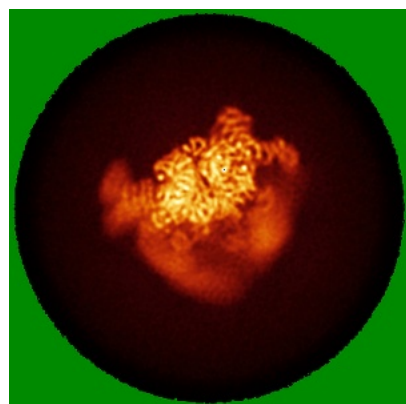


Z Index: 206

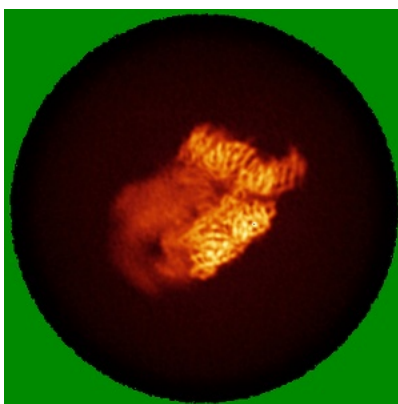
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

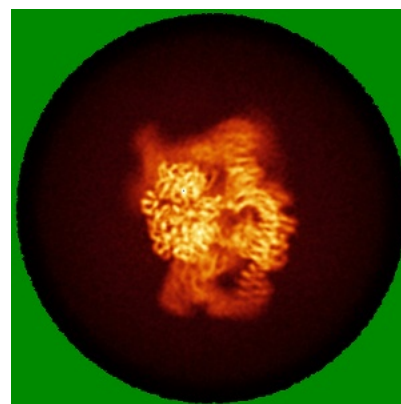
6.4.1 Primary map



X

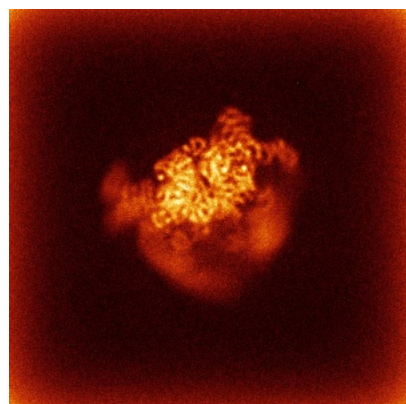


Y

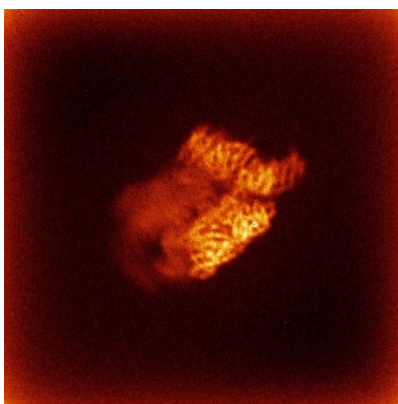


Z

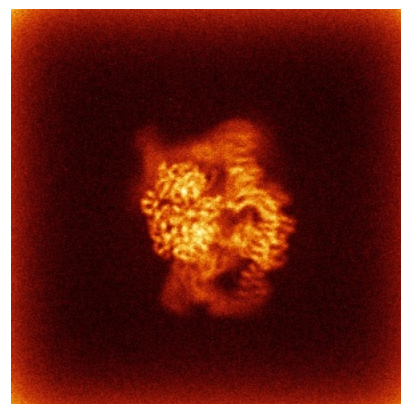
6.4.2 Raw map



X



Y

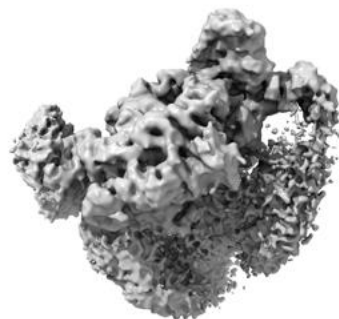


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

