Full wwPDB EM Validation Report ⓘ

Jun 24, 2025 – 04:26 PM JST

PDB ID	:	7ET3 / pdb_00007et3
EMDB ID	:	EMD-31297
Title	:	C5 portal vertex in the enveloped virion capsid
Authors	:	Li, Z.; Yu, X.
Deposited on	:	2021-05-12
Resolution	:	4.20 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:

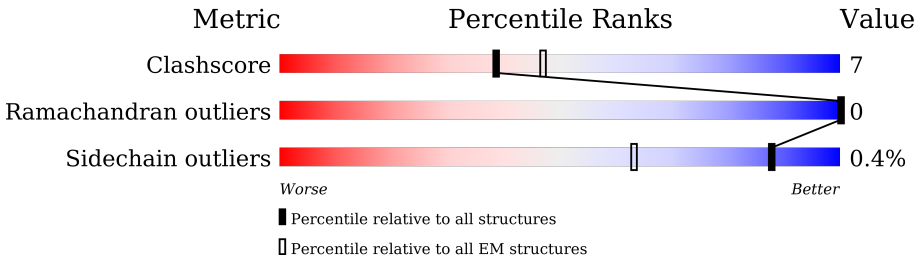
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 4.20 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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 <=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	I	306	7% 75% 19% 7%
1	h	306	8% 75% 18% 7%
1	n	306	5% 81% 15% .
1	o	306	. 72% 20% 8%
2	H	2241	. . 99%
2	P	2241	. . 99%
3	g	290	10% 63% 19% 18%
3	m	290	. 80% 20%

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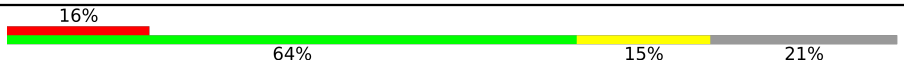
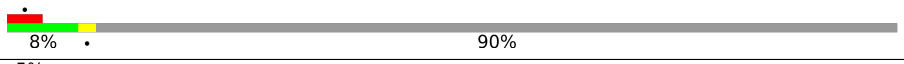
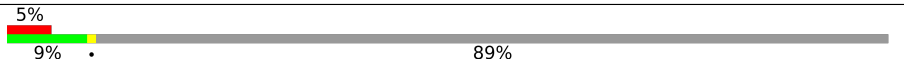
Mol	Chain	Length	Quality of chain
4	M	594	
5	N	642	
5	O	642	
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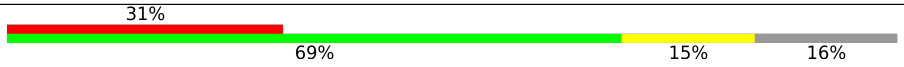
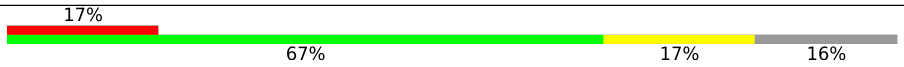
7	R	75	
7	S	75	
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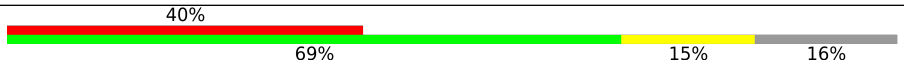
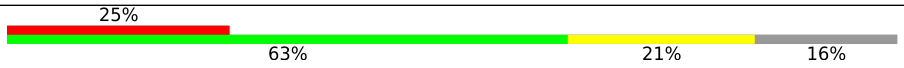
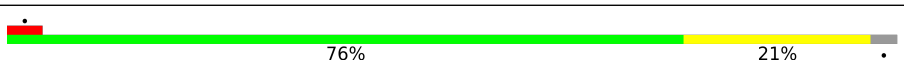
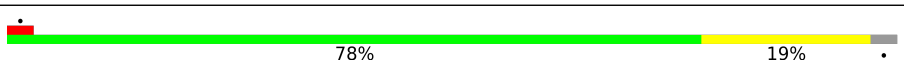
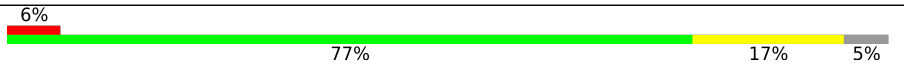
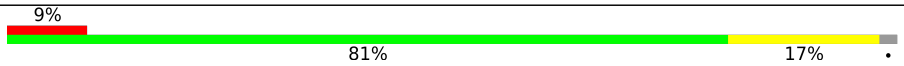
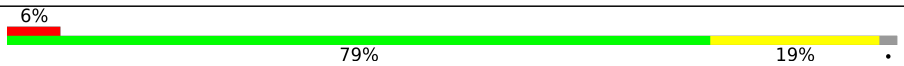
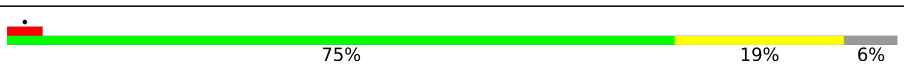
7	i	75	
7	j	75	
8	B	1370	
8	C	1370	
8	D	1370	
8	Y	1370	
8	Z	1370	
8	a	1370	

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 86332 atoms, of which 0 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 Triplex capsid protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	h	285	Total	C	N	O	S	0	0
			2258	1454	386	402	16		
1	I	285	Total	C	N	O	S	0	0
			2264	1454	389	404	17		
1	n	293	Total	C	N	O	S	0	0
			2322	1493	400	410	19		
1	o	282	Total	C	N	O	S	0	0
			2239	1442	382	397	18		

- Molecule 2 is a protein called Large tegument protein deneddylase.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	H	20	Total	C	N	O	S	0	0
			172	110	32	29	1		
2	P	20	Total	C	N	O	S	0	0
			172	110	32	29	1		

- Molecule 3 is a protein called Triplex capsid protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	g	237	Total	C	N	O	S	0	0
			1896	1218	332	335	11		
3	m	290	Total	C	N	O	S	0	0
			2325	1485	411	417	12		

- Molecule 4 is a protein called Capsid vertex component 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	M	468	Total	C	N	O	S	0	0
			3848	2408	740	686	14		

- Molecule 5 is a protein called Capsid vertex component 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	N	65	Total	C	N	O	S	0	0
			551	341	110	96	4		
5	O	69	Total	C	N	O	S	0	0
			589	371	113	102	3		

- Molecule 6 is a protein called ORFL92C_UL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	1	285	Total	C	N	O	S	0	0
			2328	1468	426	421	13		

- Molecule 7 is a protein called Small capsomere-interacting protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	R	63	Total	C	N	O	S	0	0
			513	321	97	91	4		
7	S	63	Total	C	N	O	S	0	0
			513	321	97	91	4		
7	T	63	Total	C	N	O	S	0	0
			513	321	97	91	4		
7	i	63	Total	C	N	O	S	0	0
			513	321	97	91	4		
7	j	63	Total	C	N	O	S	0	0
			513	321	97	91	4		

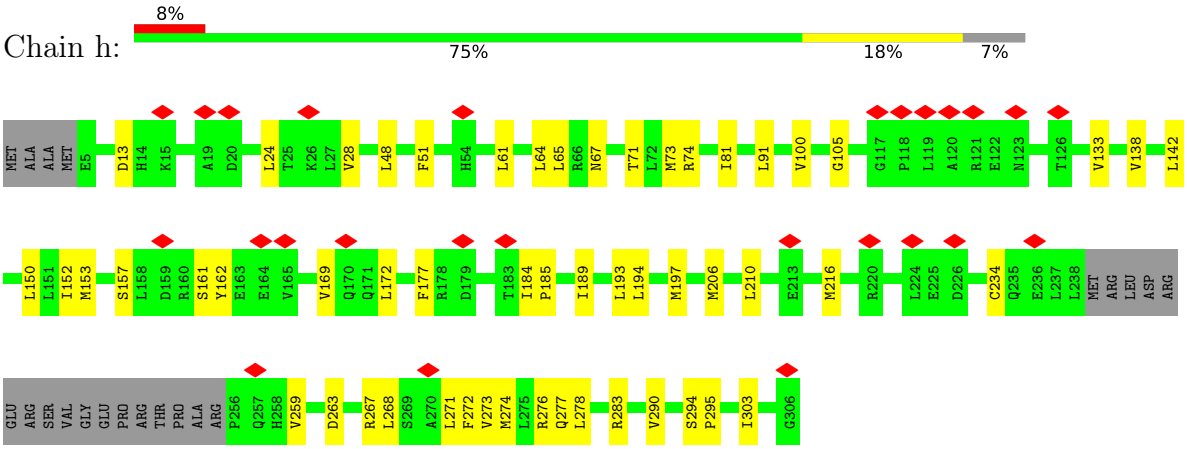
- Molecule 8 is a protein called Major capsid protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	a	1286	Total	C	N	O	S	0	0
			10169	6469	1770	1871	59		
8	B	1332	Total	C	N	O	S	0	0
			10567	6728	1831	1947	61		
8	C	1330	Total	C	N	O	S	0	0
			10540	6713	1830	1936	61		
8	D	1297	Total	C	N	O	S	0	0
			10269	6538	1785	1887	59		
8	Y	1347	Total	C	N	O	S	0	0
			10676	6799	1850	1966	61		
8	Z	1337	Total	C	N	O	S	0	0
			10582	6740	1831	1952	59		

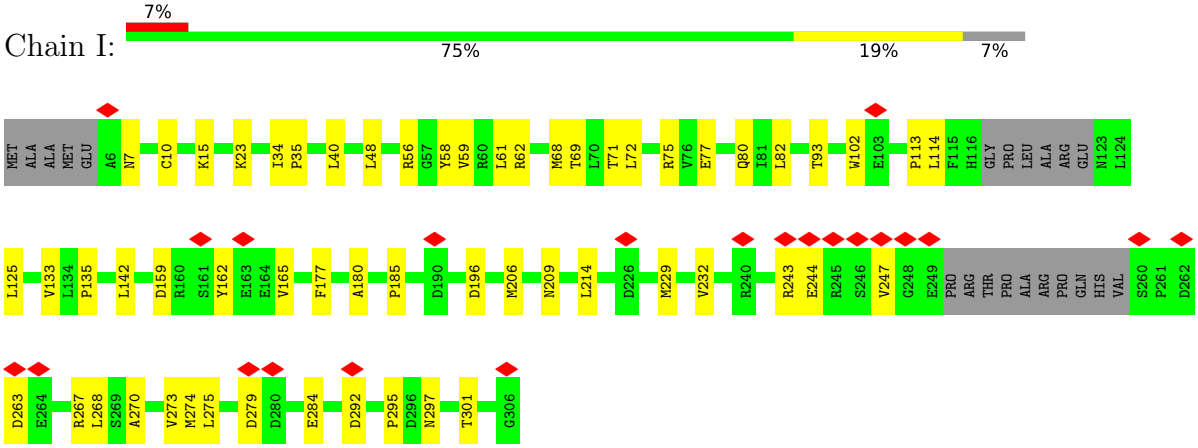
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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.

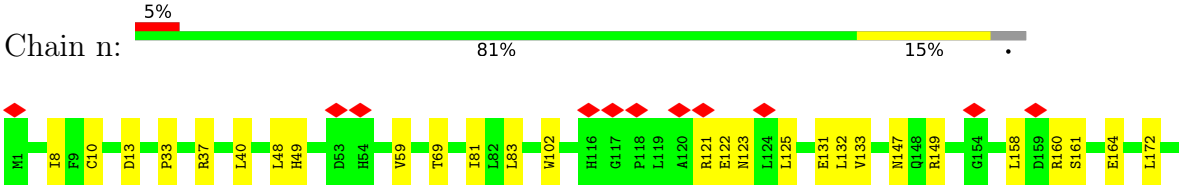
• Molecule 1: Triplex capsid protein 2

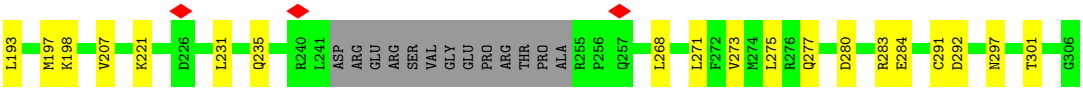


• Molecule 1: Triplex capsid protein 2



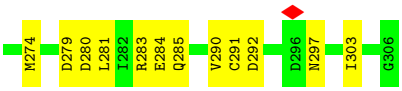
• Molecule 1: Triplex capsid protein 2





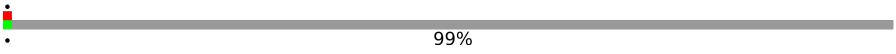
• Molecule 1: Triplex capsid protein 2

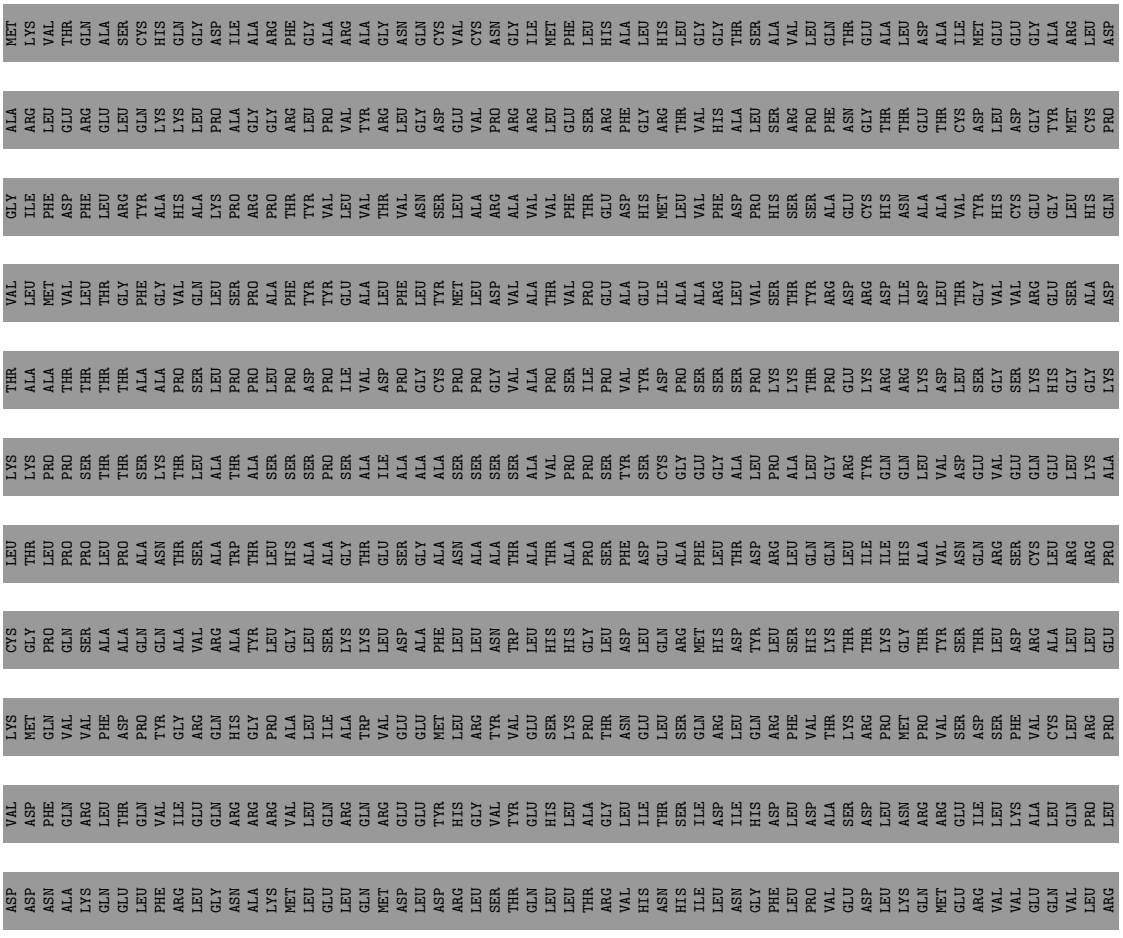
Chain o:



• Molecule 2: Large tegument protein deneddylase

Chain H:





LEU PHE TYR ASP LEU ARG ASP LEU LYS LEU CYS ASP GLY SER TYR GLU GLU GLY PHE VAL VAL ILE ARG GLU GLN LEU SER TYR LEU MET THR GLY THR VAL ARG ASP ASN VAL PRO LEU LEU GLN GLU ILE LEU GLN LEU ARG HIS ALA TYR GLN GLN ALA THR GLN GLN ASN GLU GLY

ARG LEU THR GLN ILE HIS ASP LEU LEU HIS VAL ILE GLU THR LEU VAL ARG ASP PRO GLY SER ARG GLY SER ALA LEU THR LEU ALA LEU VAL GLN GLU GLN LEU ALA GLN LEU GLU ALA LEU GLY LEU GLN LEU PRO GLU VAL GLN GLN ARG LEU GLN ASN ALA GLN LEU ALA LEU

SER ARG LEU TYR GLU GLU GLU GLU THR GLN ARG PHE LEU ASP GLY LEU SER TYR ASP ASP PRO PRO ASN GLU GLN THR ILE LYS ARG HIS PRO GLN LEU ARG GLU MET LEU ARG ARG ASP GLU GLN THR ARG LEU ARG LEU ILE ASN ALA VAL LEU SER MET PHE HIS THR LEU VAL

MET ARG LEU ALA ARG ASP GLU SER PRO ARG PRO THR PHE PHE ASP ALA VAL SER LEU LEU LEU GLN GLN LEU PRO PRO ASP SER HIS GLU ARG GLU ASP LEU ARG ALA ALA ASN ALA THR TYR ALA GLN MET VAL LYS LYS LEU GLU GLN ILE GLU LYS ALA GLY THR GLY ALA SER GLU

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VAL GLN GLN ASP LEU GLN ARG VAL VAL ASP ALA VAL LYS GLY GLU MET LEU SER THR ILE PRO HIS GLN PRO LEU GLU ALA THR LEU GLU LEU LEU LEU GLY LEU ASP GLN ARG ALA GLN PRO LEU LEU ASP LYS PHE ASN GLN ASP LEU LEU SER ALA LEU GLN GLN LEU SER LYS LYS

LEU ASP GLY ARG ILE ASN GLU CYS LEU HIS GLY VAL LEU THR GLY ASP VAL GLU ARG ARG CYS HIS PRO HIS ARG GLU ALA ALA MET GLN THR GLN ALA SER LEU ASN HIS LEU ASP GLN ILE LEU GLY PRO GLN LEU LEU ILE HIS GLU THR GLN GLN ALA LEU GLN HIS ALA VAL HIS

GLN ALA GLN PHE ILE GLU LYS CYS GLN GLN GLY ASP PRO THR THR ALA ILE THR GLY SER GLU PHE GLU GLY ASP PHE ALA ARG TYR ARG SER SER GLN GLN LYS MET GLU GLU GLN LEU GLN GLU THR ARG GLN GLN MET THR GLU THR SER GLU ARG LEU ASP ARG SER LEU ARG GLN

ASP PRO GLY SER SER SER VAL THR ARG VAL PRO GLU LYS PRO PHE LYS GLY GLN GLU LEU ALA GLY ARG ILE THR PRO PRO ALA ASP PHE GLN GLN PRO VAL PHE LYS THR LEU LEU ASP GLN GLN ALA ASP ALA ALA ARG LYS ALA LEU SER ASP GLU ALA ASP LEU LEU ASN GLN

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GLN LEU PRO TYR LEU SER ALA GLU ARG THR VAL ARG TRP MET LEU ALA PHE LEU GLU GLU ALA LEU ALA GLN ILE THR ALA ASP PRO THR HIS PRO HIS HIS GLY SER ARG THR HIS TYR ARG ASN LEU GLN GLN GLN ALA VAL GLU SER ALA VAL THR LEU ALA HIS GLN ILE GLU GLN

ASN ALA ALA CYS GLU ASN PHE ILE ALA GLN HIS GLN GLU ALA THR ALA ASN GLY ALA SER THR PRO ARG VAL ASP MET VAL GLN ALA VAL GLU ALA VAL TRP GLN ARG LEU GLU PRO GLY ARG VAL ALA GLY GLY ALA ALA ARG HIS GLN LYS VAL GLN GLU LEU LEU GLN ARG LEU GLY

GLN THR LEU GLY ASP LEU GLU LEU GLN GLU THR LEU ALA THR GLU TYR PHE ALA LEU LEU HIS GLY ILE GLN THR PHE SER TYR GLY LEU ASP PHE ARG SER GLN LEU GLU LYS ILE ARG ASP LEU ARG THR ARG PHE ALA GLU LEU ALA LYS ARG ARG GLY THR ARG LEU SER ASN GLU