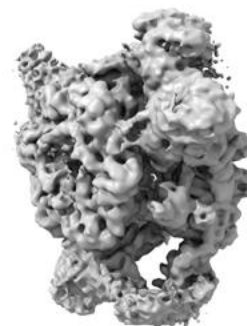
6.5.1 Primary map



X



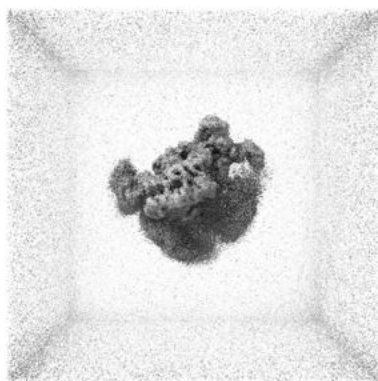
Y



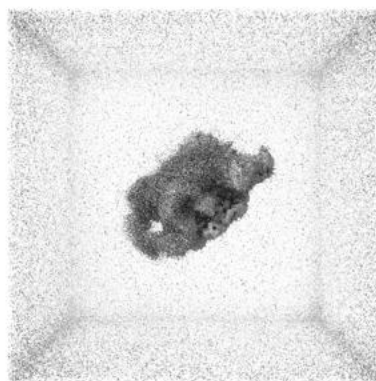
Z

The images above show the 3D surface view of the map at the recommended contour level 0.152. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

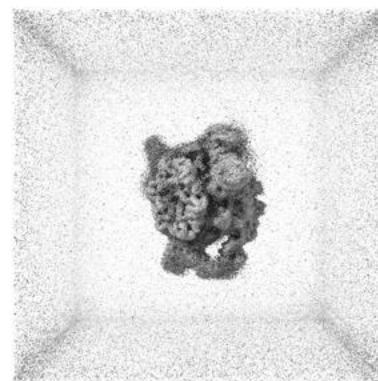
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

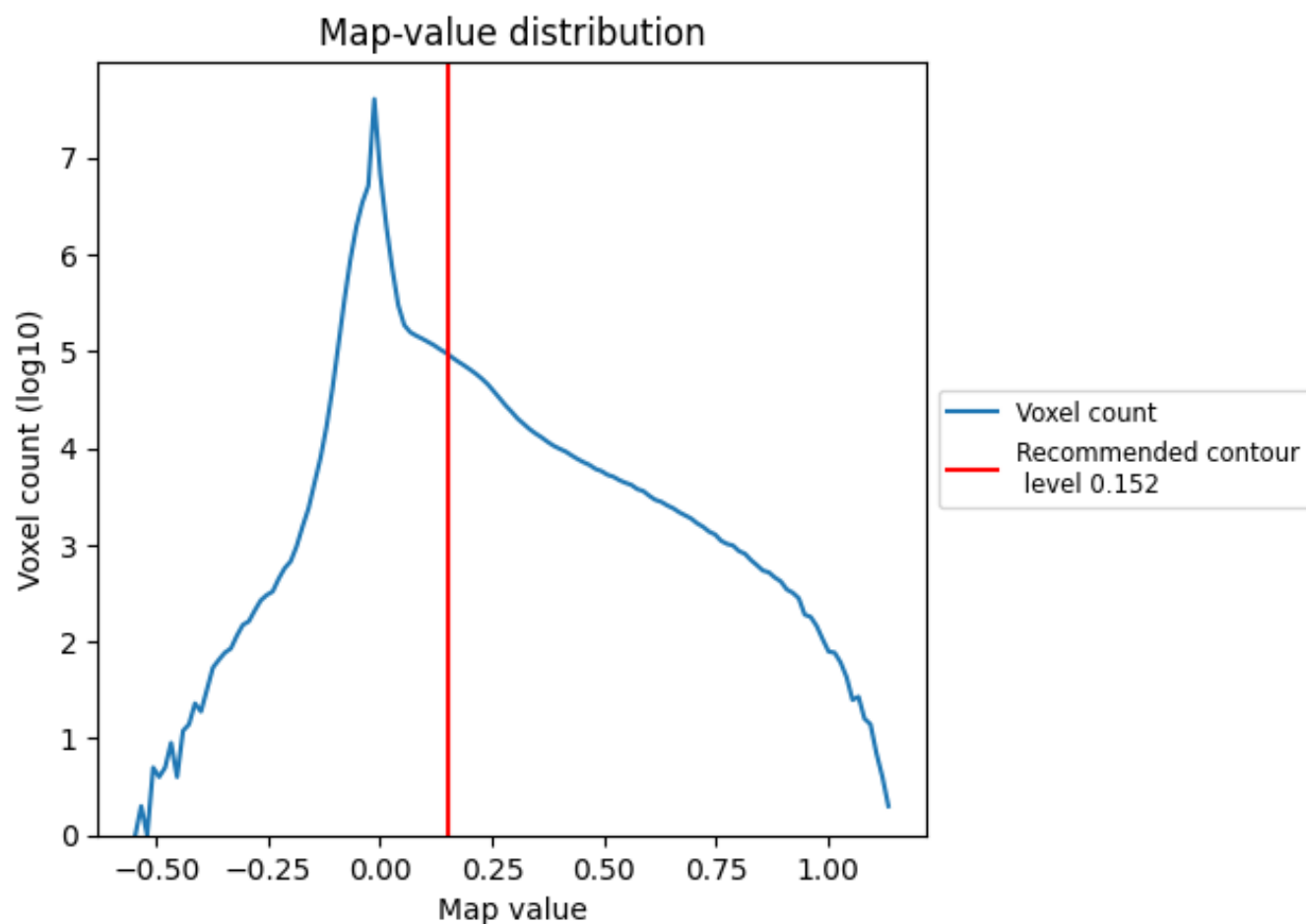
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