GLY VAL LEU PRO ASN PRO ARG LYS PRO GLN ALA THR THR SER LEU GLY ALA PHE THR ARG GLY LEU ASN ALA LEU GLU ARG HIS VAL GLN LEU GLY HIS GLN TYR LEU LEU ASN LYS LEU ASN GLY SER SER LEU VAL TYR ARG LEU GLU ASP ILE PRO SER VAL LEU PRO ALA THR HIS

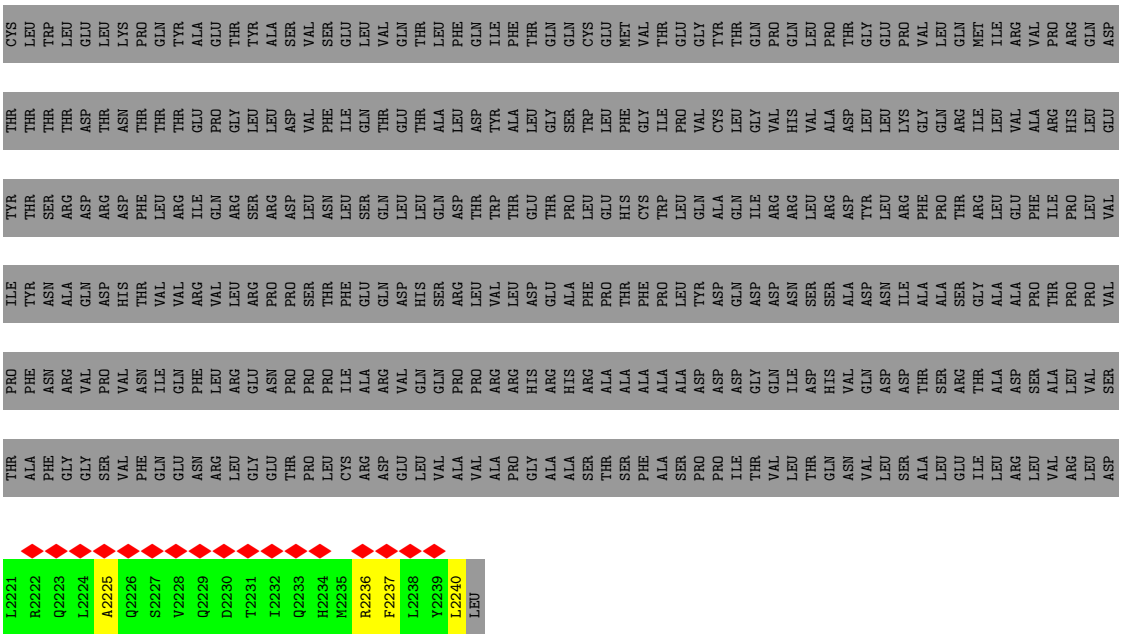
GLU THR ASP PRO ALA LEU ILE MET ARG ASP ARG LEU ARG ARG LEU CYS PHE ALA ARG HIS HIS ASP THR PHE LEU GLU VAL VAL ASP VAL PHE GLY MET ARG GLN ILE VAL THR GLN ALA GLY GLU PRO ILE HIS LEU VAL THR ASP TYR GLY ASN VAL ALA PHE LYS TYR LEU ALA LEU

ARG ASP ASP GLY ARG PRO LEU ALA TRP ARG ARG ARG CYS SER GLY GLY GLY LEU LYS ASN VAL VAL THR THR ARG TYR LYS ALA ILE THR VAL ALA VAL ALA VAL CYS GLN THR LEU ARG THR PHE TRP PRO GLN ILE SER GLN TYR ASP LEU ARG PRO TYR LEU THR GLN HIS GLN SER

HIS THR HIS PRO ALA GLU THR HIS THR LEU HIS ASN LEU LYS LEU PHE CYS TYR LEU VAL SER THR ALA TRP HIS GLN ARG ILE ASP THR GLN GLN GLU LEU THR ALA ALA ASP ARG VAL GLY SER GLY GLU GLY GLY ASP VAL GLY GLU GLN ARG PRO GLY ARG GLY THR VAL LEU ARG

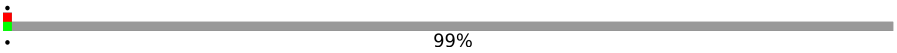
LEU SER LEU GLN GLU PHE CYS VAL LEU ILE ALA ALA LEU TYR PRO GLU TYR ILE TYR THR VAL LEU LYS TYR PRO VAL GLN MET SER LEU PRO SER LEU THR ALA HIS LEU HIS GLN ASP VAL ILE HIS ALA VAL VAL ASN ASN THR HIS LYS MET PRO PRO ASP HIS LEU PRO GLU GLN

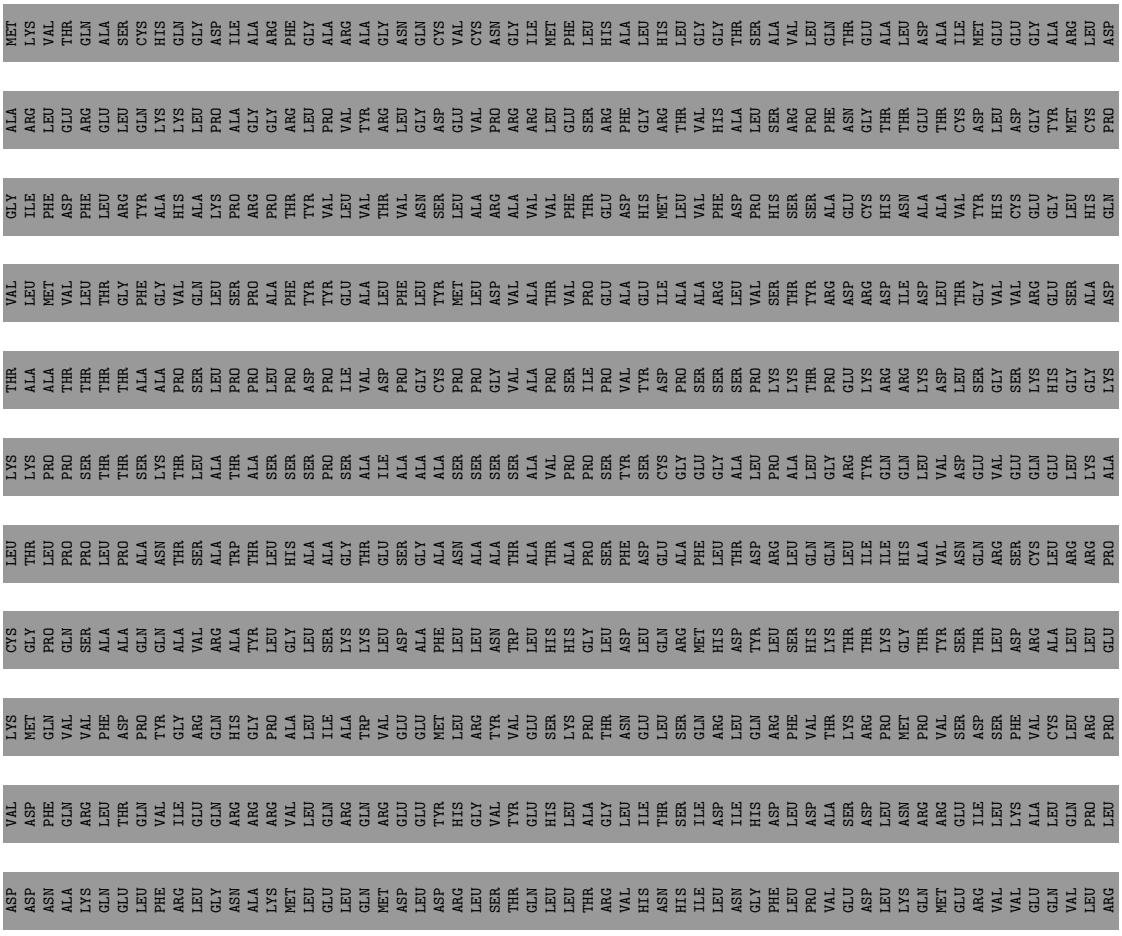
VAL LYS ALA PHE CYS ILE THR PRO THR GLN TRP PRO ALA MET GLN LEU ASN LYS LEU PHE TRP GLU ASN LYS LEU VAL GLN GLN LEU CYS GLN VAL GLY PRO GLN LYS SER THR PRO PRO LEU GLY LYS LEU TRP LEU TYR ALA MET ALA THR LEU VAL PHE PRO GLN ASP MET LEU GLN

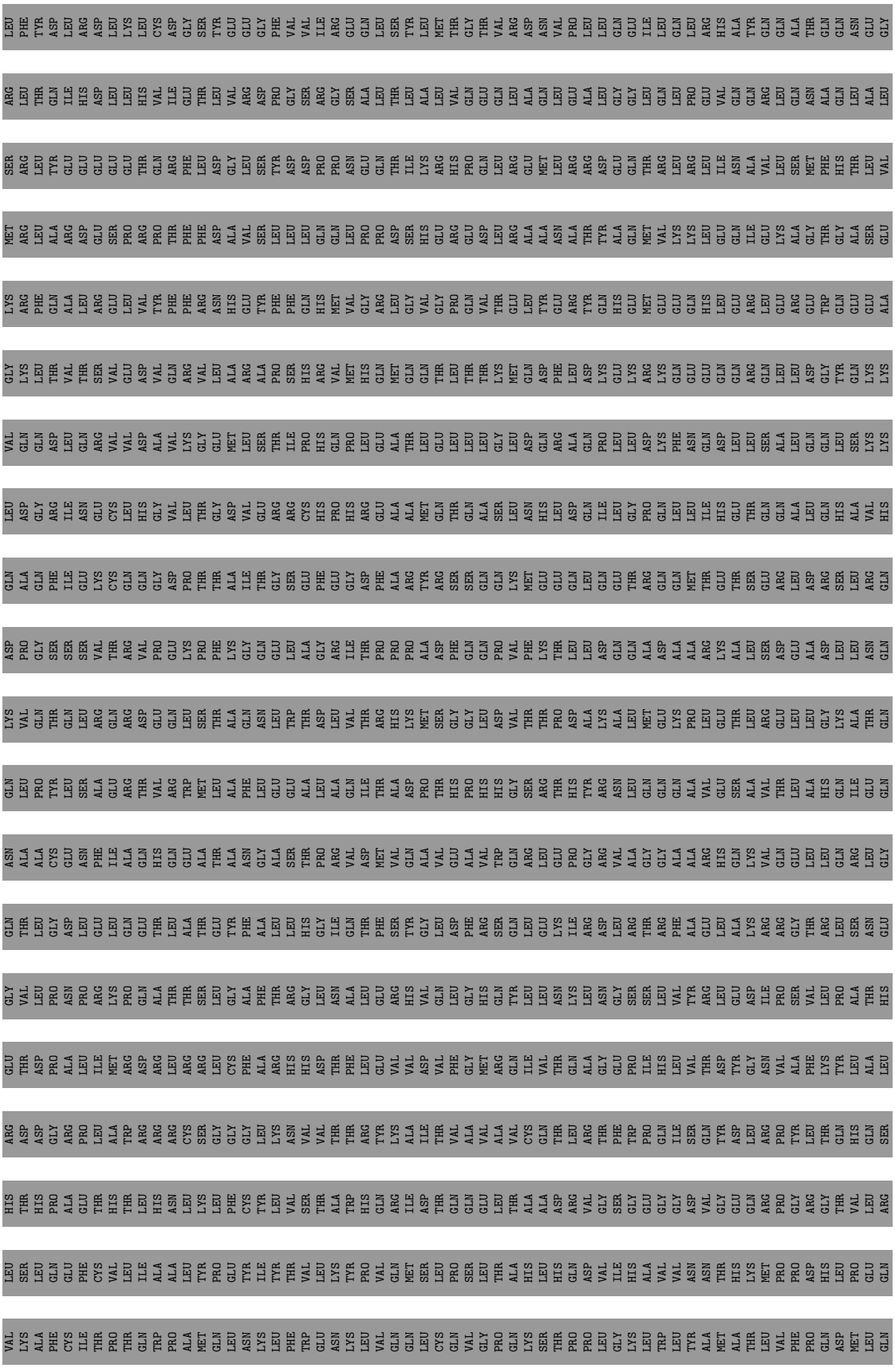


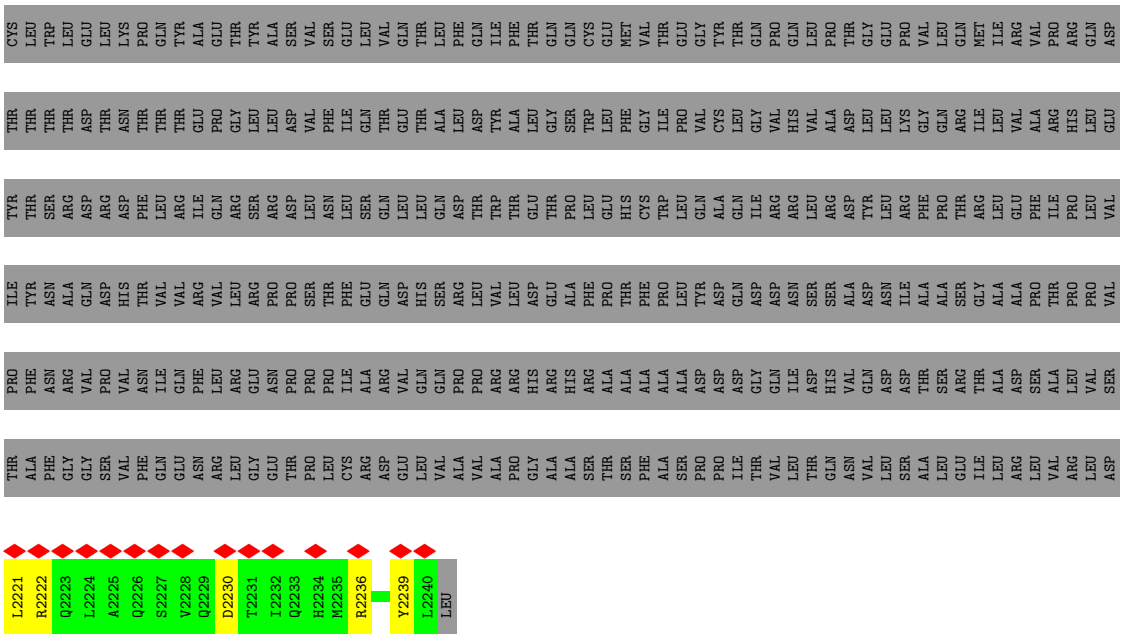
• Molecule 2: Large tegument protein deneddylase

Chain P:



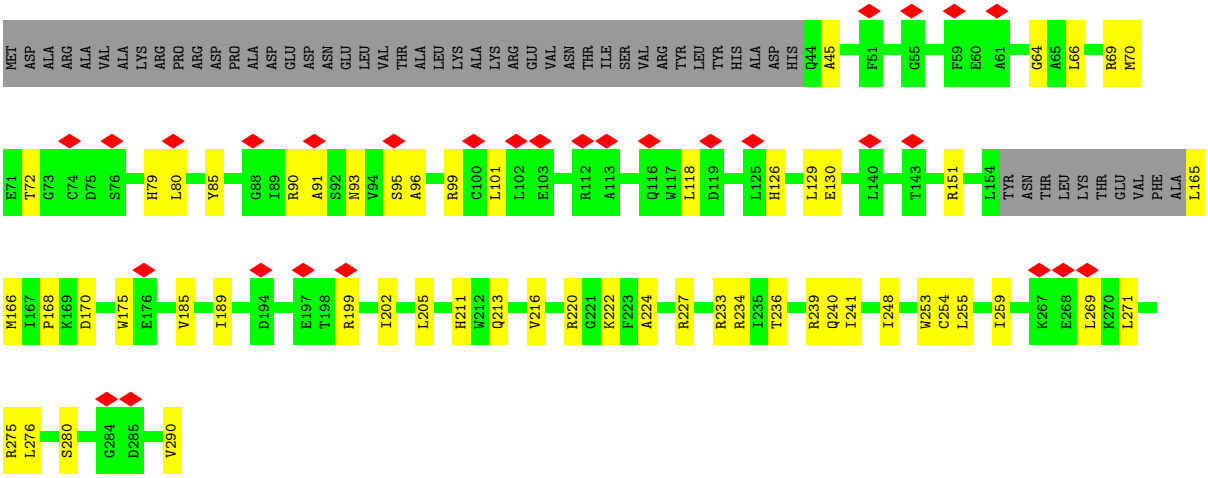






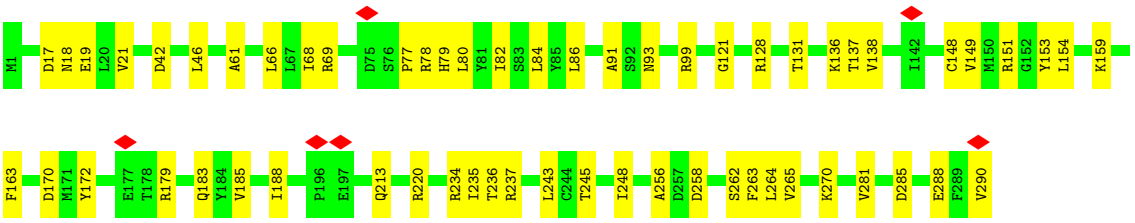
• Molecule 3: Triplex capsid protein 1

Chain g:



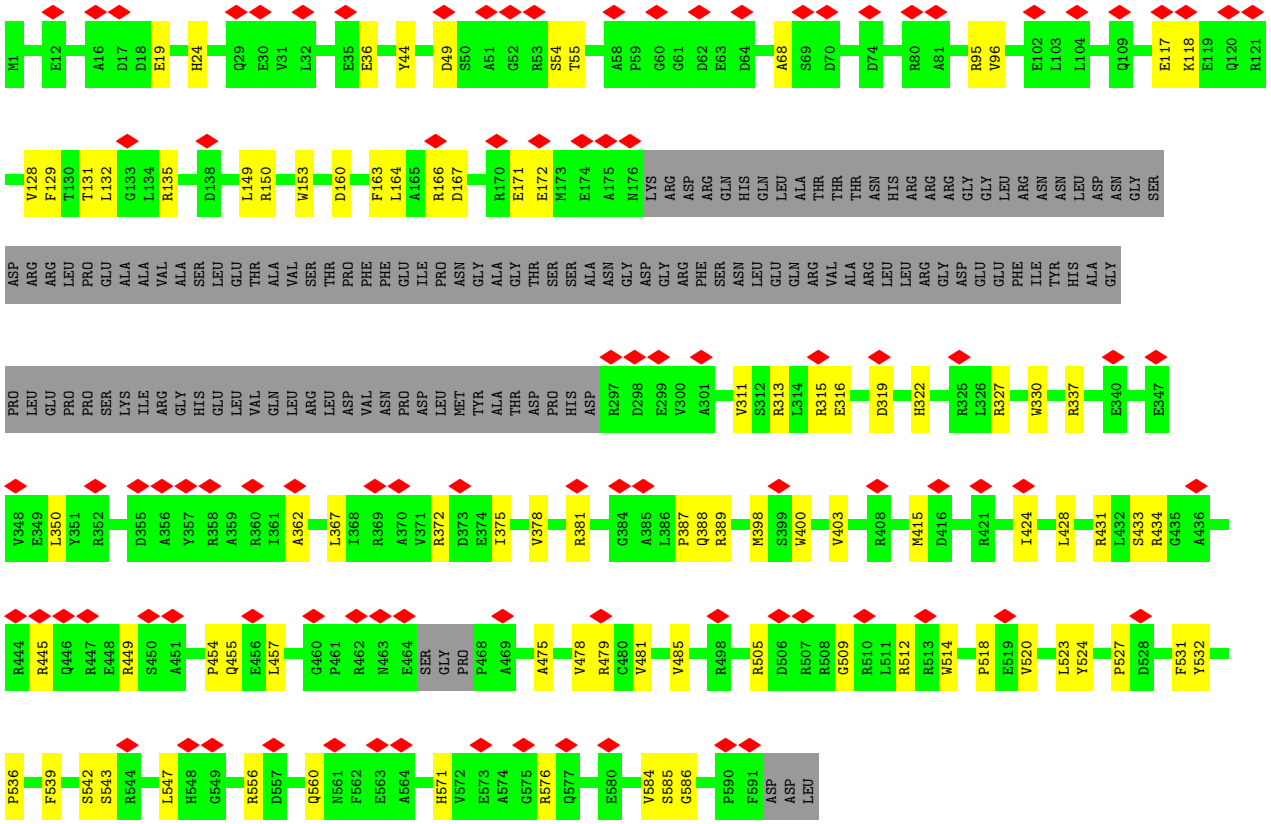
• Molecule 3: Triplex capsid protein 1

Chain m:



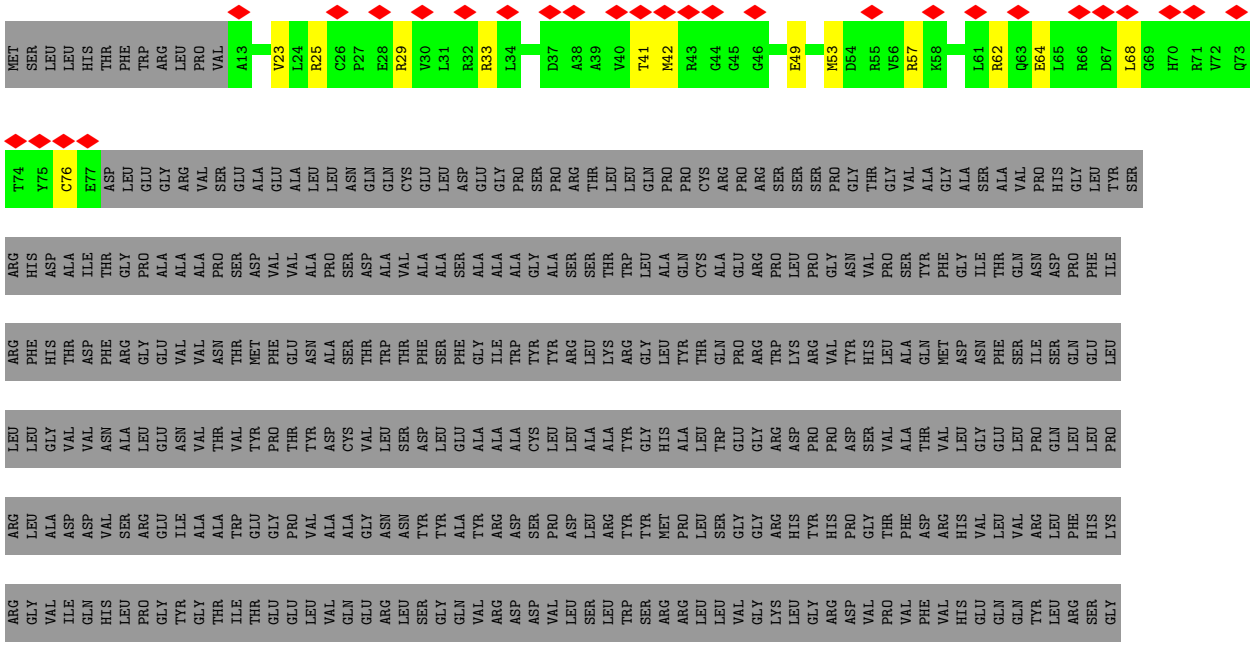
• Molecule 4: Capsid vertex component 1

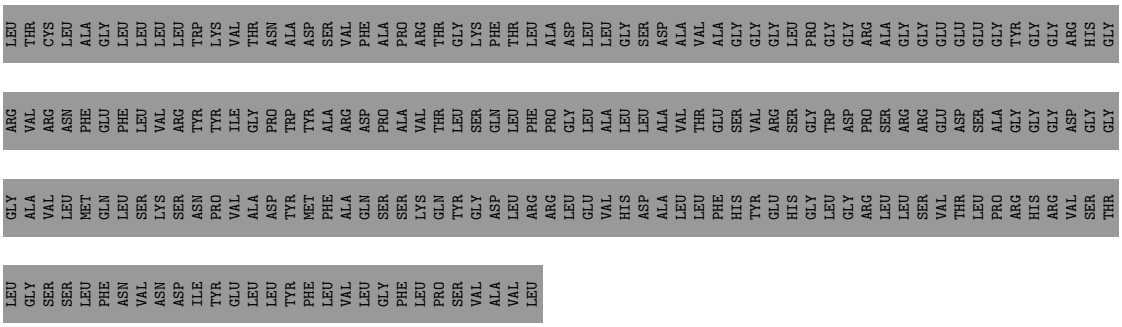
Chain M:



• Molecule 5: Capsid vertex component 2

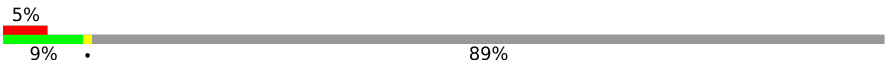
Chain N:

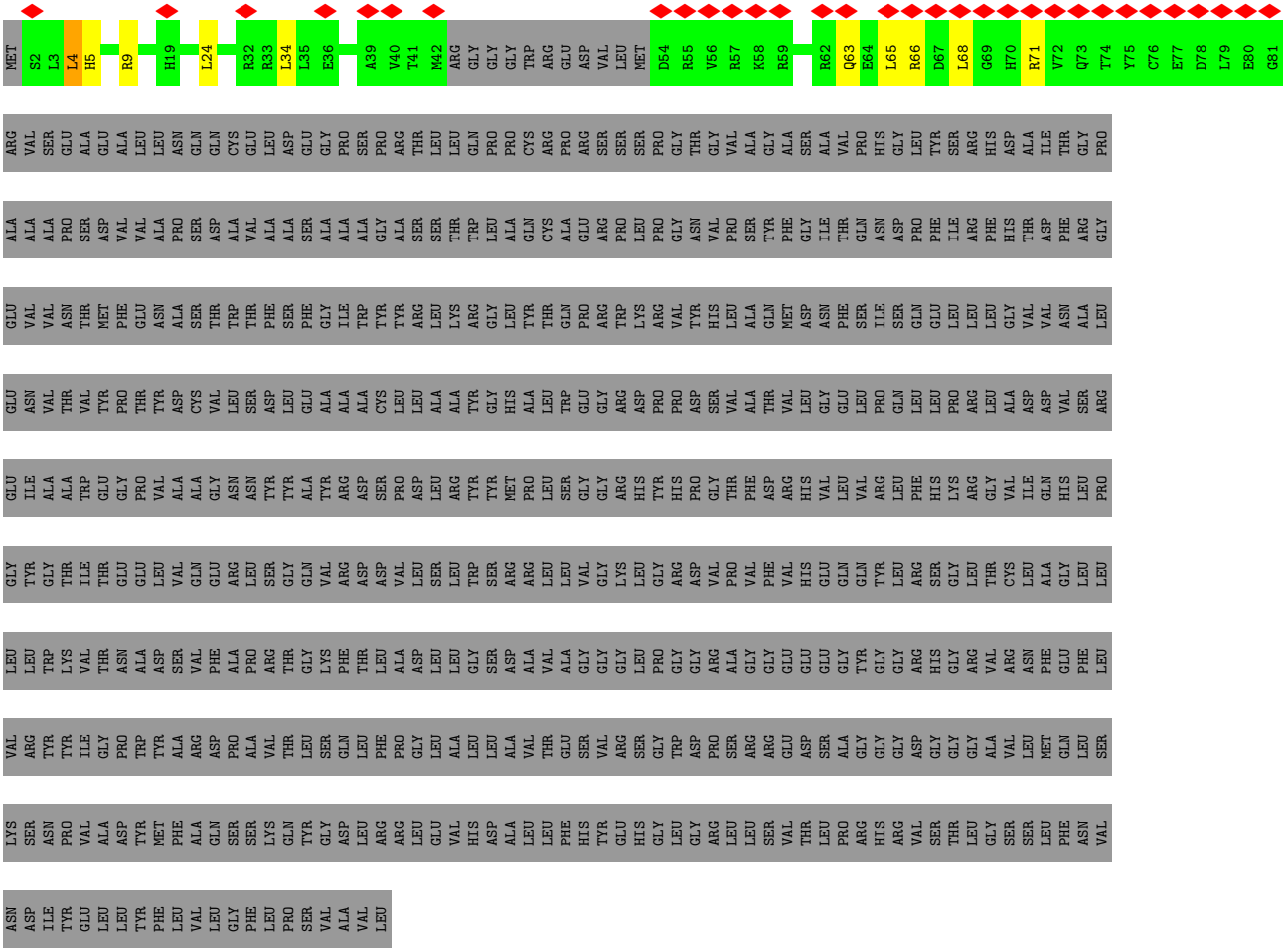




• Molecule 5: Capsid vertex component 2

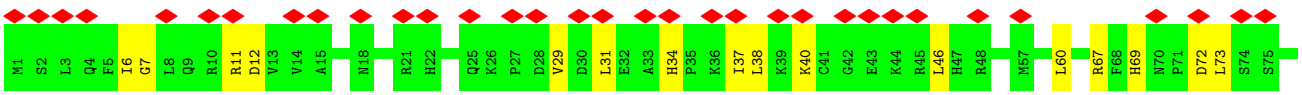
Chain O:

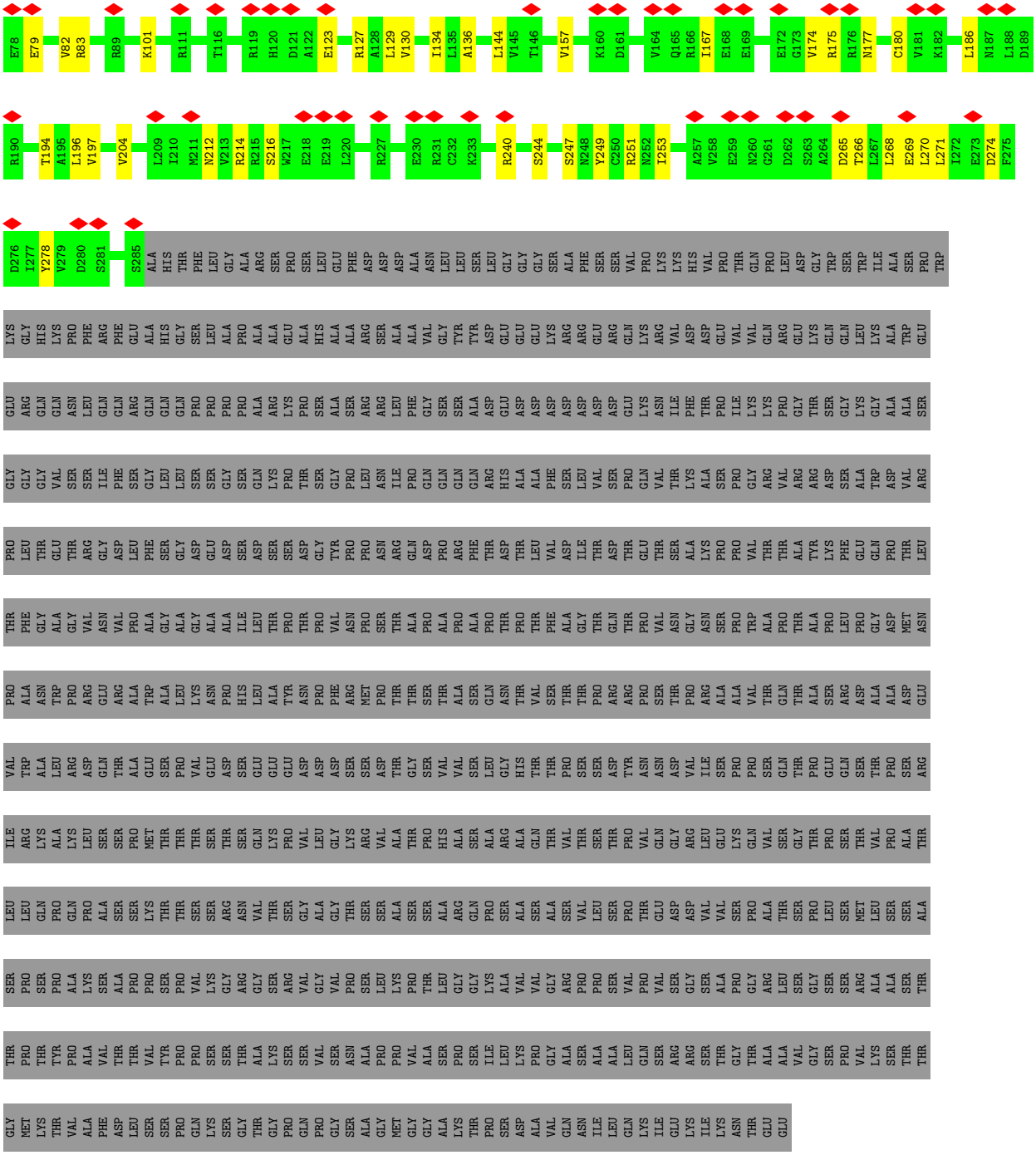




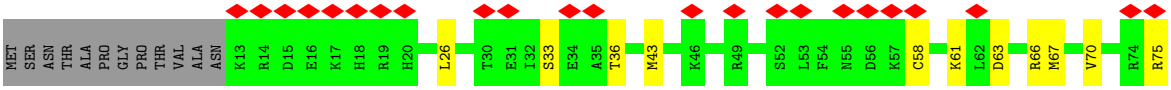
• Molecule 6: ORFL92C_UL32

Chain 1:



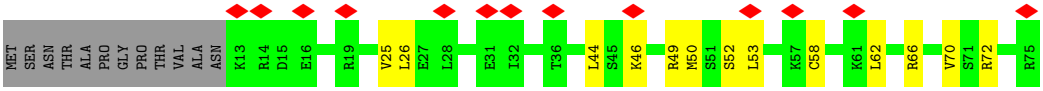


• Molecule 7: Small capsomere-interacting protein



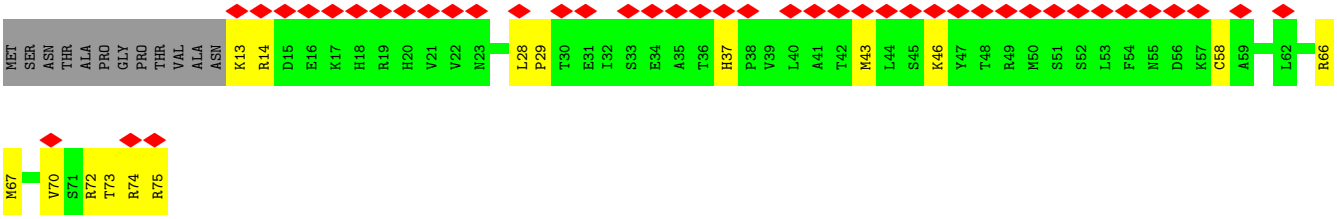
• Molecule 7: Small capsomere-interacting protein

Chain S:



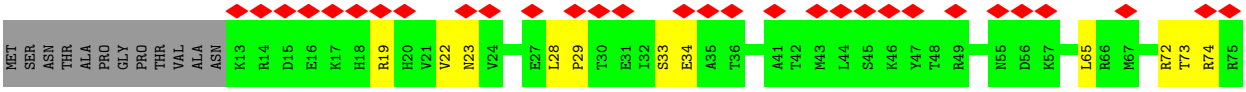
• Molecule 7: Small capsomere-interacting protein

Chain T:



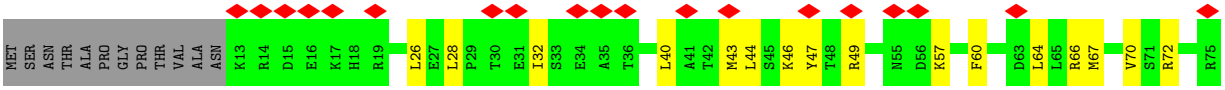
• Molecule 7: Small capsomere-interacting protein

Chain i:



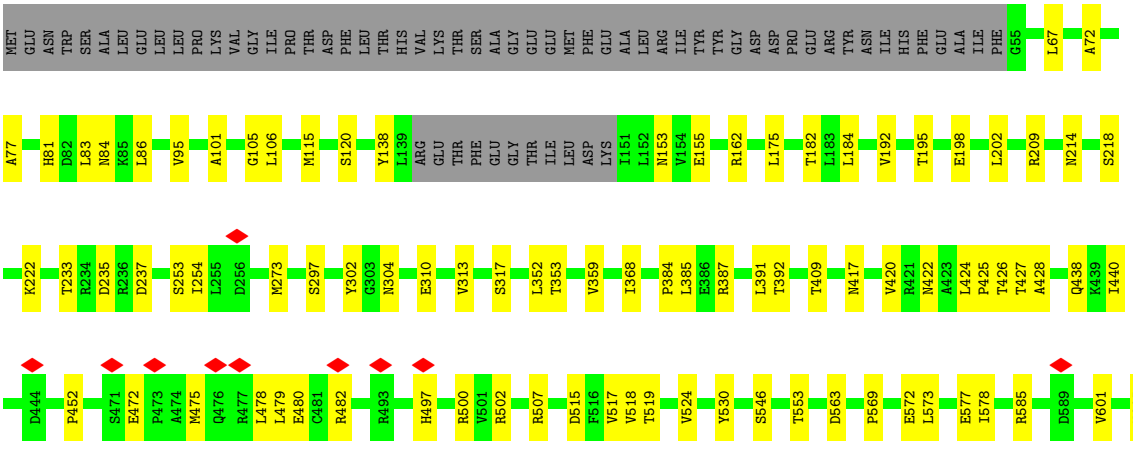
• Molecule 7: Small capsomere-interacting protein

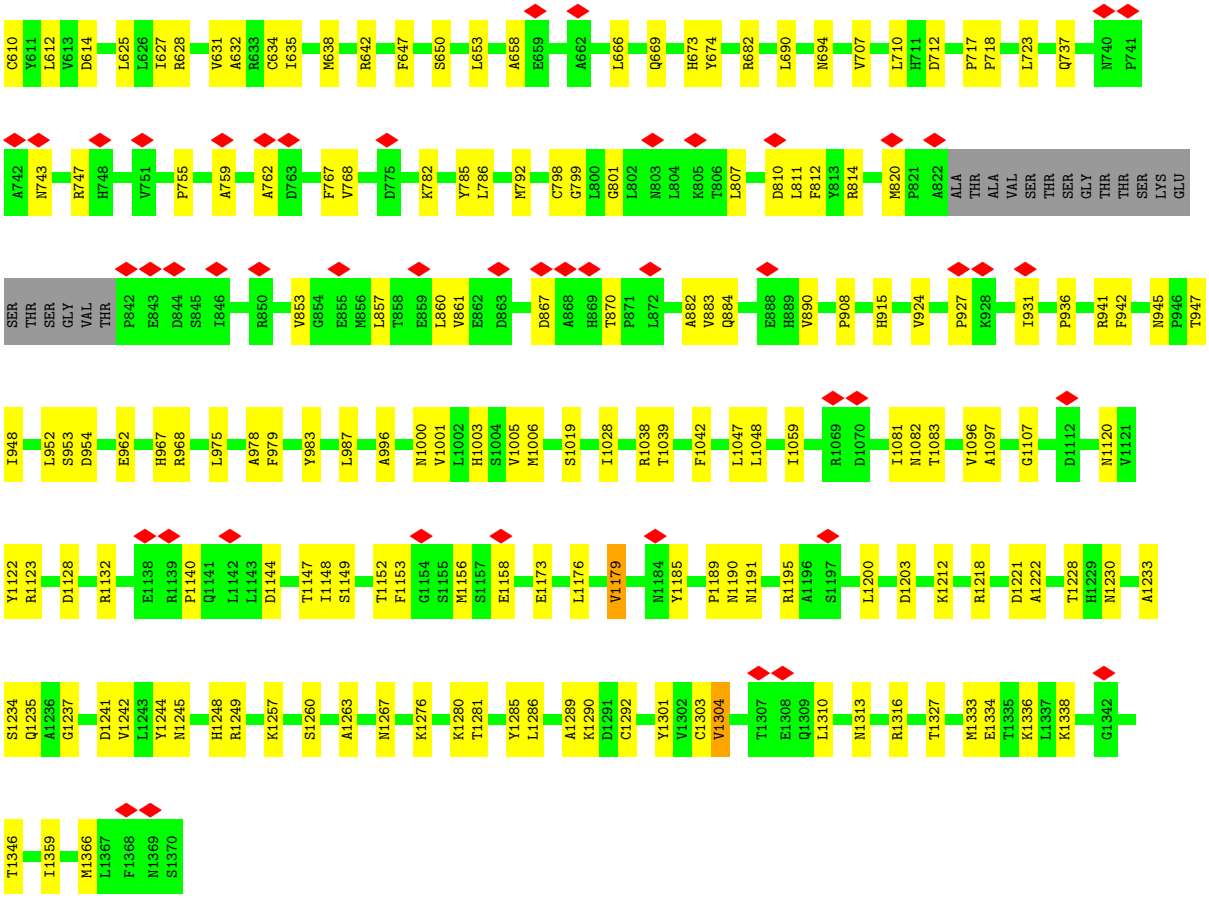
Chain j:



• Molecule 8: Major capsid protein

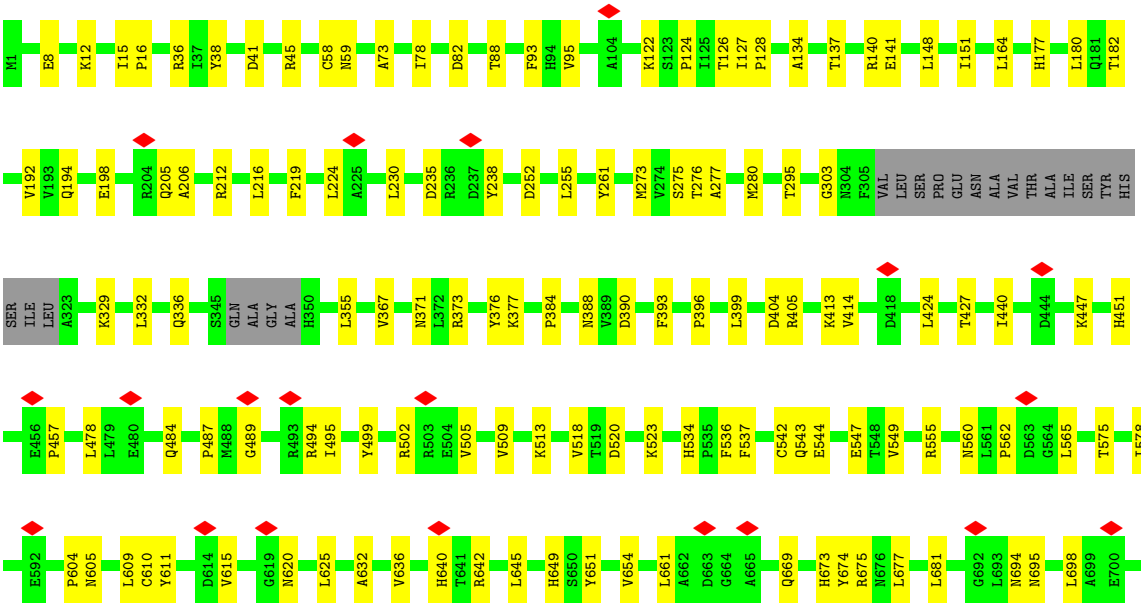
Chain a:

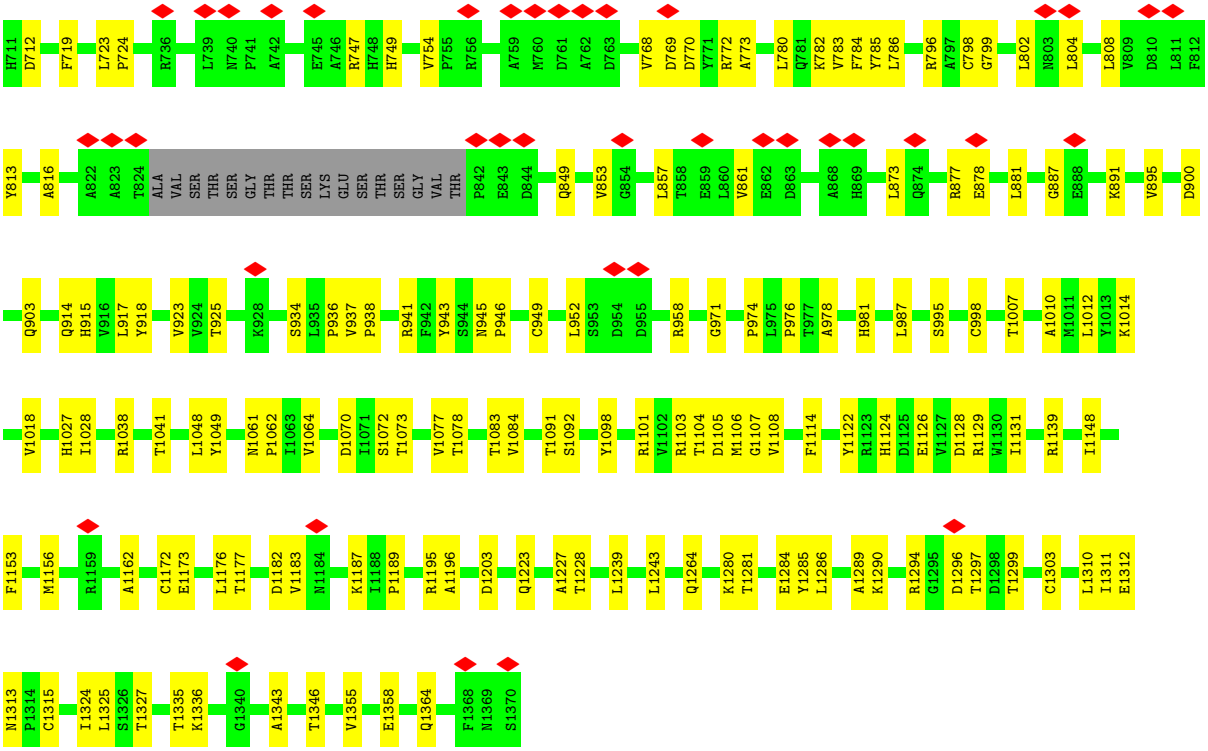




• Molecule 8: Major capsid protein

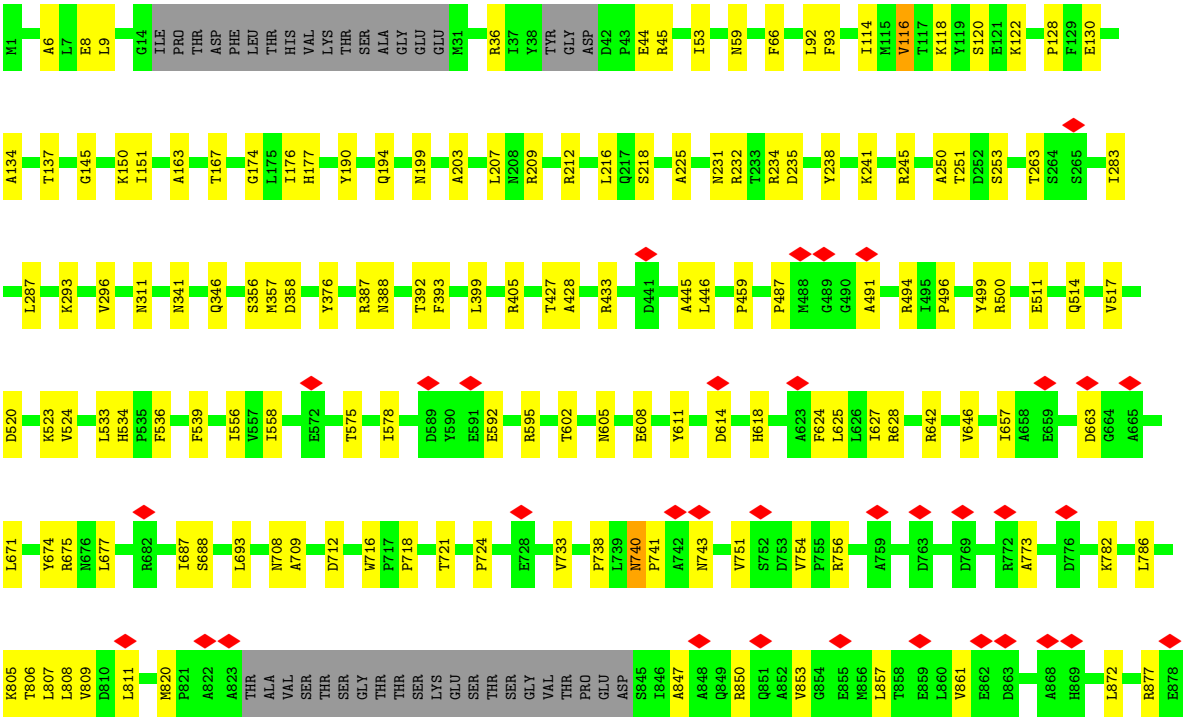
Chain B:

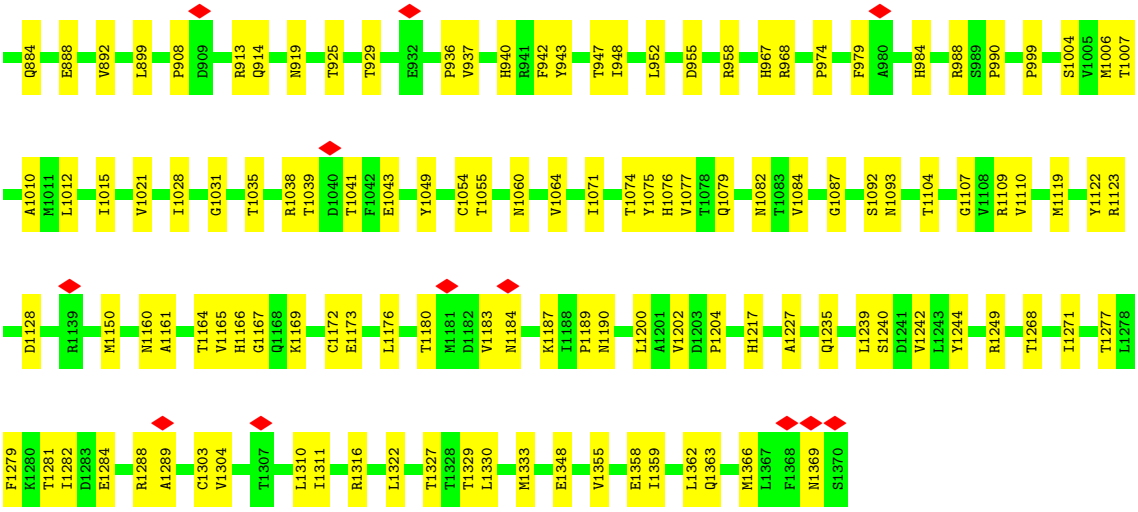




• Molecule 8: Major capsid protein

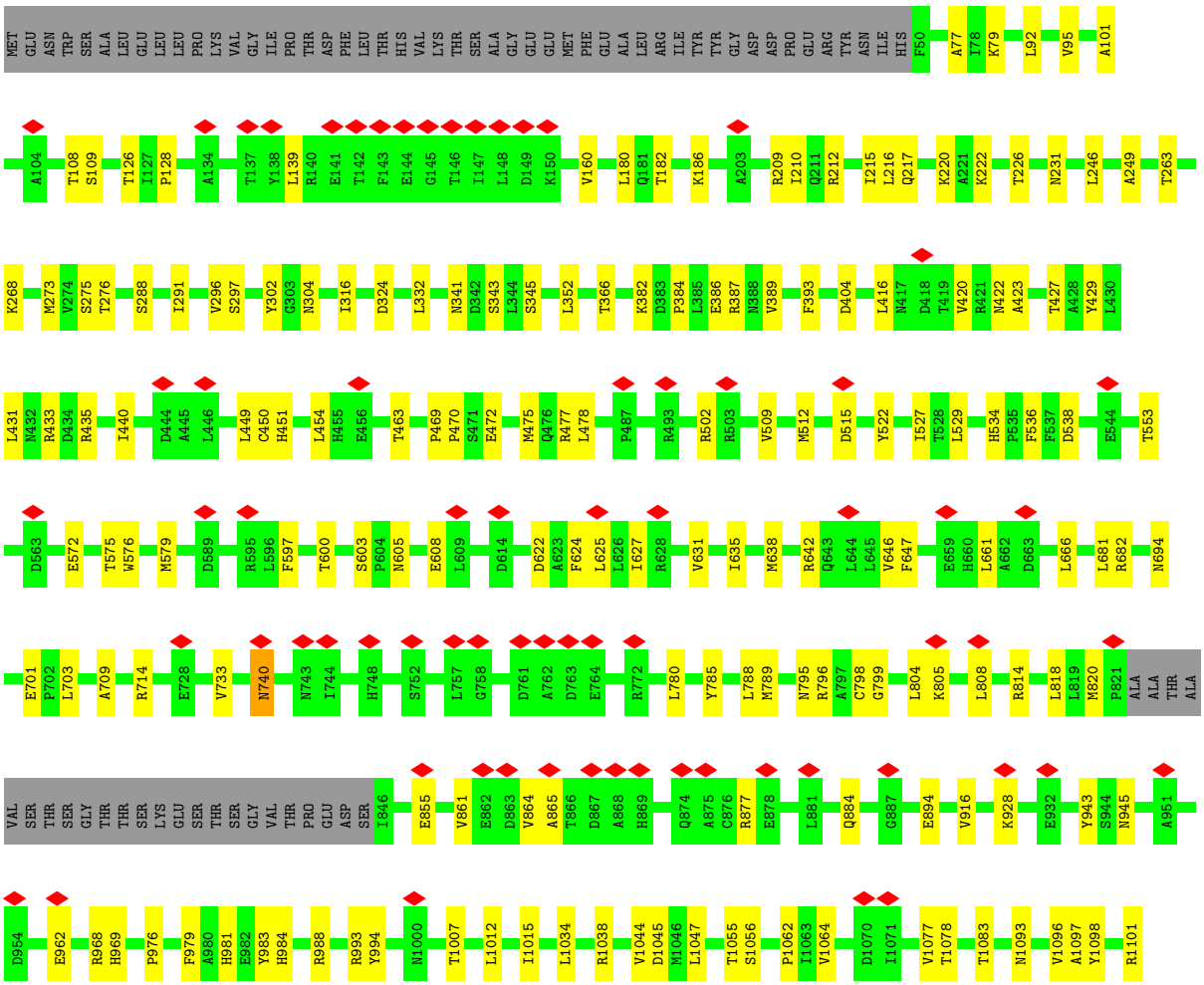
Chain C:



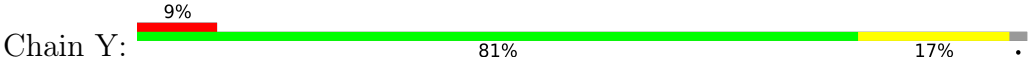


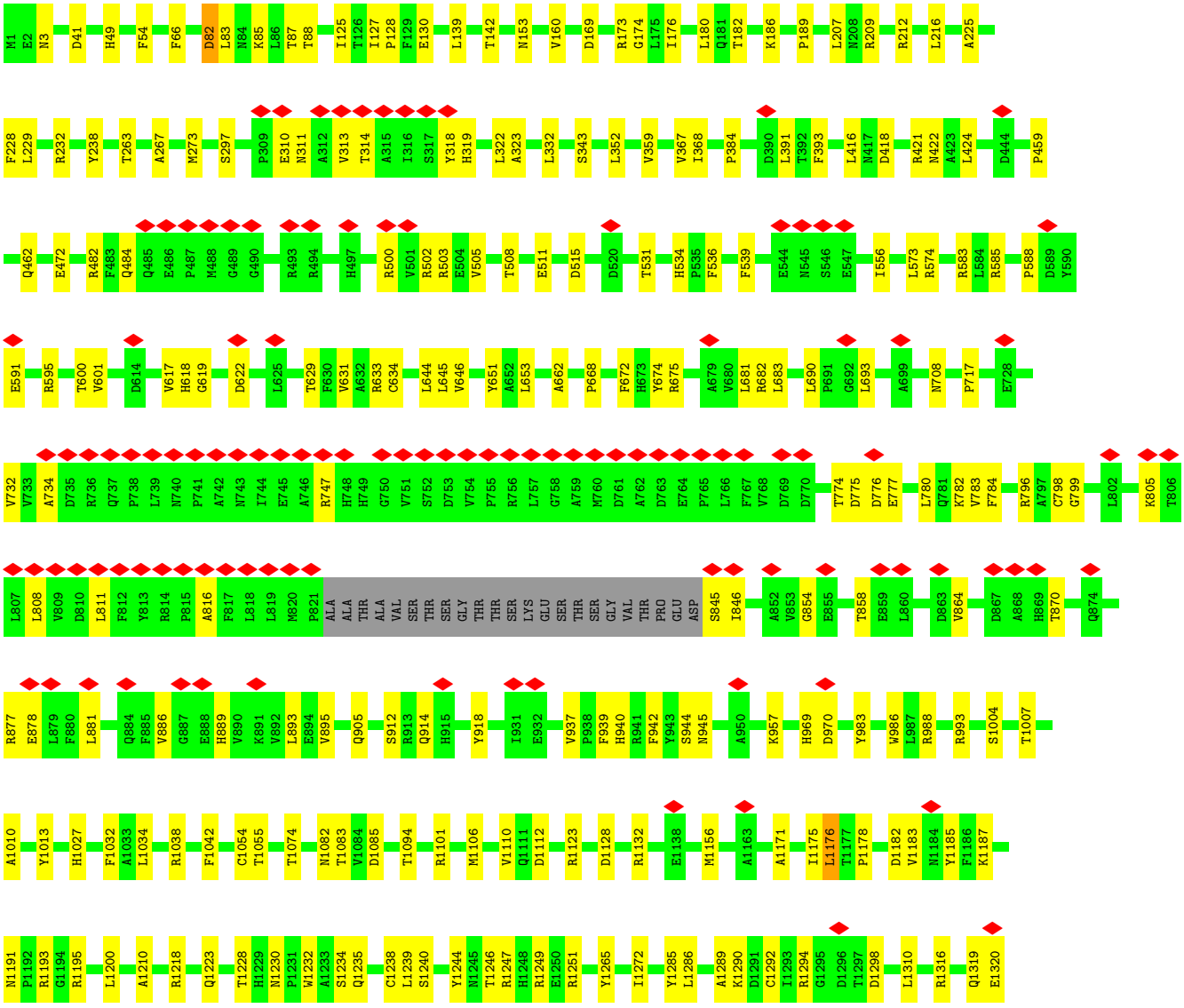
• Molecule 8: Major capsid protein

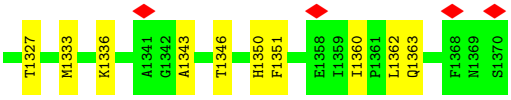
Chain D:



• Molecule 8: Major capsid protein

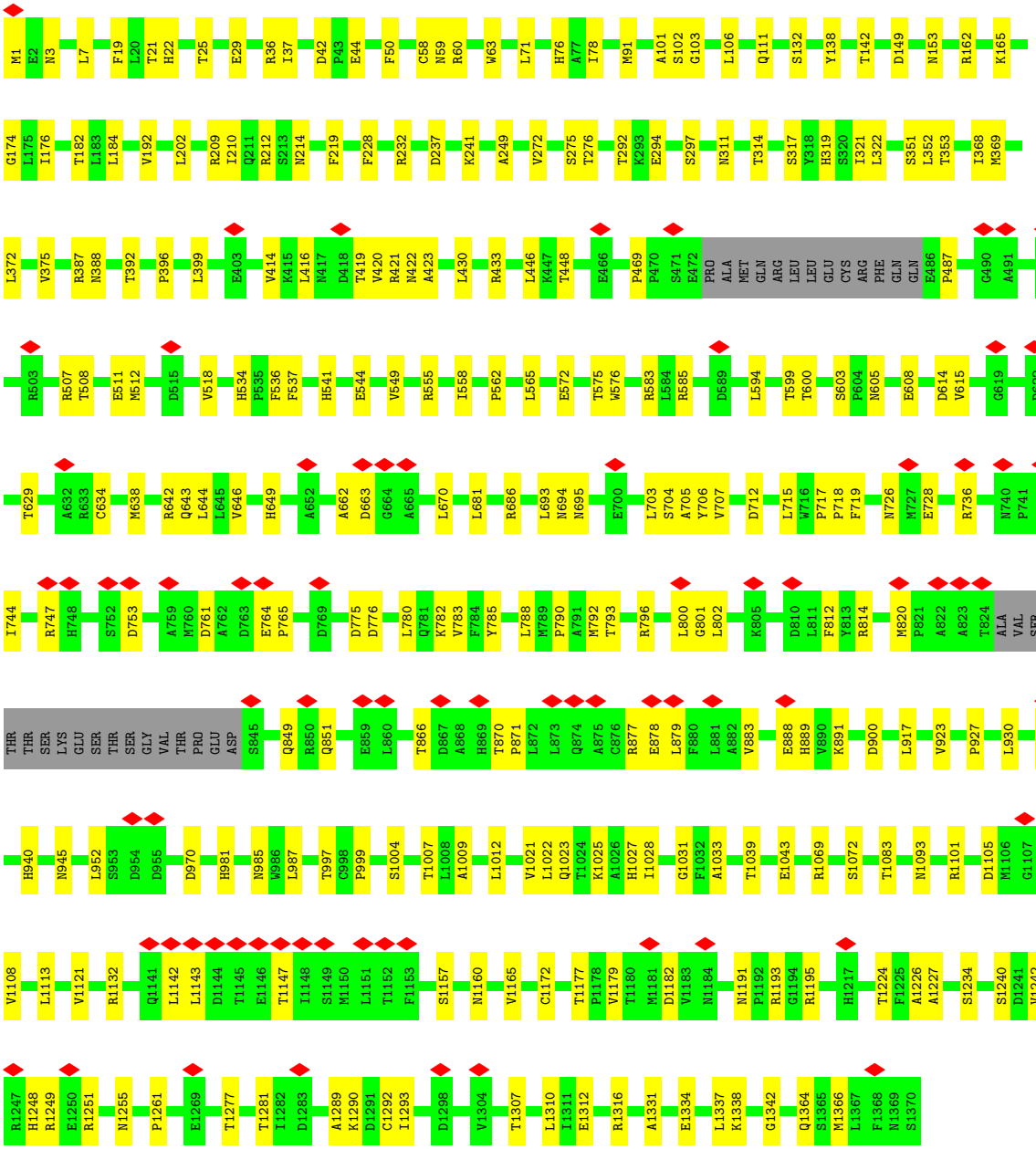






• Molecule 8: Major capsid protein

Chain Z:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	23136	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.075	Depositor
Minimum map value	-0.051	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	416.0, 416.0, 416.0	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.625, 1.625, 1.625	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	I	0.23	0/2304	0.57	2/3125 (0.1%)
1	h	0.21	0/2302	0.54	0/3128
1	n	0.22	0/2366	0.55	0/3212
1	o	0.26	1/2279 (0.0%)	0.49	0/3092
2	H	0.21	0/174	0.48	0/233
2	P	0.22	0/174	0.54	0/233
3	g	0.20	0/1936	0.52	0/2625
3	m	0.21	0/2374	0.51	0/3221
4	M	0.22	0/3935	0.52	0/5331
5	N	0.24	0/560	0.57	0/751
5	O	0.22	0/600	0.59	0/808
6	1	0.23	0/2366	0.57	0/3192
7	R	0.18	0/520	0.50	0/697
7	S	0.20	0/520	0.55	0/697
7	T	0.22	0/520	0.54	0/697
7	i	0.22	0/520	0.58	0/697
7	j	0.21	0/520	0.48	0/697
8	B	0.23	1/10819 (0.0%)	0.51	0/14733
8	C	0.22	0/10790	0.49	0/14695
8	D	0.21	0/10513	0.50	1/14322 (0.0%)
8	Y	0.21	0/10932	0.50	0/14892
8	Z	0.21	0/10835	0.50	0/14762
8	a	0.22	0/10410	0.51	1/14183 (0.0%)
All	All	0.22	2/88269 (0.0%)	0.51	4/120023 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
6	1	0	1
8	Y	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
8	a	0	1
All	All	0	3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	B	754	VAL	C-N	7.46	1.41	1.33
1	o	47	GLY	C-O	7.01	1.27	1.24

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	a	883	VAL	N-CA-C	-7.71	105.20	112.83
1	I	295	PRO	CA-C-N	5.29	131.64	121.54
1	I	295	PRO	C-N-CA	5.29	131.64	121.54
8	D	527	ILE	N-CA-C	-5.11	107.85	112.96

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
6	1	69	HIS	Peptide
8	Y	585	ARG	Peptide
8	a	585	ARG	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	I	2264	0	2350	39	0
1	h	2258	0	2342	35	0
1	n	2322	0	2418	34	0
1	o	2239	0	2331	41	0
2	H	172	0	176	4	0
2	P	172	0	176	5	0
3	g	1896	0	1934	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	m	2325	0	2363	41	0
4	M	3848	0	3773	55	0
5	N	551	0	548	10	0
5	O	589	0	587	8	0
6	1	2328	0	2363	34	0
7	R	513	0	539	8	0
7	S	513	0	539	9	0
7	T	513	0	539	12	0
7	i	513	0	539	7	0
7	j	513	0	539	9	0
8	B	10567	0	10501	173	0
8	C	10540	0	10495	166	0
8	D	10269	0	10227	143	0
8	Y	10676	0	10618	143	0
8	Z	10582	0	10521	177	0
8	a	10169	0	10124	163	0
All	All	86332	0	86542	1219	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 7.