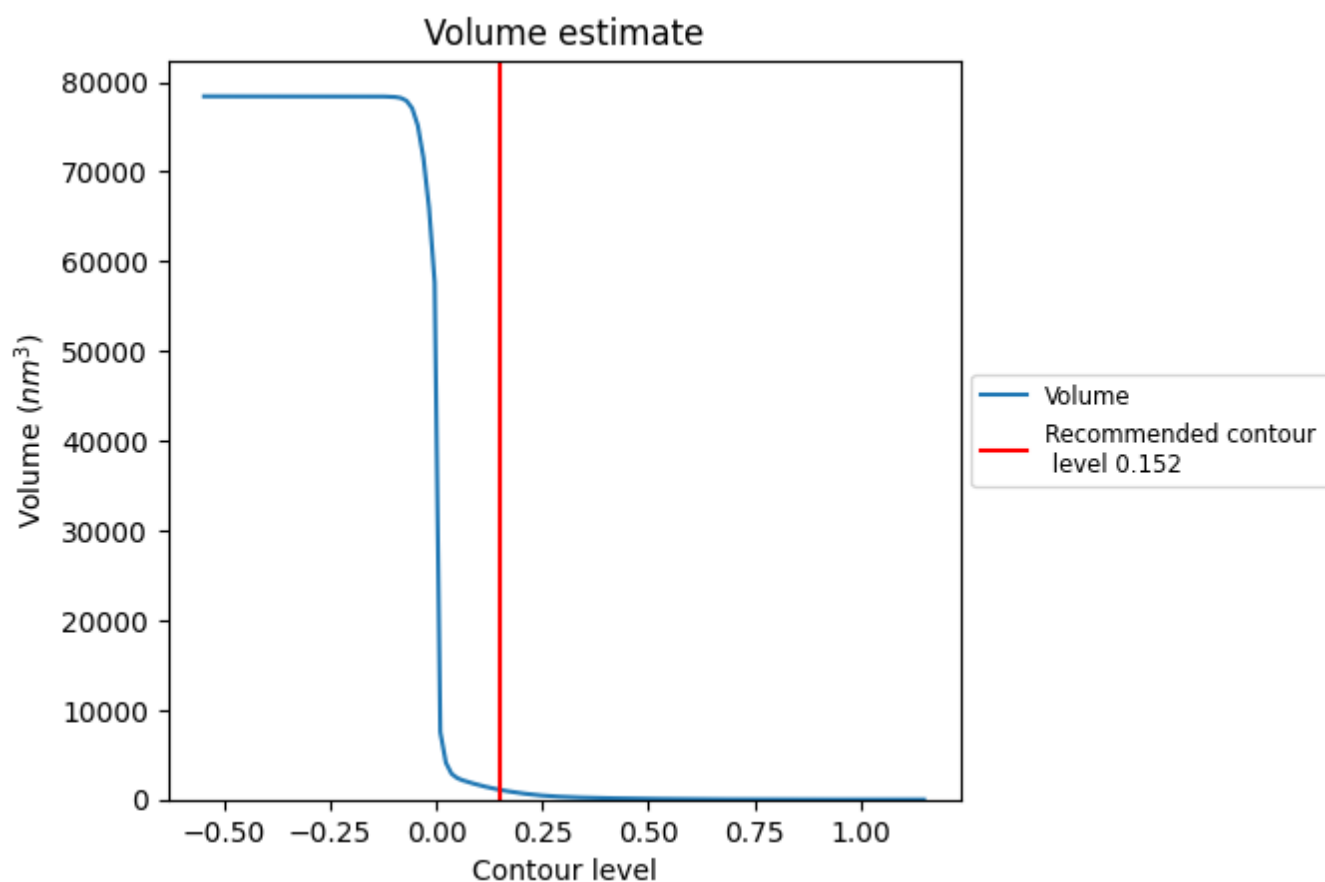
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