All (1219) 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)
8:C:782:LYS:O	8:C:786:LEU:HB2	1.80	0.81
8:a:782:LYS:O	8:a:786:LEU:HB2	1.82	0.78
3:g:45:ALA:HA	3:g:151:ARG:O	1.83	0.78
8:Y:130:GLU:H	8:Z:111:GLN:HE22	1.34	0.75
8:a:1292:CYS:SG	8:a:1303:CYS:N	2.63	0.72
8:C:575:THR:HG21	8:C:1007:THR:HA	1.73	0.70
1:I:102:TRP:H	1:I:297:ASN:HD21	1.38	0.69
8:D:575:THR:HG21	8:D:1007:THR:HA	1.75	0.69
6:1:60:LEU:HD22	6:1:268:LEU:HB2	1.76	0.68
8:B:578:ILE:HG12	8:B:1028:ILE:HD12	1.77	0.67
8:C:1327:THR:HG21	8:C:1333:MET:HB2	1.76	0.67
8:B:212:ARG:HH22	8:B:1203:ASP:HA	1.61	0.66
3:g:185:VAL:HA	3:g:205:LEU:O	1.95	0.66
8:Y:482:ARG:HB3	8:Y:484:GLN:HE22	1.61	0.66
8:B:534:HIS:HD2	8:B:536:PHE:H	1.44	0.66
3:g:224:ALA:HA	3:g:227:ARG:HD3	1.78	0.66
8:a:578:ILE:HG22	8:a:1028:ILE:HD12	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:1101:ARG:HE	8:C:199:ASN:HD21	1.45	0.65
8:Y:182:THR:HG21	8:Y:1083:THR:HG21	1.78	0.65
8:Z:849:GLN:HE22	8:Z:871:PRO:HB2	1.62	0.65
8:C:1041:THR:HG22	8:C:1104:THR:HG23	1.79	0.65
8:a:642:ARG:NH2	8:Z:663:ASP:O	2.31	0.64
4:M:163:PHE:HB3	4:M:319:ASP:HA	1.80	0.64
8:Y:583:ARG:HH21	8:Z:997:THR:HG23	1.63	0.64
4:M:455:GLN:NE2	8:C:1119:MET:SD	2.72	0.63
8:Z:102:SER:HB2	8:Z:106:LEU:HD23	1.80	0.63
8:C:1172:CYS:SG	8:C:1173:GLU:N	2.71	0.63
8:a:798:CYS:SG	8:a:799:GLY:N	2.71	0.63
8:C:1244:TYR:HA	8:C:1249:ARG:HH21	1.63	0.63
7:j:66:ARG:NH2	8:a:884:GLN:O	2.32	0.62
8:Z:600:THR:HG22	8:Z:644:LEU:HB2	1.81	0.62
1:I:114:LEU:HD23	1:I:185:PRO:HD2	1.82	0.62
4:M:481:VAL:HG21	5:O:34:LEU:HD22	1.81	0.62
8:D:139:LEU:HD22	8:D:160:VAL:HG21	1.80	0.62
8:a:86:LEU:HA	8:Z:50:PHE:HB2	1.82	0.61
8:Y:216:LEU:HD11	8:Y:1200:LEU:HG	1.82	0.61
7:S:25:VAL:HG13	7:S:26:LEU:HD12	1.82	0.61
8:B:1327:THR:HG23	8:B:1355:VAL:HG12	1.83	0.61
3:m:136:LYS:HG3	3:m:137:THR:HG23	1.83	0.61
1:n:102:TRP:H	1:n:297:ASN:HD21	1.49	0.61
8:C:446:LEU:HD11	8:C:1021:VAL:HG22	1.82	0.61
6:1:174:VAL:HG13	6:1:175:ARG:HH12	1.65	0.61
8:a:518:VAL:HG23	8:a:519:THR:HG23	1.82	0.61
8:C:1279:PHE:HA	8:C:1282:ILE:HD12	1.83	0.61
8:B:900:ASP:HB3	8:B:903:GLN:H	1.66	0.60
8:B:58:CYS:SG	8:B:59:ASN:N	2.74	0.60
8:Y:1106:MET:SD	8:Y:1363:GLN:NE2	2.74	0.60
8:C:716:TRP:O	8:C:914:GLN:NE2	2.34	0.60
4:M:524:TYR:HB2	4:M:532:TYR:HB2	1.83	0.60
6:1:240:ARG:HA	6:1:251:ARG:HH21	1.66	0.60
8:a:182:THR:HG21	8:a:1083:THR:HG21	1.83	0.60
8:B:555:ARG:HB3	8:B:560:ASN:HB3	1.84	0.60
8:B:786:LEU:HD11	8:B:987:LEU:HG	1.82	0.60
3:m:188:ILE:HG12	3:m:248:ILE:HG22	1.84	0.60
7:S:58:CYS:SG	8:C:805:LYS:NZ	2.73	0.60
8:B:632:ALA:HB2	8:B:661:LEU:HD11	1.83	0.59
3:m:66:LEU:HB2	3:m:84:LEU:HB2	1.84	0.59
8:C:514:GLN:HE22	8:C:990:PRO:HD3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:663:ASP:O	8:D:642:ARG:NH2	2.34	0.59
8:a:690:LEU:H	8:a:694:ASN:HD21	1.50	0.59
8:B:329:LYS:HE3	8:B:1077:VAL:HG11	1.83	0.59
8:D:682:ARG:HE	8:D:780:LEU:HD11	1.66	0.59
8:a:1122:TYR:HB2	8:a:1128:ASP:HB2	1.82	0.59
8:B:390:ASP:HB2	8:B:1313:ASN:HB3	1.83	0.59
8:Z:76:HIS:HD2	8:Z:78:ILE:HD11	1.67	0.59
8:C:988:ARG:HB2	8:C:990:PRO:HD2	1.85	0.59
8:a:95:VAL:HG12	8:Z:59:ASN:HB2	1.85	0.59
8:C:174:GLY:HA3	8:D:101:ALA:HB3	1.85	0.59
8:Z:1244:TYR:HA	8:Z:1249:ARG:HH21	1.68	0.59
8:a:605:ASN:HB3	8:Z:662:ALA:HB1	1.85	0.59
8:C:130:GLU:HG2	8:C:1074:THR:HG22	1.83	0.59
8:Z:534:HIS:O	8:Z:555:ARG:NH1	2.36	0.59
1:h:206:MET:HE1	3:g:234:ARG:HG2	1.85	0.58
4:M:514:TRP:HB2	4:M:520:VAL:HG21	1.84	0.58
8:Y:459:PRO:HA	8:Y:462:GLN:HG2	1.86	0.58
8:B:177:HIS:HD1	8:B:376:TYR:HH	1.52	0.58
8:Y:1292:CYS:HB3	8:Y:1310:LEU:HD23	1.84	0.58
1:h:67:ASN:ND2	8:a:1147:THR:OG1	2.37	0.58
8:B:1264:GLN:NE2	8:B:1315:CYS:SG	2.77	0.58
4:M:330:TRP:HB3	4:M:337:ARG:HH12	1.69	0.58
7:R:26:LEU:O	8:B:813:TYR:OH	2.21	0.58
4:M:117:GLU:HG2	4:M:118:LYS:HG2	1.84	0.58
8:a:120:SER:OG	8:a:1082:ASN:OD1	2.21	0.58
2:P:2230:ASP:OD1	5:O:71:ARG:NH1	2.36	0.58
7:S:50:MET:HE3	8:C:754:VAL:HG11	1.85	0.58
8:Y:708:ASN:HA	8:Y:1013:TYR:HA	1.86	0.58
8:Y:1244:TYR:HA	8:Y:1249:ARG:HH21	1.67	0.58
2:H:2225:ALA:HB1	5:N:76:CYS:HB2	1.85	0.58
1:h:272:PHE:HB3	1:h:276:ARG:HH11	1.69	0.57
8:B:1172:CYS:SG	8:B:1173:GLU:N	2.77	0.57
8:Z:1342:GLY:H	8:Z:1364:GLN:HE21	1.52	0.57
8:B:277:ALA:HA	8:B:371:ASN:HD21	1.67	0.57
8:B:1038:ARG:NH1	8:B:1107:GLY:O	2.37	0.57
8:B:1156:MET:SD	8:B:1294:ARG:NH2	2.76	0.57
8:Y:1101:ARG:HH21	8:Z:202:LEU:HG	1.69	0.57
8:Z:1069:ARG:NH2	8:Z:1072:SER:OG	2.37	0.57
1:h:48:LEU:HD21	1:h:65:LEU:HD13	1.87	0.57
8:a:198:GLU:O	8:Z:1101:ARG:NH1	2.38	0.57
8:a:409:THR:OG1	8:Z:1338:LYS:NZ	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:575:THR:HG21	8:B:1007:THR:HA	1.85	0.57
8:C:807:LEU:O	8:C:811:LEU:HB2	2.05	0.57
8:Z:58:CYS:SG	8:Z:59:ASN:N	2.75	0.57
8:B:499:TYR:O	8:B:502:ARG:NH1	2.38	0.57
1:n:59:VAL:HG21	1:n:193:LEU:HB2	1.87	0.57
1:I:7:ASN:HB3	1:I:82:LEU:HD11	1.87	0.57
8:a:945:ASN:ND2	8:a:947:THR:OG1	2.38	0.57
8:a:1228:THR:HG22	8:a:1230:ASN:H	1.69	0.57
8:Y:631:VAL:HA	8:Y:634:CYS:HB3	1.87	0.57
8:Z:634:CYS:O	8:Z:638:MET:HB2	2.05	0.57
6:1:177:ASN:ND2	6:1:180:CYS:SG	2.78	0.57
7:j:43:MET:HA	7:j:46:LYS:HE2	1.85	0.57
1:I:214:LEU:HD21	1:I:267:ARG:HD3	1.87	0.56
1:I:214:LEU:HD11	1:I:267:ARG:HB3	1.86	0.56
4:M:150:ARG:NH1	4:M:160:ASP:OD2	2.38	0.56
8:Z:210:ILE:O	8:Z:214:ASN:ND2	2.37	0.56
8:a:202:LEU:HD11	8:Z:1043:GLU:HG2	1.86	0.56
8:a:747:ARG:HB2	8:a:767:PHE:HB3	1.87	0.56
8:B:544:GLU:HB3	8:B:547:GLU:HB3	1.87	0.56
8:C:8:GLU:HB3	8:C:45:ARG:HH11	1.70	0.56
8:C:212:ARG:HH22	8:C:1204:PRO:HD3	1.69	0.56
8:C:1064:VAL:HG22	8:C:1077:VAL:HG12	1.87	0.56
1:I:93:THR:HG22	1:I:301:THR:HG22	1.88	0.56
3:m:93:ASN:ND2	3:m:170:ASP:O	2.38	0.56
6:1:73:LEU:HD13	6:1:214:ARG:HH21	1.69	0.56
8:a:317:SER:O	8:Z:3:ASN:ND2	2.38	0.56
8:D:1064:VAL:HG22	8:D:1077:VAL:HG12	1.87	0.56
8:Y:747:ARG:NH2	8:Y:918:TYR:OH	2.38	0.56
8:Y:816:ALA:O	8:Y:877:ARG:NH2	2.38	0.56
1:o:101:THR:OG1	1:o:297:ASN:ND2	2.38	0.56
8:B:1239:LEU:O	8:B:1243:LEU:HB2	2.05	0.56
8:D:297:SER:HB2	8:D:352:LEU:HD12	1.87	0.56
8:Z:275:SER:OG	8:Z:276:THR:N	2.38	0.56
8:Z:820:MET:SD	8:Z:877:ARG:NH1	2.78	0.56
4:M:388:GLN:HA	4:M:539:PHE:HA	1.88	0.56
8:a:480:GLU:HB3	8:a:482:ARG:HH12	1.71	0.56
8:a:524:VAL:O	8:a:1218:ARG:NH1	2.37	0.56
8:a:669:GLN:O	8:a:673:HIS:ND1	2.35	0.56
8:B:694:ASN:ND2	8:B:695:ASN:OD1	2.38	0.56
8:C:231:ASN:O	8:C:1369:ASN:ND2	2.39	0.56
8:C:605:ASN:O	8:C:642:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:538:ASP:OD2	8:D:988:ARG:NH1	2.39	0.56
8:Y:1193:ARG:NH1	8:Y:1195:ARG:O	2.39	0.56
1:o:106:ASP:OD1	3:m:69:ARG:NH2	2.39	0.56
7:i:19:ARG:HD2	7:i:23:ASN:HD21	1.71	0.56
7:i:65:LEU:HB3	8:Z:883:VAL:HG11	1.86	0.56
8:a:807:LEU:O	8:a:811:LEU:HB2	2.05	0.56
8:Y:1289:ALA:O	8:Y:1316:ARG:NH1	2.38	0.56
1:n:149:ARG:NH1	1:n:172:LEU:O	2.39	0.56
7:T:58:CYS:HB2	8:D:805:LYS:HE3	1.86	0.56
8:a:712:ASP:O	8:a:782:LYS:NZ	2.38	0.56
8:a:915:HIS:NE2	8:a:978:ALA:O	2.38	0.56
8:Y:1327:THR:HG21	8:Y:1333:MET:HG2	1.88	0.56
1:n:160:ARG:NH1	1:n:164:GLU:OE2	2.39	0.56
8:a:101:ALA:HB3	8:Z:174:GLY:HA3	1.88	0.56
8:a:1059:ILE:HG22	8:a:1081:ILE:HG12	1.88	0.56
8:C:687:ILE:HG12	8:C:1006:MET:HE1	1.88	0.56
8:D:638:MET:HE3	8:D:864:VAL:HA	1.87	0.56
8:Y:174:GLY:HA3	8:Z:101:ALA:HB3	1.86	0.56
4:M:95:ARG:HB3	4:M:129:PHE:HB2	1.88	0.56
1:h:274:MET:HE1	3:g:290:VAL:HG21	1.86	0.56
1:I:62:ARG:NH2	1:I:284:GLU:OE1	2.39	0.56
3:g:165:LEU:N	3:g:276:LEU:O	2.39	0.56
3:g:254:CYS:SG	3:g:255:LEU:N	2.78	0.56
8:B:1041:THR:HG23	8:B:1103:ARG:HB3	1.87	0.56
8:Z:565:LEU:HD22	8:Z:1177:THR:HG21	1.88	0.56
8:C:936:PRO:HB3	8:C:952:LEU:HD13	1.88	0.55
8:D:451:HIS:HE1	8:D:1120:ASN:HB2	1.71	0.55
1:h:150:LEU:HD21	1:h:184:ILE:HG12	1.88	0.55
8:B:192:VAL:HA	8:B:219:PHE:HE1	1.72	0.55
8:B:505:VAL:HG11	8:B:974:PRO:HB3	1.87	0.55
8:C:445:ALA:HA	8:C:1110:VAL:HG11	1.88	0.55
8:D:1327:THR:HG21	8:D:1333:MET:HB2	1.88	0.55
8:Y:3:ASN:ND2	8:Z:317:SER:O	2.40	0.55
8:Z:575:THR:HG21	8:Z:1007:THR:HA	1.88	0.55
8:Z:889:HIS:O	8:Z:891:LYS:NZ	2.38	0.55
8:Z:1195:ARG:NH1	8:Z:1227:ALA:O	2.39	0.55
8:C:947:THR:HG22	8:C:967:HIS:HE1	1.71	0.55
8:Y:1156:MET:SD	8:Y:1294:ARG:NH1	2.80	0.55
8:Y:1285:TYR:HA	8:Y:1289:ALA:HB3	1.86	0.55
1:n:277:GLN:HE22	3:m:220:ARG:HH21	1.55	0.55
8:D:79:LYS:HE3	8:D:304:ASN:HB3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:1247:ARG:O	8:Y:1251:ARG:NH1	2.40	0.55
8:Z:558:ILE:HD11	8:Z:1031:GLY:HA3	1.88	0.55
1:h:152:ILE:HD12	1:I:268:LEU:HB3	1.88	0.55
8:B:891:LYS:O	8:B:918:TYR:HB3	2.07	0.55
8:Z:311:ASN:ND2	8:Z:322:LEU:O	2.39	0.55
3:g:91:ALA:O	3:g:99:ARG:NH2	2.39	0.55
8:a:945:ASN:HD22	8:a:948:ILE:HG12	1.71	0.55
8:Y:49:HIS:O	8:Z:319:HIS:ND1	2.40	0.55
7:S:70:VAL:HG12	8:C:884:GLN:HG3	1.87	0.55
8:a:209:ARG:NH2	8:a:1203:ASP:OD2	2.39	0.55
8:a:1336:LYS:NZ	8:a:1346:THR:OG1	2.40	0.55
8:D:701:GLU:HG2	8:D:714:ARG:HH12	1.72	0.55
8:Z:1191:ASN:ND2	8:Z:1195:ARG:O	2.40	0.55
1:I:35:PRO:HA	1:I:68:MET:HG2	1.88	0.54
8:a:1185:TYR:HA	8:a:1190:ASN:HD22	1.71	0.54
8:a:792:MET:HE3	8:a:1005:VAL:HG22	1.88	0.54
8:D:478:LEU:HD11	8:D:509:VAL:HG13	1.89	0.54
8:Z:681:LEU:HD22	8:Z:783:VAL:HG13	1.89	0.54
4:M:571:HIS:HD2	4:M:576:ARG:HH11	1.53	0.54
8:a:627:ILE:HD11	8:a:882:ALA:HB2	1.90	0.54
8:a:927:PRO:HD2	8:a:952:LEU:HD21	1.89	0.54
8:a:1149:SER:HA	8:a:1152:THR:HG22	1.88	0.54
4:M:322:HIS:O	8:a:737:GLN:NE2	2.41	0.54
8:a:723:LEU:HD13	8:a:768:VAL:HG23	1.89	0.54
8:a:1176:LEU:HD21	8:a:1233:ALA:HB2	1.90	0.54
8:B:712:ASP:O	8:B:782:LYS:NZ	2.38	0.54
3:g:93:ASN:ND2	3:g:170:ASP:O	2.40	0.54
8:a:812:PHE:HE1	8:a:857:LEU:HD11	1.72	0.54
8:D:231:ASN:O	8:D:1369:ASN:ND2	2.41	0.54
1:n:147:ASN:ND2	1:n:284:GLU:OE1	2.41	0.54
7:S:66:ARG:NH1	8:C:751:VAL:O	2.41	0.54
8:B:1196:ALA:HB2	8:B:1223:GLN:HB2	1.89	0.54
8:B:1325:LEU:HB2	8:B:1358:GLU:HB2	1.89	0.54
8:C:263:THR:HG22	8:C:296:VAL:HG12	1.88	0.54
1:n:273:VAL:HG13	3:m:288:GLU:HG3	1.90	0.54
1:o:76:VAL:HG12	1:o:81:ILE:HG23	1.89	0.54
8:D:433:ARG:NH1	8:D:1102:VAL:O	2.41	0.54
8:Z:228:PHE:H	8:Z:232:ARG:HH21	1.55	0.54
8:Z:1289:ALA:HB1	8:Z:1316:ARG:HG2	1.89	0.54
8:B:651:TYR:HA	8:B:654:VAL:HG22	1.90	0.54
8:B:1182:ASP:OD1	8:B:1182:ASP:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:225:ALA:O	8:Y:232:ARG:NH1	2.41	0.54
8:Y:662:ALA:HB1	8:Z:605:ASN:HD22	1.73	0.54
8:Z:638:MET:HG2	8:Z:646:VAL:HB	1.90	0.54
6:1:79:GLU:OE1	6:1:83:ARG:NH1	2.41	0.54
8:B:489:GLY:O	8:B:494:ARG:NH2	2.41	0.54
8:B:798:CYS:SG	8:B:799:GLY:N	2.81	0.54
8:C:491:ALA:HA	8:C:494:ARG:HG2	1.88	0.54
8:D:1112:ASP:OD1	8:D:1112:ASP:N	2.41	0.54
8:Y:574:ARG:NH2	8:Y:1010:ALA:O	2.41	0.54
8:a:1334:GLU:O	8:a:1338:LYS:HB2	2.08	0.54
8:B:502:ARG:HH21	8:B:958:ARG:HD2	1.73	0.54
1:o:8:ILE:HB	1:o:83:LEU:HB2	1.89	0.53
8:B:770:ASP:HB3	8:B:772:ARG:HH21	1.72	0.53
8:C:433:ARG:HE	8:D:217:GLN:HG3	1.73	0.53
8:Y:732:VAL:HG12	8:Y:895:VAL:HG12	1.90	0.53
8:a:996:ALA:O	8:Z:686:ARG:NH2	2.41	0.53
8:a:1156:MET:HG2	8:a:1257:LYS:HG2	1.89	0.53
8:Z:249:ALA:HB3	8:Z:1093:ASN:HD21	1.73	0.53
6:1:136:ALA:HB1	6:1:157:VAL:HG21	1.90	0.53
8:a:497:HIS:HA	8:a:500:ARG:HD2	1.89	0.53
8:B:8:GLU:OE1	8:Z:162:ARG:NH1	2.41	0.53
8:Y:87:THR:HG22	8:Y:88:THR:HG23	1.89	0.53
8:Y:273:MET:HE3	8:Y:367:VAL:HG11	1.90	0.53
1:n:37:ARG:NH1	1:n:69:THR:OG1	2.40	0.53
8:a:138:TYR:O	8:a:153:ASN:ND2	2.42	0.53
8:a:625:LEU:HA	8:a:628:ARG:HG3	1.90	0.53
8:Z:182:THR:HG21	8:Z:1083:THR:HG21	1.89	0.53
8:Z:599:THR:O	8:Z:603:SER:OG	2.26	0.53
4:M:316:GLU:OE1	4:M:327:ARG:NH1	2.41	0.53
8:B:295:THR:HA	8:B:355:LEU:O	2.08	0.53
8:C:92:LEU:HD23	8:Z:7:LEU:HD22	1.89	0.53
1:o:71:THR:HG21	1:o:83:LEU:HD13	1.90	0.53
8:a:77:ALA:HB1	8:a:302:TYR:HD1	1.74	0.53
1:n:291:CYS:HG	1:n:301:THR:HG1	1.53	0.53
4:M:172:GLU:OE2	4:M:313:ARG:NH1	2.42	0.53
7:T:75:ARG:NH1	8:D:625:LEU:O	2.41	0.53
8:C:740:ASN:OD1	8:C:740:ASN:N	2.36	0.53
8:Z:694:ASN:ND2	8:Z:704:SER:OG	2.41	0.53
8:B:1027:HIS:HD2	8:C:517:VAL:HG21	1.74	0.53
8:Y:85:LYS:O	8:Y:319:HIS:NE2	2.40	0.53
8:Y:556:ILE:HG21	8:Y:986:TRP:HZ3	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:668:PRO:HB2	8:Z:643:GLN:HG2	1.91	0.53
8:Y:1316:ARG:O	8:Y:1319:GLN:NE2	2.42	0.53
8:C:756:ARG:NH2	8:C:888:GLU:OE1	2.41	0.53
8:Z:681:LEU:HB3	8:Z:780:LEU:HD22	1.90	0.53
8:Z:718:PRO:HD2	8:Z:785:TYR:HB3	1.90	0.53
4:M:531:PHE:O	4:M:542:SER:HA	2.09	0.52
8:a:1234:SER:HG	8:a:1235:GLN:H	1.58	0.52
8:B:495:ILE:HG12	8:B:976:PRO:HG2	1.91	0.52
8:Y:82:ASP:OD1	8:Y:82:ASP:N	2.43	0.52
8:B:413:LYS:HE2	8:B:1335:THR:HG23	1.91	0.52
8:C:1161:ALA:O	8:D:209:ARG:NH1	2.42	0.52
8:C:1268:THR:HA	8:C:1271:ILE:HB	1.91	0.52
3:g:91:ALA:O	3:g:199:ARG:NH2	2.42	0.52
4:M:372:ARG:HD3	4:M:415:MET:HG3	1.92	0.52
8:C:558:ILE:HD11	8:C:1031:GLY:HA3	1.91	0.52
1:n:283:ARG:NH1	1:o:279:ASP:OD2	2.42	0.52
4:M:556:ARG:HH21	4:M:560:GLN:HG3	1.74	0.52
8:C:955:ASP:OD1	8:C:958:ARG:NH2	2.43	0.52
8:Z:138:TYR:O	8:Z:153:ASN:ND2	2.43	0.52
8:Z:1182:ASP:OD1	8:Z:1182:ASP:N	2.40	0.52
8:C:151:ILE:HD12	8:D:332:LEU:HG	1.90	0.52
8:C:578:ILE:HG12	8:C:1028:ILE:HD12	1.91	0.52
8:C:925:THR:HA	8:C:948:ILE:HD12	1.91	0.52
3:m:262:SER:OG	3:m:263:PHE:N	2.43	0.52
8:B:93:PHE:HB3	8:B:95:VAL:HG23	1.92	0.52
8:B:451:HIS:HE2	8:B:1114:PHE:HA	1.75	0.52
8:B:669:GLN:O	8:B:673:HIS:ND1	2.37	0.52
8:D:249:ALA:HB3	8:D:1093:ASN:HD21	1.75	0.52
8:Y:1185:TYR:OH	8:Y:1191:ASN:O	2.25	0.52
1:o:151:LEU:HD21	1:o:281:LEU:HD13	1.91	0.52
4:M:166:ARG:HD3	4:M:350:LEU:HD11	1.92	0.52
4:M:431:ARG:NH2	4:M:527:PRO:O	2.42	0.52
7:R:66:ARG:HG3	7:R:67:MET:HE2	1.92	0.52
8:a:931:ILE:HD12	8:a:952:LEU:HD13	1.92	0.52
8:C:190:TYR:OH	8:C:194:GLN:NE2	2.39	0.52
8:C:487:PRO:O	8:C:494:ARG:NH1	2.43	0.52
8:Y:805:LYS:HB3	8:Y:889:HIS:HE1	1.75	0.52
8:B:620:ASN:ND2	8:B:769:ASP:OD2	2.43	0.52