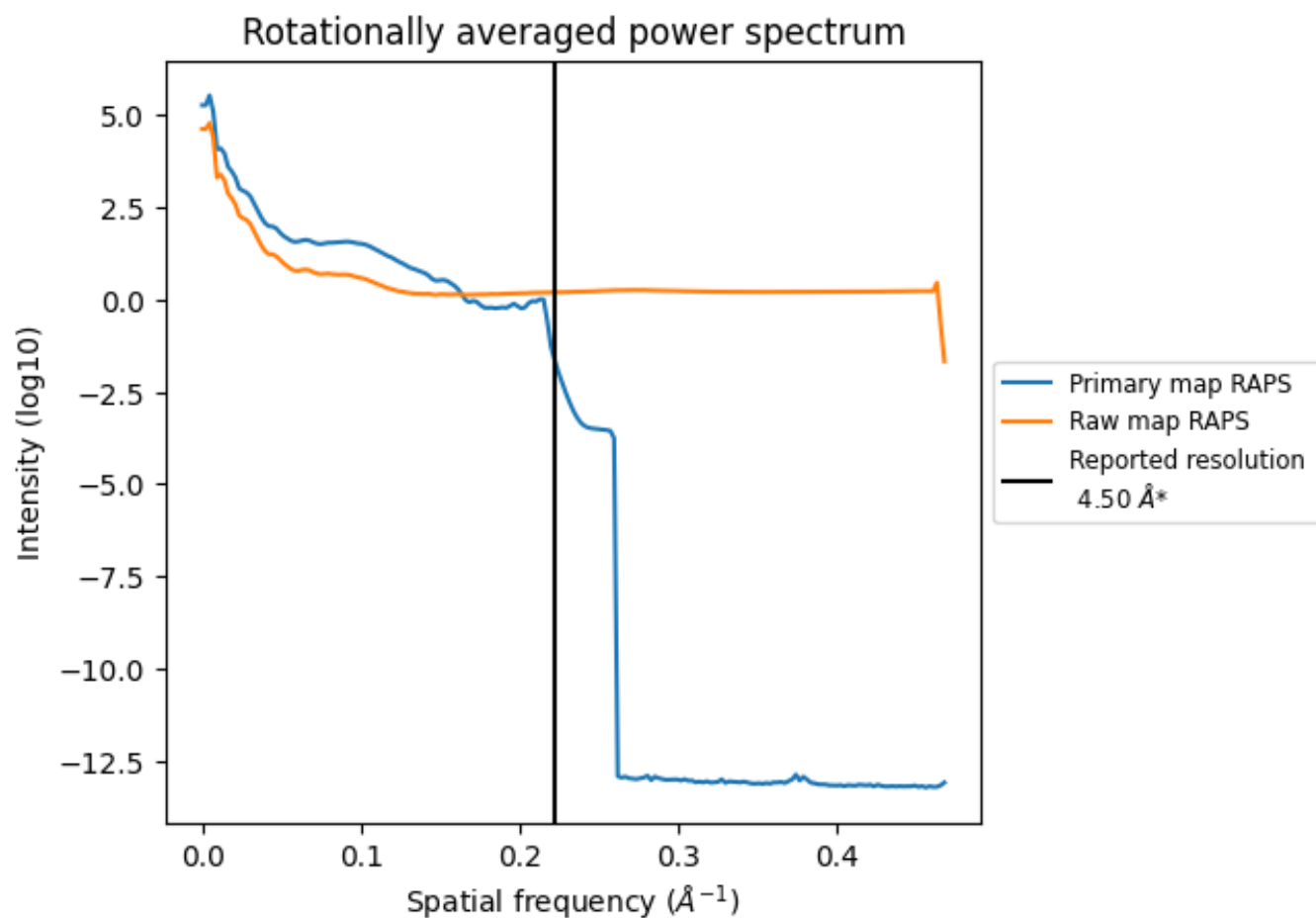
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1069 nm^3 ; this corresponds to an approximate mass of 965 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

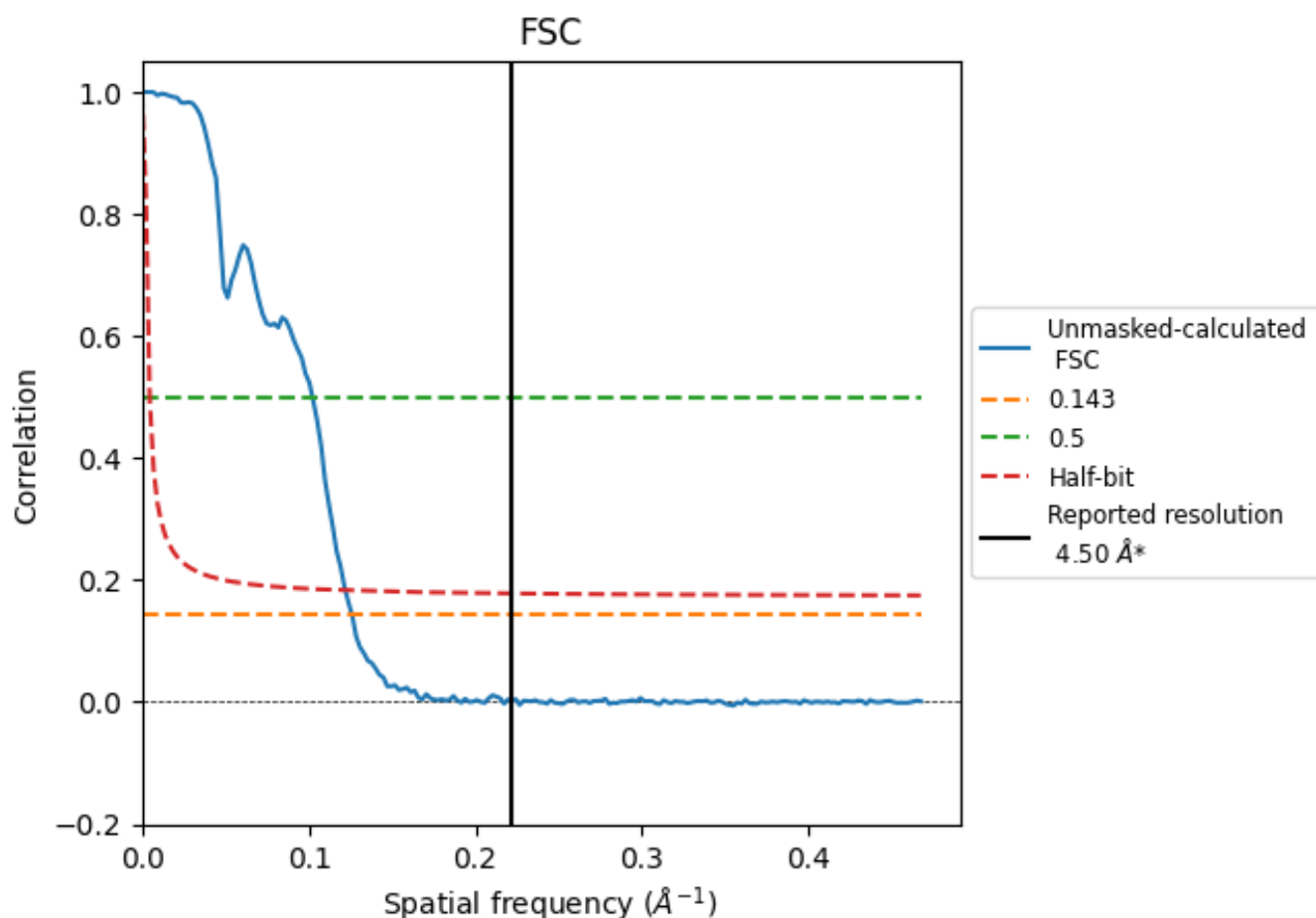


*Reported resolution corresponds to spatial frequency of 0.222 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.222 Å⁻¹

8.2 Resolution estimates [i](#)

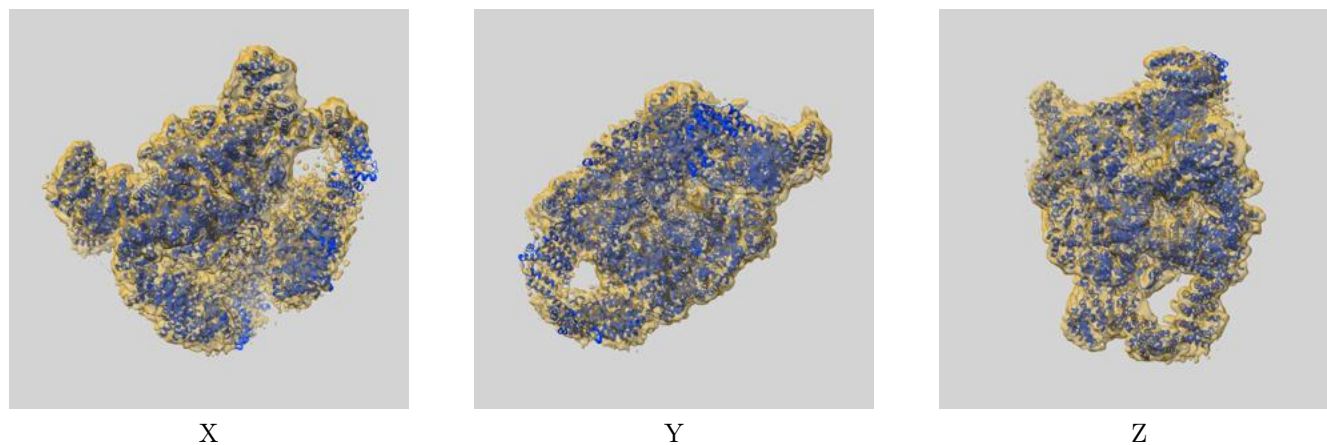
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.50	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.94	9.78	8.20

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.94 differs from the reported value 4.5 by more than 10 %