8:D:382:LYS:NZ	8:D:386:GLU:O	2.43	0.52
1:n:121:ARG:HH21	1:n:123:ASN:HA	1.75	0.51
1:o:62:ARG:NH1	1:o:280:ASP:O	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:M:387:PRO:HA	5:N:23:VAL:HG12	1.92	0.51
8:B:609:LEU:HD22	8:B:861:VAL:HG12	1.92	0.51
8:C:1054:CYS:SG	8:C:1055:THR:N	2.83	0.51
8:C:1289:ALA:O	8:C:1316:ARG:NH1	2.43	0.51
1:n:207:VAL:HG23	1:n:271:LEU:HD11	1.91	0.51
4:M:400:TRP:HE3	4:M:403:VAL:HG11	1.75	0.51
7:T:37:HIS:NE2	8:D:818:LEU:O	2.42	0.51
8:B:1162:ALA:O	8:C:209:ARG:NH2	2.39	0.51
8:C:433:ARG:NH2	8:C:1104:THR:O	2.42	0.51
1:I:40:LEU:HD21	8:B:124:PRO:HG2	1.93	0.51
8:a:391:LEU:HB2	8:a:1042:PHE:HE2	1.75	0.51
8:a:1003:HIS:HA	8:a:1006:MET:HG2	1.92	0.51
8:C:341:ASN:HB3	8:C:346:GLN:HE21	1.75	0.51
8:C:524:VAL:HG22	8:C:1227:ALA:HB2	1.92	0.51
8:D:529:LEU:HD21	8:D:1228:THR:HG22	1.91	0.51
8:Y:1223:GLN:NE2	8:Y:1320:GLU:OE2	2.43	0.51
1:o:240:ARG:HD3	3:m:235:ILE:HD11	1.91	0.51
4:M:388:GLN:O	4:M:389:ARG:NH1	2.41	0.51
6:1:29:VAL:HG22	6:1:177:ASN:HA	1.92	0.51
8:Y:1128:ASP:OD1	8:Y:1132:ARG:NH2	2.42	0.51
8:Z:693:LEU:HB3	8:Z:1022:LEU:HD12	1.92	0.51
8:Z:1292:CYS:SG	8:Z:1293:ILE:N	2.83	0.51
5:O:65:LEU:HA	5:O:68:LEU:HG	1.92	0.51
7:S:52:SER:OG	7:S:53:LEU:N	2.44	0.51
7:j:26:LEU:HD13	7:j:64:LEU:HD22	1.93	0.51
1:h:283:ARG:NH2	1:I:279:ASP:OD2	2.44	0.51
1:I:177:PHE:HB3	1:I:180:ALA:HB3	1.93	0.51
1:n:125:LEU:HD13	1:n:132:LEU:HB3	1.93	0.51
6:1:271:LEU:O	6:1:278:TYR:OH	2.29	0.51
8:D:681:LEU:HD21	8:D:788:LEU:HD22	1.92	0.51
1:n:158:LEU:HD11	1:n:197:MET:HE3	1.92	0.51
7:S:72:ARG:NH1	8:C:820:MET:O	2.44	0.51
8:a:237:ASP:OD1	8:a:237:ASP:N	2.41	0.51
8:D:324:ASP:HB2	8:D:343:SER:HB3	1.92	0.51
8:Y:66:PHE:HA	8:Y:176:ILE:HD11	1.93	0.51
8:Z:419:THR:HG22	8:Z:421:ARG:H	1.76	0.51
8:Z:572:GLU:HG2	8:Z:1007:THR:HG21	1.92	0.51
1:h:206:MET:HE2	1:h:210:LEU:HD23	1.93	0.51
7:j:47:TYR:OH	7:j:60:PHE:O	2.25	0.51
8:D:1284:GLU:OE2	8:D:1288:ARG:NH1	2.43	0.51
8:Y:646:VAL:O	8:Y:674:TYR:OH	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:1195:ARG:HG2	8:Y:1234:SER:HB2	1.92	0.51
1:n:149:ARG:HB3	1:n:172:LEU:HD21	1.93	0.51
1:o:104:LYS:NZ	1:o:291:CYS:O	2.44	0.51
4:M:512:ARG:NH2	8:a:546:SER:O	2.42	0.51
8:D:180:LEU:HD23	8:D:384:PRO:HG2	1.93	0.51
8:D:1062:PRO:HA	8:D:1078:THR:O	2.10	0.51
8:a:115:MET:HE3	8:B:36:ARG:HB3	1.92	0.50
8:B:681:LEU:HD22	8:B:783:VAL:HG13	1.93	0.50
8:B:804:LEU:O	8:B:808:LEU:HB2	2.11	0.50
8:B:275:SER:OG	8:B:276:THR:N	2.44	0.50
8:C:93:PHE:HB2	8:C:116:VAL:HG13	1.93	0.50
8:D:740:ASN:OD1	8:D:740:ASN:N	2.45	0.50
8:Z:747:ARG:NH2	8:Z:888:GLU:OE2	2.44	0.50
1:o:29:ALA:O	1:o:95:LEU:N	2.42	0.50
1:o:105:GLY:H	1:o:290:VAL:HG23	1.76	0.50
8:a:507:ARG:NH1	8:a:515:ASP:OD2	2.43	0.50
8:B:38:TYR:OH	8:B:45:ARG:NH1	2.39	0.50
8:B:853:VAL:HG22	8:B:857:LEU:HD13	1.93	0.50
8:C:36:ARG:NH2	8:C:44:GLU:OE1	2.44	0.50
8:D:477:ARG:NH2	8:D:512:MET:SD	2.84	0.50
8:Y:617:VAL:HG11	8:Y:653:LEU:HD21	1.93	0.50
8:Z:719:PHE:HE1	8:Z:917:LEU:HD12	1.77	0.50
1:n:40:LEU:O	8:a:105:GLY:N	2.43	0.50
8:Y:774:THR:OG1	8:Y:777:GLU:OE2	2.24	0.50
1:n:121:ARG:NH2	1:n:122:GLU:O	2.44	0.50
7:R:75:ARG:NH1	8:B:625:LEU:O	2.39	0.50
8:B:487:PRO:O	8:B:494:ARG:NH1	2.44	0.50
8:B:796:ARG:O	8:B:945:ASN:ND2	2.45	0.50
8:B:936:PRO:HB3	8:B:952:LEU:HD12	1.93	0.50
8:C:1284:GLU:OE2	8:C:1288:ARG:NH2	2.45	0.50
8:Z:534:HIS:HD2	8:Z:536:PHE:H	1.58	0.50
8:Z:615:VAL:HG21	8:Z:802:LEU:HD23	1.93	0.50
8:Z:753:ASP:OD2	8:Z:753:ASP:N	2.41	0.50
2:P:2236:ARG:HH22	5:N:68:LEU:HB2	1.76	0.50
8:B:849:GLN:HB2	8:B:873:LEU:HD23	1.94	0.50
8:C:592:GLU:OE1	8:C:595:ARG:NH1	2.45	0.50
1:I:229:MET:HA	1:I:232:VAL:HG22	1.94	0.50
3:g:66:LEU:HD11	3:g:165:LEU:HD21	1.94	0.50
8:a:1313:ASN:HB3	8:a:1316:ARG:HE	1.77	0.50
8:C:216:LEU:HD13	8:C:1200:LEU:HD22	1.93	0.50
8:D:1111:GLN:NE2	8:D:1112:ASP:OD1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:940:HIS:O	8:Y:944:SER:OG	2.26	0.50
8:Z:36:ARG:NH2	8:Z:44:GLU:OE2	2.45	0.50
1:h:184:ILE:HD12	1:h:185:PRO:HD2	1.93	0.50
8:a:1038:ARG:NH1	8:a:1107:GLY:O	2.45	0.50
8:Y:681:LEU:HD22	8:Y:783:VAL:HG13	1.92	0.50
8:Z:142:THR:OG1	8:Z:149:ASP:OD2	2.26	0.50
3:g:72:THR:HG21	3:g:80:LEU:HD23	1.94	0.50
8:a:83:LEU:HD21	8:a:1082:ASN:HB2	1.94	0.50
8:a:384:PRO:O	8:a:387:ARG:NH2	2.45	0.50
8:C:688:SER:OG	8:C:708:ASN:ND2	2.45	0.50
8:Z:703:LEU:HA	8:Z:706:TYR:HD2	1.77	0.50
1:I:58:TYR:OH	1:I:62:ARG:NH1	2.44	0.49
3:m:258:ASP:OD1	3:m:258:ASP:N	2.43	0.49
4:M:378:VAL:HG21	4:M:543:SER:HB3	1.93	0.49
8:a:452:PRO:HB2	8:a:1120:ASN:HB3	1.94	0.49
8:Z:790:PRO:HA	8:Z:793:THR:HG22	1.93	0.49
8:Z:1157:SER:OG	8:Z:1255:ASN:ND2	2.45	0.49
4:M:454:PRO:HA	4:M:457:LEU:HB2	1.95	0.49
8:Y:618:HIS:NE2	8:Y:886:VAL:O	2.45	0.49
8:Z:594:LEU:HD12	8:Z:792:MET:HE3	1.93	0.49
1:h:189:ILE:HG23	1:h:193:LEU:HD23	1.94	0.49
1:n:10:CYS:HB3	1:n:81:ILE:HB	1.94	0.49
8:B:1091:THR:OG1	8:B:1092:SER:N	2.45	0.49
8:C:225:ALA:O	8:C:232:ARG:NH1	2.42	0.49
8:C:1035:THR:HB	8:C:1176:LEU:HD22	1.93	0.49
8:Y:717:PRO:HB3	8:Y:782:LYS:HA	1.93	0.49
8:Y:775:ASP:N	8:Y:775:ASP:OD1	2.43	0.49
8:Z:1121:VAL:HG12	8:Z:1132:ARG:HH12	1.77	0.49
8:a:610:CYS:O	8:a:614:ASP:HB2	2.12	0.49
8:B:41:ASP:N	8:B:41:ASP:OD1	2.44	0.49
8:B:273:MET:HE2	8:B:1049:TYR:HB2	1.94	0.49
8:D:416:LEU:HD13	8:D:422:ASN:HB3	1.93	0.49
8:Y:1298:ASP:OD1	8:Y:1298:ASP:N	2.41	0.49
1:h:73:MET:HB3	1:h:81:ILE:HD11	1.93	0.49
7:T:73:THR:O	7:T:74:ARG:NE	2.45	0.49
8:B:695:ASN:ND2	8:C:511:GLU:OE2	2.38	0.49
8:B:816:ALA:O	8:B:877:ARG:NH1	2.35	0.49
8:D:624:PHE:HA	8:D:627:ILE:HG22	1.93	0.49
8:D:1247:ARG:HE	8:D:1269:GLU:HG3	1.77	0.49
8:B:404:ASP:OD1	8:B:405:ARG:NH2	2.45	0.49
8:B:484:GLN:O	8:B:981:HIS:NE2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:275:SER:OG	8:D:276:THR:N	2.46	0.49
8:Y:311:ASN:ND2	8:Y:322:LEU:O	2.44	0.49
8:Z:420:VAL:HG11	8:Z:576:TRP:HB3	1.94	0.49
8:Z:507:ARG:HE	8:Z:512:MET:HE1	1.78	0.49
7:T:43:MET:HE3	7:T:46:LYS:HG2	1.95	0.49
8:a:478:LEU:HD11	8:a:530:TYR:HE1	1.77	0.49
8:a:953:SER:OG	8:a:954:ASP:N	2.45	0.49
8:B:547:GLU:HG3	8:B:549:VAL:HG13	1.94	0.49
8:C:608:GLU:OE2	8:C:929:THR:OG1	2.30	0.49
8:C:675:ARG:HE	8:D:603:SER:HA	1.77	0.49
8:D:681:LEU:HB3	8:D:780:LEU:HD22	1.94	0.49
8:D:1110:VAL:HA	8:D:1171:ALA:HB3	1.94	0.49
8:Y:629:THR:O	8:Y:633:ARG:NH1	2.46	0.49
8:Z:800:LEU:HD22	8:Z:923:VAL:HB	1.93	0.49
8:B:542:CYS:SG	8:B:543:GLN:N	2.85	0.49
8:C:575:THR:HG22	8:C:1010:ALA:HB3	1.94	0.49
8:D:126:THR:HG22	8:D:128:PRO:HD3	1.94	0.49
8:Z:761:ASP:OD1	8:Z:761:ASP:N	2.43	0.49
8:Z:927:PRO:HB2	8:Z:930:LEU:HB2	1.94	0.49
1:I:159:ASP:OD1	1:I:159:ASP:N	2.43	0.49
8:a:218:SER:OG	8:a:222:LYS:NZ	2.39	0.49
8:B:509:VAL:HG12	8:B:513:LYS:HE3	1.95	0.49
8:C:558:ILE:HB	8:C:1015:ILE:HD11	1.95	0.49
8:C:908:PRO:HG3	8:C:1123:ARG:HH12	1.78	0.49
8:Y:323:ALA:HB3	8:Y:343:SER:HB2	1.95	0.49
8:Y:1286:LEU:O	8:Y:1290:LYS:NZ	2.46	0.49
8:Z:764:GLU:HG2	8:Z:765:PRO:HD3	1.94	0.49
1:I:229:MET:SD	1:I:229:MET:N	2.85	0.49
8:D:795:ASN:ND2	8:D:969:HIS:O	2.41	0.49
3:m:18:ASN:HB2	3:m:21:VAL:HG23	1.95	0.48
8:C:357:MET:HE3	8:C:358:ASP:H	1.78	0.48
8:Y:41:ASP:OD1	8:Y:41:ASP:N	2.44	0.48
8:Y:54:PHE:HB2	8:Z:91:MET:HG2	1.95	0.48
8:Y:130:GLU:HA	8:Y:1074:THR:HA	1.95	0.48
8:Y:668:PRO:HB3	8:Z:642:ARG:HA	1.94	0.48
8:a:502:ARG:NH1	8:a:962:GLU:OE1	2.46	0.48
8:D:694:ASN:HA	8:D:703:LEU:HD23	1.94	0.48
8:D:1193:ARG:HB3	8:D:1266:PHE:HE1	1.78	0.48
8:Z:176:ILE:HG21	8:Z:375:VAL:HG21	1.95	0.48
1:h:24:LEU:HD21	1:h:81:ILE:HD12	1.95	0.48
6:1:31:LEU:HB3	6:1:38:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:a:392:THR:HG22	8:a:1039:THR:HG22	1.94	0.48
8:a:810:ASP:O	8:a:814:ARG:NH1	2.43	0.48
8:Y:780:LEU:HA	8:Y:783:VAL:HG12	1.95	0.48
8:Y:1004:SER:HA	8:Y:1007:THR:HG22	1.95	0.48
8:Y:1054:CYS:SG	8:Y:1055:THR:N	2.86	0.48
8:Z:970:ASP:N	8:Z:970:ASP:OD1	2.45	0.48
1:n:280:ASP:O	3:m:213:GLN:NE2	2.47	0.48
8:B:252:ASP:N	8:B:252:ASP:OD1	2.46	0.48
8:Y:142:THR:OG1	8:Y:153:ASN:ND2	2.37	0.48
8:Y:970:ASP:OD1	8:Y:970:ASP:N	2.47	0.48
1:o:7:ASN:HA	1:o:83:LEU:O	2.13	0.48
1:o:93:THR:HG21	8:C:1071:ILE:HG22	1.95	0.48
3:m:121:GLY:HA3	3:m:128:ARG:HH22	1.78	0.48
8:B:1286:LEU:O	8:B:1290:LYS:NZ	2.45	0.48
8:D:635:ILE:HA	8:D:646:VAL:HG11	1.95	0.48
8:D:709:ALA:HB3	8:D:1012:LEU:HB3	1.96	0.48
3:m:68:ILE:HD12	3:m:131:THR:HG22	1.95	0.48
8:a:1153:PHE:HB2	8:a:1304:VAL:HG11	1.96	0.48
8:B:180:LEU:HD23	8:B:384:PRO:HG2	1.95	0.48
8:B:273:MET:HE3	8:B:367:VAL:HG11	1.95	0.48
8:B:396:PRO:HB2	8:B:399:LEU:HD23	1.96	0.48
8:C:1060:ASN:O	8:C:1079:GLN:NE2	2.45	0.48
1:I:56:ARG:NH2	8:B:1153:PHE:O	2.45	0.48
8:B:126:THR:HG23	8:B:1078:THR:HG22	1.95	0.48
8:B:1183:VAL:HG13	8:B:1187:LYS:HZ1	1.78	0.48
8:D:108:THR:OG1	8:D:109:SER:N	2.47	0.48
8:D:820:MET:HG2	8:D:877:ARG:HE	1.79	0.48
8:Y:503:ARG:HH21	8:Y:505:VAL:HA	1.78	0.48
1:I:23:LYS:HD3	1:I:125:LEU:HA	1.96	0.48
8:a:718:PRO:HD2	8:a:785:TYR:HB3	1.94	0.48
8:B:1064:VAL:HG22	8:B:1077:VAL:HG12	1.95	0.48
8:Y:878:GLU:HA	8:Y:881:LEU:HG	1.96	0.48
1:h:277:GLN:HG3	3:g:290:VAL:HG22	1.94	0.48
3:m:172:TYR:OH	3:m:179:ARG:NH2	2.46	0.48
8:B:388:ASN:HB2	8:B:1311:ILE:HG23	1.95	0.48
8:C:253:SER:HB3	8:C:1054:CYS:HA	1.96	0.48
8:D:1047:LEU:HD23	8:D:1097:ALA:HB2	1.96	0.48
8:D:1147:THR:O	8:D:1151:LEU:N	2.46	0.48
8:Y:229:LEU:HD11	8:Y:238:TYR:HE2	1.78	0.48
8:Y:393:PHE:HD2	8:Y:1038:ARG:HH21	1.62	0.48
1:o:62:ARG:NH2	1:o:284:GLU:OE1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:m:61:ALA:HA	3:m:138:VAL:HG11	1.95	0.48
4:M:132:LEU:HD21	4:M:149:LEU:HD23	1.94	0.48
8:a:1285:TYR:HA	8:a:1289:ALA:HB3	1.96	0.48
8:B:478:LEU:HD11	8:B:509:VAL:HG13	1.96	0.48
8:D:246:LEU:O	8:D:1093:ASN:ND2	2.47	0.48
8:D:661:LEU:HD21	8:D:666:LEU:HD21	1.96	0.48
8:D:1106:MET:SD	8:D:1363:GLN:NE2	2.87	0.48
8:Y:189:PRO:HA	8:Y:1094:THR:HB	1.95	0.48
8:Y:651:TYR:HB2	8:Y:784:PHE:CG	2.49	0.48
8:Y:681:LEU:HB3	8:Y:780:LEU:HD22	1.95	0.48
8:Z:396:PRO:HB2	8:Z:399:LEU:HD23	1.96	0.48
1:I:243:ARG:HH11	1:I:247:VAL:HB	1.79	0.47
6:1:129:LEU:HD22	6:1:204:VAL:HG23	1.95	0.47
6:1:253:ILE:HG23	6:1:270:LEU:HD23	1.95	0.47
8:B:427:THR:OG1	8:C:405:ARG:NH1	2.46	0.47
8:D:981:HIS:HB3	8:D:984:HIS:HB2	1.96	0.47
8:D:1294:ARG:HB2	8:D:1303:CYS:HA	1.96	0.47
8:Y:207:LEU:HD13	8:Y:212:ARG:HB3	1.95	0.47
7:T:28:LEU:HD12	7:T:29:PRO:HD2	1.96	0.47
8:a:438:GLN:HE22	8:a:1107:GLY:HA2	1.78	0.47
8:B:895:VAL:HG23	8:B:914:GLN:HB3	1.95	0.47
8:C:120:SER:HB3	8:C:1084:VAL:HG22	1.96	0.47
8:D:605:ASN:O	8:D:642:ARG:NH1	2.47	0.47
8:Z:801:GLY:N	8:Z:935:LEU:O	2.37	0.47
1:o:146:ILE:HD11	1:o:175:ILE:HD13	1.96	0.47
8:B:747:ARG:HH12	8:B:887:GLY:HA2	1.78	0.47
8:C:388:ASN:HB2	8:C:1311:ILE:HG23	1.96	0.47
8:D:450:CYS:O	8:D:1122:TYR:OH	2.29	0.47
8:Z:717:PRO:HD3	8:Z:782:LYS:HG3	1.96	0.47
8:B:1101:ARG:NH2	8:C:218:SER:OG	2.48	0.47
8:B:1290:LYS:HB2	8:B:1310:LEU:HD22	1.95	0.47
8:D:389:VAL:HG13	8:D:1044:VAL:HG21	1.97	0.47
3:g:64:GLY:O	3:g:85:TYR:OH	2.30	0.47
4:M:372:ARG:HA	4:M:375:ILE:HD12	1.97	0.47
7:i:28:LEU:HD12	7:i:29:PRO:HD2	1.96	0.47
8:a:553:THR:HG21	8:a:983:TYR:HB3	1.97	0.47
8:a:801:GLY:HA3	8:a:890:VAL:HG21	1.97	0.47
8:C:520:ASP:HA	8:C:523:LYS:HG3	1.96	0.47
8:C:693:LEU:HG	8:D:515:ASP:HB2	1.95	0.47
8:D:502:ARG:NH1	8:D:962:GLU:OE1	2.43	0.47
1:o:66:ARG:HD3	1:o:285:GLN:HE22	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:g:69:ARG:HH21	3:g:130:GLU:HG3	1.79	0.47
3:g:233:ARG:HA	3:g:236:THR:HG22	1.96	0.47
8:a:658:ALA:HB2	8:a:674:TYR:HB3	1.95	0.47
8:D:427:THR:OG1	8:D:440:ILE:O	2.33	0.47
8:Y:515:ASP:N	8:Y:515:ASP:OD1	2.47	0.47
8:Z:1248:HIS:CE1	8:Z:1251:ARG:HH22	2.32	0.47
8:Z:1290:LYS:HB2	8:Z:1310:LEU:HD23	1.96	0.47
1:h:105:GLY:H	1:h:290:VAL:HG23	1.80	0.47
1:o:178:ARG:HH22	3:m:79:HIS:CE1	2.31	0.47
3:m:78:ARG:O	3:m:79:HIS:ND1	2.47	0.47
4:M:96:VAL:HG22	4:M:128:VAL:HG12	1.97	0.47
5:O:63:GLN:HA	5:O:66:ARG:HD2	1.97	0.47
6:1:175:ARG:NE	6:1:216:SER:OG	2.43	0.47
8:a:1195:ARG:NH2	8:a:1221:ASP:OD1	2.47	0.47
8:B:127:ILE:HD12	8:B:128:PRO:HD2	1.97	0.47
8:B:413:LYS:HG3	8:B:414:VAL:HG13	1.97	0.47
8:B:610:CYS:HB3	8:B:649:HIS:HE1	1.80	0.47
8:C:399:LEU:HD11	8:C:1180:THR:HG22	1.97	0.47
8:D:182:THR:HG21	8:D:1083:THR:HG21	1.97	0.47
1:o:292:ASP:OD1	1:o:292:ASP:N	2.48	0.47
4:M:378:VAL:HA	4:M:381:ARG:HG2	1.96	0.47
8:a:254:ILE:HG23	8:B:15:ILE:HG21	1.96	0.47
8:B:140:ARG:HG2	8:B:141:GLU:HG2	1.97	0.47
8:B:605:ASN:HD22	8:B:642:ARG:HD3	1.79	0.47
8:C:393:PHE:HZ	8:C:1362:LEU:HD21	1.79	0.47
8:D:420:VAL:HG11	8:D:576:TRP:HB3	1.97	0.47
8:D:1105:ASP:HB2	8:D:1166:HIS:HB3	1.96	0.47
3:g:95:SER:OG	3:g:96:ALA:N	2.48	0.47
3:m:77:PRO:HD3	8:C:1150:MET:HG2	1.96	0.47
7:j:72:ARG:NH2	8:a:820:MET:O	2.48	0.47
8:a:1260:SER:HB3	8:a:1263:ALA:HB2	1.97	0.47
8:B:224:LEU:HD11	8:B:1189:PRO:HG2	1.97	0.47
8:B:941:ARG:NH1	8:B:971:GLY:O	2.48	0.47
8:C:611:TYR:O	8:C:614:ASP:HB3	2.15	0.47
8:D:215:ILE:HG21	8:D:1278:LEU:HD11	1.97	0.47
8:D:387:ARG:NH2	8:D:1310:LEU:O	2.44	0.47
8:Y:798:CYS:SG	8:Y:799:GLY:N	2.87	0.47
8:Z:981:HIS:O	8:Z:985:ASN:N	2.48	0.47
1:h:28:VAL:HG23	1:h:74:ARG:HA	1.96	0.47
1:h:61:LEU:HD12	1:h:64:LEU:HD11	1.97	0.47
3:m:91:ALA:O	3:m:99:ARG:NH2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:1122:TYR:HB2	8:B:1128:ASP:HB2	1.97	0.47
8:D:631:VAL:HG13	8:D:647:PHE:HE2	1.79	0.47
8:D:861:VAL:HG13	8:D:865:ALA:HB3	1.97	0.47
8:Y:169:ASP:OD2	8:Y:173:ARG:NH2	2.48	0.47
8:Y:263:THR:HB	8:Y:267:ALA:H	1.81	0.47
1:h:142:LEU:HD13	1:h:177:PHE:HB2	1.97	0.46
1:I:15:LYS:NZ	8:B:88:THR:OG1	2.46	0.46
3:m:236:THR:HG23	3:m:237:ARG:HG3	1.96	0.46
8:B:230:LEU:HD12	8:B:1098:TYR:HB2	1.98	0.46
8:C:145:GLY:O	8:C:150:LYS:NZ	2.43	0.46
8:Y:500:ARG:O	8:Y:502:ARG:NH1	2.48	0.46
8:Z:297:SER:HA	8:Z:353:THR:O	2.14	0.46
8:Z:518:VAL:HG22	8:Z:1179:VAL:HG21	1.97	0.46