9 Map-model fit [i](#)

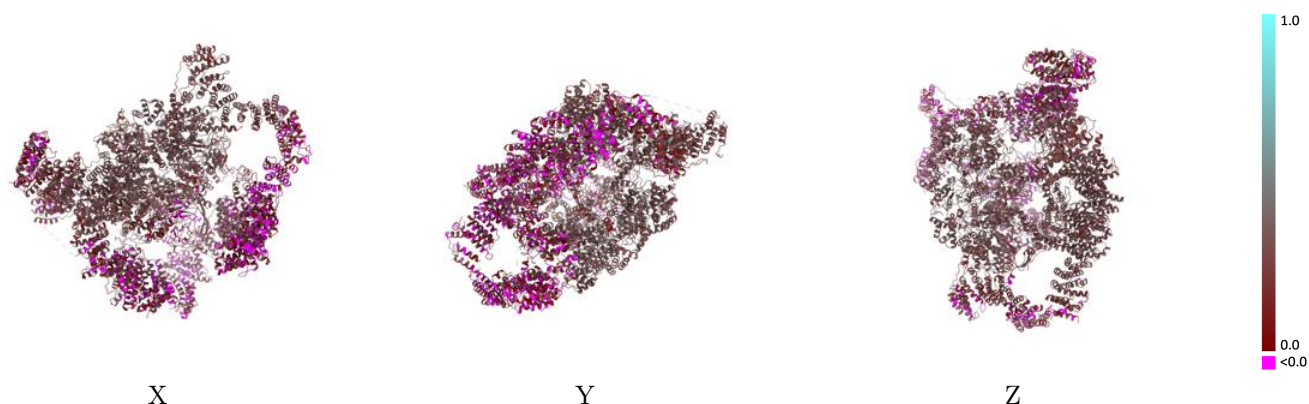
This section contains information regarding the fit between EMDB map EMD-66022 and PDB model 9WJM. Per-residue inclusion information can be found in [section 3](#) on [page 6](#).

9.1 Map-model overlay [i](#)



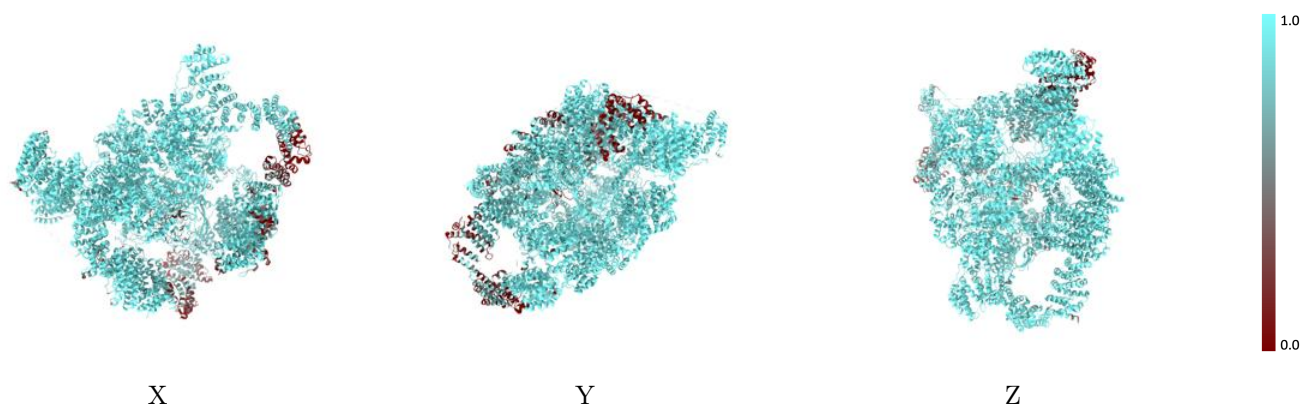
The images above show the 3D surface view of the map at the recommended contour level 0.152 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



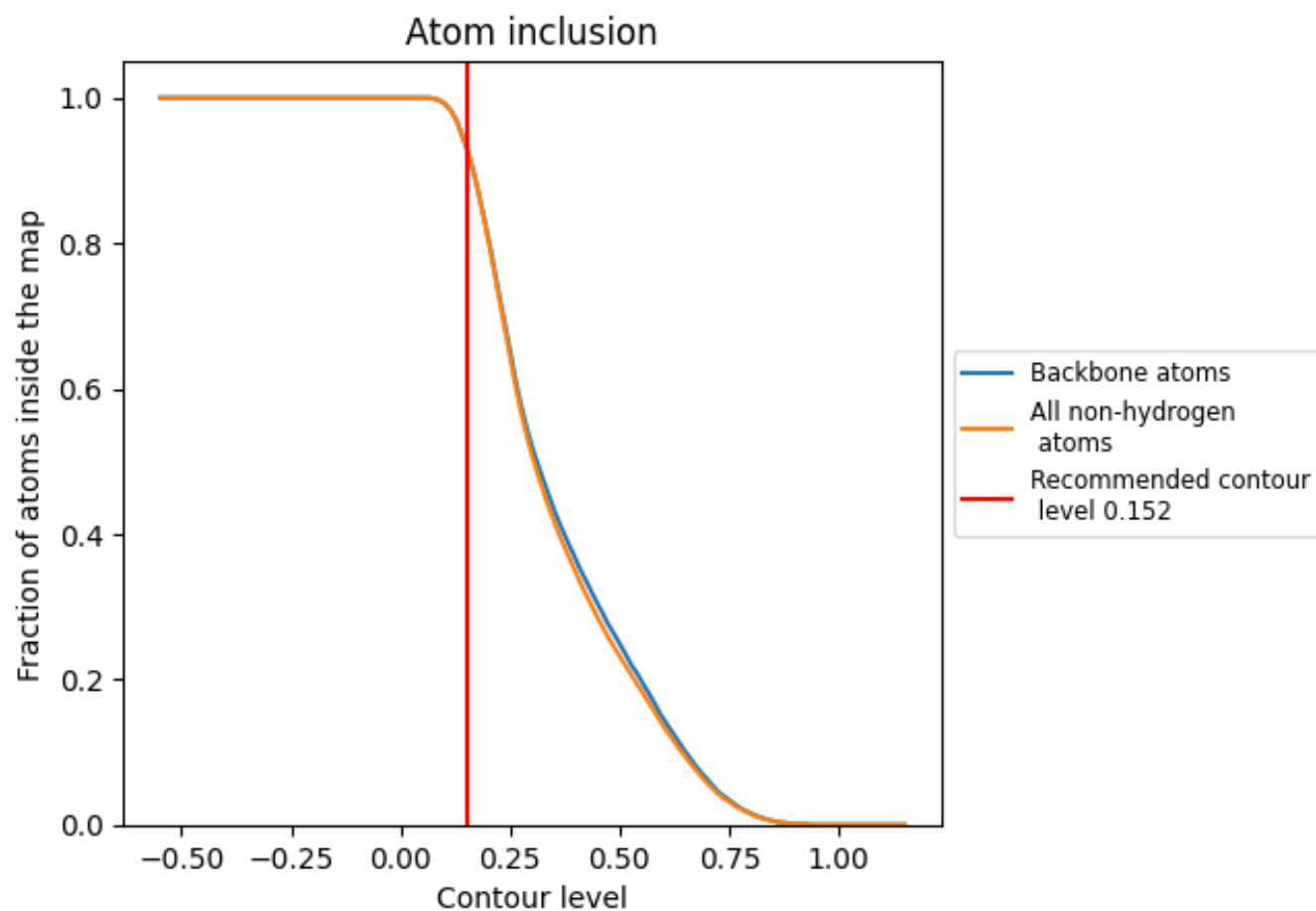
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.152).

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.152) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9300	 0.2290
A	 0.9940	 0.2990
B	 0.9900	 0.2770
C	 0.9950	 0.2940
D	 0.9990	 0.3390
E	 0.9940	 0.3350
F	 0.9950	 0.3110
G	 0.9870	 0.3110
H	 0.9960	 0.3150
I	 0.9970	 0.3240
J	 0.7480	 0.1160
K	 0.8890	 0.1540
L	 0.9840	 0.1940
M	 0.9360	 0.1330
N	 0.8140	 0.1250
O	 0.7330	 0.1080
P	 0.8260	 0.0870