8:Z:614:ASP:OD1	8:Z:649:HIS:NE2	2.48	0.46
3:m:183:GLN:HG2	3:m:256:ALA:HB2	1.97	0.46
8:B:1122:TYR:HE2	8:B:1131:ILE:HG21	1.81	0.46
8:Y:1182:ASP:OD1	8:Y:1182:ASP:N	2.43	0.46
8:Y:1336:LYS:NZ	8:Y:1343:ALA:O	2.48	0.46
8:Z:537:PHE:O	8:Z:555:ARG:NH1	2.48	0.46
1:o:48:LEU:HD22	1:o:61:LEU:HD21	1.97	0.46
1:o:178:ARG:HD3	3:m:78:ARG:HE	1.80	0.46
6:1:127:ARG:HA	6:1:130:VAL:HG22	1.96	0.46
7:S:62:LEU:HD11	8:C:808:LEU:HB3	1.97	0.46
8:a:1237:GLY:N	8:a:1241:ASP:OD2	2.47	0.46
8:B:82:ASP:OD1	8:B:82:ASP:N	2.49	0.46
8:B:780:LEU:HA	8:B:783:VAL:HG12	1.96	0.46
8:D:785:TYR:O	8:D:943:TYR:OH	2.31	0.46
8:Y:1238:CYS:SG	8:Y:1240:SER:OG	2.69	0.46
1:h:234:CYS:HB2	1:I:206:MET:HE3	1.97	0.46
1:I:292:ASP:OD2	1:I:292:ASP:N	2.48	0.46
3:m:153:TYR:OH	8:Z:1069:ARG:NH1	2.48	0.46
4:M:167:ASP:OD1	4:M:167:ASP:N	2.49	0.46
8:a:707:VAL:HG12	8:a:1019:SER:HA	1.97	0.46
1:n:198:LYS:HE2	1:n:198:LYS:HB2	1.71	0.46
1:n:198:LYS:HD3	1:o:231:LEU:HD13	1.96	0.46
1:n:292:ASP:OD1	1:n:301:THR:OG1	2.34	0.46
3:m:66:LEU:HD12	3:m:84:LEU:HD22	1.98	0.46
8:a:631:VAL:HA	8:a:634:CYS:HB3	1.97	0.46
8:a:1047:LEU:HD22	8:a:1097:ALA:HB2	1.98	0.46
8:Y:416:LEU:HB3	8:Y:422:ASN:HD21	1.79	0.46
8:Y:937:VAL:HG12	8:Y:939:PHE:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:351:SER:OG	8:Z:352:LEU:N	2.48	0.46
8:Z:448:THR:HG23	8:Z:1113:LEU:HG	1.96	0.46
8:Z:594:LEU:HD11	8:Z:788:LEU:HD11	1.98	0.46
4:M:445:ARG:O	4:M:449:ARG:NH2	2.49	0.46
8:B:724:PRO:HA	8:B:773:ALA:HB3	1.97	0.46
8:C:118:LYS:NZ	8:C:1087:GLY:O	2.48	0.46
8:C:1184:ASN:O	8:C:1190:ASN:ND2	2.49	0.46
8:D:576:TRP:HA	8:D:579:MET:HE3	1.97	0.46
8:D:1241:ASP:O	8:D:1248:HIS:ND1	2.49	0.46
8:Y:531:THR:OG1	8:Y:539:PHE:O	2.29	0.46
4:M:518:PRO:HA	4:M:536:PRO:HG2	1.98	0.46
8:a:601:VAL:HG22	8:a:924:VAL:HG11	1.98	0.46
8:a:908:PRO:HG3	8:a:1123:ARG:HH12	1.80	0.46
8:B:604:PRO:HA	8:B:925:THR:HG21	1.98	0.46
8:B:1104:THR:OG1	8:B:1105:ASP:N	2.49	0.46
2:H:2236:ARG:HH12	2:H:2240:LEU:HB2	1.81	0.46
1:n:8:ILE:HB	1:n:83:LEU:HB2	1.97	0.46
8:B:1070:ASP:OD2	8:B:1070:ASP:N	2.48	0.46
8:C:556:ILE:HD12	8:C:899:LEU:HD11	1.97	0.46
8:D:796:ARG:O	8:D:945:ASN:ND2	2.48	0.46
8:Y:1246:THR:HA	8:Y:1249:ARG:HB3	1.97	0.46
8:Z:63:TRP:HH2	8:Z:165:LYS:HB3	1.81	0.46
1:I:196:ASP:OD1	1:I:196:ASP:N	2.49	0.46
1:o:60:ARG:N	1:o:196:ASP:OD2	2.42	0.46
7:j:67:MET:HA	7:j:70:VAL:HG12	1.98	0.46
8:B:447:LYS:HB3	8:B:447:LYS:HE2	1.84	0.46
8:B:1336:LYS:NZ	8:B:1346:THR:OG1	2.39	0.46
8:D:404:ASP:OD1	8:D:404:ASP:N	2.49	0.46
8:Y:180:LEU:HD23	8:Y:384:PRO:HG2	1.98	0.46
8:Z:487:PRO:HG3	8:Z:736:ARG:HE	1.80	0.46
8:Z:715:LEU:HB3	8:Z:782:LYS:HZ3	1.80	0.46
1:o:75:ARG:HB3	1:o:82:LEU:HD12	1.98	0.45
3:m:148:CYS:SG	3:m:149:VAL:N	2.89	0.45
6:1:249:TYR:OH	6:1:274:ASP:OD1	2.28	0.45
7:j:28:LEU:HD13	7:j:32:ILE:HB	1.98	0.45
8:D:268:LYS:O	8:D:366:THR:OG1	2.32	0.45
8:Y:1350:HIS:CD2	8:Y:1351:PHE:H	2.34	0.45
6:1:7:GLY:HA3	6:1:46:LEU:HD21	1.98	0.45
8:B:698:LEU:HD22	8:B:1018:VAL:HG21	1.99	0.45
8:C:712:ASP:O	8:C:782:LYS:NZ	2.47	0.45
8:D:622:ASP:OD1	8:D:622:ASP:N	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:940:HIS:HE1	8:Z:987:LEU:HD12	1.80	0.45
8:a:155:GLU:OE2	8:a:162:ARG:NH1	2.49	0.45
8:a:975:LEU:HB3	8:a:979:PHE:HB2	1.98	0.45
8:C:387:ARG:NH2	8:C:1310:LEU:O	2.40	0.45
8:Y:393:PHE:N	8:Y:1038:ARG:O	2.36	0.45
1:I:59:VAL:HB	1:I:196:ASP:HB2	1.98	0.45
4:M:36:GLU:HA	4:M:153:TRP:HE1	1.81	0.45
7:R:43:MET:HE3	7:R:67:MET:HG3	1.99	0.45
8:B:1129:ARG:HE	8:B:1139:ARG:HH12	1.63	0.45
8:C:8:GLU:OE1	8:C:45:ARG:NH1	2.49	0.45
8:C:388:ASN:HD22	8:C:1043:GLU:HA	1.82	0.45
8:D:1290:LYS:HD2	8:D:1312:GLU:HG3	1.99	0.45
8:Z:1240:SER:O	8:Z:1244:TYR:N	2.47	0.45
1:h:169:VAL:HA	1:h:172:LEU:HB3	1.98	0.45
1:I:34:ILE:HG13	1:I:69:THR:HG23	1.97	0.45
6:1:67:ARG:NH1	6:1:265:ASP:OD1	2.49	0.45
8:a:1158:GLU:O	8:a:1301:TYR:OH	2.32	0.45
8:B:903:GLN:HE22	8:B:1014:LYS:HE2	1.82	0.45
8:B:934:SER:HB2	8:B:952:LEU:HD13	1.99	0.45
8:C:392:THR:HA	8:C:1039:THR:HA	1.99	0.45
8:D:1157:SER:OG	8:D:1158:GLU:N	2.49	0.45
8:Y:940:HIS:HD2	8:Y:942:PHE:H	1.64	0.45
8:Z:21:THR:OG1	8:Z:22:HIS:N	2.49	0.45
8:Z:1023:GLN:HB2	8:Z:1028:ILE:HB	1.98	0.45
1:n:280:ASP:OD1	1:o:283:ARG:NH2	2.49	0.45
1:o:55:THR:HG23	1:o:56:ARG:HE	1.81	0.45
1:o:149:ARG:NH1	1:o:174:THR:O	2.41	0.45
3:g:70:MET:O	3:g:79:HIS:HA	2.15	0.45
8:a:1263:ALA:O	8:a:1267:ASN:ND2	2.49	0.45
8:B:134:ALA:HA	8:B:137:THR:HG22	1.99	0.45
8:B:694:ASN:ND2	8:C:968:ARG:HG3	2.32	0.45
8:D:804:LEU:O	8:D:808:LEU:HB2	2.17	0.45
8:Z:562:PRO:HD2	8:Z:565:LEU:HD12	1.99	0.45
1:n:48:LEU:HB3	1:n:133:VAL:HG13	1.99	0.45
3:g:101:LEU:HD11	3:g:269:LEU:HB3	1.97	0.45
7:T:66:ARG:HG3	8:D:884:GLN:HA	1.99	0.45
8:a:967:HIS:NE2	8:Z:776:ASP:OD2	2.50	0.45
1:h:48:LEU:HB2	1:h:133:VAL:HG23	1.98	0.45
3:m:80:LEU:HD12	3:m:80:LEU:HA	1.88	0.45
3:m:285:ASP:OD1	3:m:285:ASP:N	2.50	0.45
8:a:1189:PRO:HD3	8:a:1359:ILE:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:798:CYS:SG	8:D:799:GLY:N	2.90	0.45
8:Y:845:SER:OG	8:Y:846:ILE:N	2.49	0.45
8:Z:900:ASP:OD1	8:Z:900:ASP:N	2.49	0.45
1:h:216:MET:HE1	1:I:209:ASN:HA	1.99	0.45
1:I:48:LEU:HD23	1:I:61:LEU:HD21	1.99	0.45
1:n:13:ASP:OD1	1:n:13:ASP:N	2.50	0.45
8:B:1124:HIS:CE1	8:B:1126:GLU:HB3	2.52	0.45
8:C:207:LEU:HD12	8:Z:29:GLU:HG2	1.98	0.45
8:C:1165:VAL:HG13	8:C:1166:HIS:HD2	1.82	0.45
8:C:1183:VAL:HA	8:C:1187:LYS:HE2	1.99	0.45
8:Y:1032:PHE:HA	8:Y:1178:PRO:HD3	1.98	0.45
1:I:75:ARG:NH2	1:I:77:GLU:OE2	2.50	0.45
3:m:245:THR:HG23	3:m:290:VAL:HG22	1.98	0.45
4:M:479:ARG:HA	4:M:520:VAL:HG12	1.98	0.45
7:i:33:SER:OG	7:i:34:GLU:N	2.50	0.45
8:a:1222:ALA:HB1	8:Z:1165:VAL:HG22	2.00	0.45
8:B:555:ARG:NH1	8:B:560:ASN:O	2.49	0.45
8:B:1106:MET:HE2	8:B:1106:MET:HB3	1.87	0.45
8:D:1246:THR:HA	8:D:1249:ARG:HB2	1.99	0.45
8:Y:854:GLY:O	8:Y:858:THR:OG1	2.32	0.45
8:Y:1176:LEU:HD13	8:Y:1176:LEU:HA	1.81	0.45
8:Y:1360:ILE:HG13	8:Y:1362:LEU:HD22	1.99	0.45
8:Z:1:MET:SD	8:Z:1:MET:N	2.82	0.45
8:Z:392:THR:HA	8:Z:1039:THR:HA	1.99	0.45
8:Z:1172:CYS:HB2	8:Z:1261:PRO:HG2	1.98	0.45
4:M:433:SER:OG	4:M:434:ARG:N	2.50	0.44
5:N:25:ARG:HH11	5:O:5:HIS:HB2	1.82	0.44
5:N:41:THR:HG23	5:N:42:MET:HE2	1.98	0.44
8:a:867:ASP:HB2	8:a:870:THR:HG22	1.98	0.44
8:a:942:PHE:HE2	8:a:987:LEU:HD22	1.81	0.44
8:a:1366:MET:HE3	8:a:1366:MET:HB3	1.92	0.44
8:D:288:SER:HA	8:D:291:ILE:HG12	1.99	0.44
8:D:682:ARG:HA	8:D:682:ARG:HD3	1.77	0.44
8:Y:310:GLU:HA	8:Y:313:VAL:HG12	1.98	0.44
3:m:82:ILE:HG23	3:m:86:LEU:HD22	1.99	0.44
3:m:154:LEU:O	3:m:163:PHE:N	2.49	0.44
6:1:175:ARG:HE	6:1:216:SER:HG	1.65	0.44
8:a:120:SER:OG	8:a:1083:THR:O	2.34	0.44
8:a:426:THR:HG23	8:a:427:THR:HG23	1.99	0.44
8:B:1285:TYR:OH	8:B:1312:GLU:OE1	2.27	0.44
8:D:553:THR:HG21	8:D:983:TYR:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:228:PHE:H	8:Y:232:ARG:HH21	1.65	0.44
8:Y:534:HIS:HD2	8:Y:536:PHE:H	1.65	0.44
8:Z:1193:ARG:NH2	8:Z:1234:SER:O	2.48	0.44
1:h:13:ASP:OD1	1:h:13:ASP:N	2.49	0.44
1:o:91:LEU:HD22	3:m:46:LEU:HD22	1.99	0.44
3:g:168:PRO:HB3	3:g:271:LEU:HD21	2.00	0.44
6:1:11:ARG:NH1	6:1:12:ASP:OD1	2.50	0.44
8:B:424:LEU:HD12	8:B:424:LEU:HA	1.88	0.44
8:C:741:PRO:HB2	8:C:743:ASN:H	1.81	0.44
8:D:220:LYS:HZ2	8:D:1318:THR:HG1	1.59	0.44
8:Y:421:ARG:NH2	8:Y:1027:HIS:O	2.49	0.44
8:Y:690:LEU:HB3	8:Y:693:LEU:HD13	1.98	0.44
8:Y:1191:ASN:ND2	8:Y:1319:GLN:O	2.51	0.44
8:Z:1021:VAL:HG12	8:Z:1025:LYS:HE2	1.98	0.44
8:Z:1105:ASP:OD1	8:Z:1105:ASP:N	2.51	0.44
4:M:54:SER:OG	4:M:55:THR:N	2.50	0.44
8:C:53:ILE:HG23	8:D:92:LEU:HD13	1.99	0.44
8:C:1109:ARG:HH11	8:C:1169:LYS:HB3	1.83	0.44
8:C:1303:CYS:SG	8:C:1304:VAL:N	2.89	0.44
8:D:433:ARG:HH22	8:D:1101:ARG:HH21	1.66	0.44
8:Y:1034:LEU:HD12	8:Y:1175:ILE:HA	2.00	0.44
8:Y:1235:GLN:HB2	8:Y:1238:CYS:HB3	1.99	0.44
1:h:194:LEU:HA	1:h:197:MET:HE3	2.00	0.44
3:m:264:LEU:O	3:m:270:LYS:HA	2.18	0.44
8:B:393:PHE:HB3	8:B:1324:ILE:HB	1.99	0.44
8:B:1280:LYS:HE2	8:B:1280:LYS:HB3	1.83	0.44
8:C:496:PRO:O	8:C:500:ARG:HB2	2.17	0.44
8:C:1322:LEU:HD12	8:C:1359:ILE:HG21	1.99	0.44
8:Z:430:LEU:HD12	8:Z:1108:VAL:HG12	1.99	0.44
8:Z:866:THR:OG1	8:Z:870:THR:O	2.34	0.44
1:I:71:THR:OG1	1:I:72:LEU:N	2.50	0.44
8:B:332:LEU:O	8:B:336:GLN:HB2	2.16	0.44
8:B:723:LEU:HD13	8:B:768:VAL:HG21	2.00	0.44
8:B:1290:LYS:HE2	8:B:1312:GLU:HG2	2.00	0.44
8:C:122:LYS:HB3	8:C:1082:ASN:HB3	1.99	0.44
8:C:611:TYR:O	8:C:614:ASP:CB	2.66	0.44
8:Y:1110:VAL:HA	8:Y:1171:ALA:HB3	1.99	0.44
8:Z:237:ASP:OD1	8:Z:241:LYS:NZ	2.45	0.44
8:Z:469:PRO:HB3	8:Z:541:HIS:CE1	2.53	0.44
1:n:221:LYS:HB3	1:o:158:LEU:HD22	1.98	0.44
1:o:236:GLU:OE2	5:O:9:ARG:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:a:968:ARG:HH11	8:Z:695:ASN:HB3	1.82	0.44
8:B:16:PRO:HD3	8:Z:60:ARG:HD2	1.98	0.44
8:B:495:ILE:HG21	8:B:938:PRO:HD2	2.00	0.44
8:B:719:PHE:HD1	8:B:917:LEU:HD22	1.82	0.44
8:B:1285:TYR:HA	8:B:1289:ALA:HB3	1.99	0.44
8:B:1296:ASP:OD1	8:B:1296:ASP:N	2.49	0.44
8:D:608:GLU:OE2	8:D:928:LYS:N	2.51	0.44
8:Y:1265:TYR:OH	8:Y:1320:GLU:O	2.33	0.44
4:M:164:LEU:HG	4:M:166:ARG:H	1.83	0.44
7:R:33:SER:H	7:R:36:THR:HG1	1.66	0.44
7:S:46:LYS:HA	7:S:49:ARG:HH21	1.81	0.44
8:C:892:VAL:HG11	8:C:979:PHE:HE1	1.82	0.44
8:C:1189:PRO:HB3	8:C:1322:LEU:HD13	2.00	0.44
8:D:522:TYR:OH	8:D:1177:THR:OG1	2.29	0.44
8:Y:127:ILE:HB	8:Z:101:ALA:HA	1.99	0.44
8:Z:1224:THR:HG22	8:Z:1226:ALA:H	1.82	0.44
3:g:189:ILE:HG22	3:g:202:ILE:HG13	2.00	0.44
5:N:53:MET:HB3	5:N:57:ARG:HH12	1.83	0.44
6:1:175:ARG:NH1	6:1:212:ASN:HB3	2.33	0.44
8:D:1155:SER:OG	8:D:1255:ASN:OD1	2.26	0.44
8:D:1215:TYR:OH	8:D:1268:THR:OG1	2.28	0.44
8:Y:125:ILE:HG22	8:Z:103:GLY:HA2	1.99	0.44
8:Y:508:THR:HG23	8:Y:511:GLU:H	1.81	0.44
8:Y:945:ASN:HB2	8:Y:969:HIS:HD2	1.82	0.44
8:a:67:LEU:HA	8:a:72:ALA:HB2	2.00	0.43
8:a:1234:SER:HG	8:a:1235:GLN:N	2.15	0.43
8:a:1290:LYS:HA	8:a:1316:ARG:HH22	1.82	0.43
8:B:235:ASP:OD2	8:B:238:TYR:N	2.48	0.43
8:C:203:ALA:O	8:Z:25:THR:OG1	2.36	0.43
8:C:709:ALA:HB3	8:C:1012:LEU:HD12	2.00	0.43
8:D:1328:THR:HB	8:D:1353:ASN:HB3	2.00	0.43
8:Y:617:VAL:HG13	8:Y:619:GLY:H	1.82	0.43
1:o:303:ILE:HD11	3:m:151:ARG:HD2	2.00	0.43
5:N:29:ARG:O	5:N:33:ARG:NE	2.50	0.43
8:B:182:THR:HG21	8:B:1083:THR:HG21	2.00	0.43
8:C:1122:TYR:HB2	8:C:1128:ASP:HB2	2.01	0.43
8:C:1330:LEU:HD13	8:D:1183:VAL:HG11	2.00	0.43
8:C:1348:GLU:H	8:C:1355:VAL:HG23	1.83	0.43
8:D:1045:ASP:HB2	8:D:1098:TYR:HB3	1.99	0.43
8:Y:1101:ARG:HD2	8:Z:214:ASN:HB3	2.00	0.43
8:Z:297:SER:O	8:Z:297:SER:OG	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:1277:THR:O	8:Z:1281:THR:N	2.49	0.43
8:a:1132:ARG:HH12	8:a:1140:PRO:HB3	1.84	0.43
8:C:427:THR:OG1	8:C:428:ALA:N	2.51	0.43
8:C:534:HIS:HD2	8:C:536:PHE:H	1.66	0.43
8:C:806:THR:HA	8:C:809:VAL:HG12	2.00	0.43
8:D:182:THR:HG22	8:D:186:LYS:HE2	2.00	0.43
8:Y:600:THR:HG23	8:Y:601:VAL:HG23	2.00	0.43
8:Z:508:THR:HG23	8:Z:511:GLU:H	1.83	0.43
8:Z:583:ARG:HE	8:Z:583:ARG:HB3	1.69	0.43
8:Z:1242:VAL:HA	8:Z:1248:HIS:CD2	2.54	0.43
1:o:206:MET:HG2	1:o:274:MET:HG3	2.00	0.43
7:T:13:LYS:HB3	7:T:14:ARG:H	1.67	0.43
8:a:518:VAL:HB	8:a:1179:VAL:HG11	2.01	0.43
8:a:717:PRO:HA	8:a:718:PRO:HD3	1.88	0.43
8:B:205:GLN:NE2	8:B:206:ALA:O	2.45	0.43
8:C:235:ASP:HB3	8:C:238:TYR:HB3	1.99	0.43
8:C:1327:THR:OG1	8:C:1329:THR:O	2.34	0.43
8:Z:272:VAL:HG23	8:Z:368:ILE:HB	2.00	0.43
6:1:101:LYS:HA	6:1:101:LYS:HD3	1.86	0.43
7:i:72:ARG:NE	8:Z:820:MET:O	2.45	0.43
8:a:214:ASN:OD1	8:Z:433:ARG:NH2	2.49	0.43
8:a:792:MET:HE1	8:a:1000:ASN:HA	1.99	0.43
8:C:59:ASN:HB2	8:D:95:VAL:HG13	2.01	0.43
8:D:449:LEU:HD11	8:D:1034:LEU:HD21	2.01	0.43
8:Y:682:ARG:NH1	8:Y:776:ASP:OD2	2.50	0.43
1:h:91:LEU:HA	1:h:303:ILE:HA	1.99	0.43
1:I:263:ASP:OD1	1:I:263:ASP:N	2.50	0.43
2:H:2240:LEU:HD12	5:N:62:ARG:HG3	2.01	0.43
4:M:479:ARG:HE	4:M:479:ARG:HB2	1.70	0.43
8:a:253:SER:OG	8:a:254:ILE:N	2.51	0.43
8:B:1176:LEU:HD12	8:B:1177:THR:H	1.83	0.43
8:C:459:PRO:HB2	8:C:1242:VAL:HG21	2.01	0.43
8:C:624:PHE:HA	8:C:627:ILE:HG22	2.00	0.43
8:C:1164:THR:OG1	8:C:1166:HIS:O	2.36	0.43
8:C:1240:SER:O	8:C:1244:TYR:HB2	2.19	0.43
8:C:1277:THR:O	8:C:1281:THR:OG1	2.35	0.43
8:C:1358:GLU:OE2	8:C:1363:GLN:N	2.50	0.43
8:D:263:THR:HG22	8:D:296:VAL:HG12	2.01	0.43
8:D:393:PHE:O	8:D:1038:ARG:N	2.47	0.43
8:Z:71:LEU:HD22	8:Z:372:LEU:HD11	1.99	0.43
8:Z:999:PRO:O	8:Z:1004:SER:OG	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:h:100:VAL:HG21	1:h:138:VAL:HG22	2.01	0.43
1:h:267:ARG:HH21	3:g:234:ARG:HH22	1.65	0.43
1:o:41:ILE:HD11	1:o:45:GLN:HB2	2.00	0.43
4:M:68:ALA:HB3	4:M:547:LEU:HB3	2.00	0.43
6:1:72:ASP:N	6:1:72:ASP:OD1	2.48	0.43
6:1:167:ILE:HD11	6:1:186:LEU:HD21	2.00	0.43
8:a:297:SER:HB2	8:a:352:LEU:HD23	2.01	0.43
8:a:417:ASN:OD1	8:a:422:ASN:ND2	2.42	0.43
8:a:743:ASN:OD1	8:a:743:ASN:N	2.51	0.43
8:B:373:ARG:HH21	8:B:377:LYS:HA	1.84	0.43
8:B:440:ILE:HB	8:B:1108:VAL:HB	2.01	0.43
8:C:6:ALA:HA	8:D:316:ILE:HG22	2.00	0.43
8:D:216:LEU:HD13	8:D:1200:LEU:HD12	2.00	0.43
8:Z:629:THR:OG1	8:Z:878:GLU:OE2	2.34	0.43
8:Z:1334:GLU:HA	8:Z:1337:LEU:HB2	2.01	0.43
1:o:190:ASP:O	1:o:192:HIS:ND1	2.45	0.43
4:M:428:LEU:HD13	4:M:431:ARG:HD2	2.00	0.43
8:a:936:PRO:HD3	8:a:952:LEU:HB3	2.00	0.43
8:B:194:GLN:O	8:B:198:GLU:HB2	2.19	0.43
8:C:820:MET:HE3	8:C:877:ARG:HH11	1.84	0.43
8:C:853:VAL:HG11	8:C:872:LEU:HD22	2.01	0.43
8:C:1217:HIS:CE1	8:C:1235:GLN:HG2	2.53	0.43
8:Y:186:LYS:HE3	8:Y:1085:ASP:HB2	1.99	0.43
8:Y:424:LEU:HB2	8:Y:573:LEU:HD21	2.00	0.43
8:Z:209:ARG:HA	8:Z:212:ARG:HG2	2.01	0.43
1:n:161:SER:HG	1:n:164:GLU:H	1.67	0.43
1:n:273:VAL:HG21	3:m:243:LEU:HD12	2.00	0.43
3:g:234:ARG:HH12	3:g:241:ILE:HD13	1.83	0.43
3:g:253:TRP:O	3:g:280:SER:OG	2.31	0.43
6:1:134:ILE:HD12	6:1:144:LEU:HD22	2.01	0.43
8:B:575:THR:HG22	8:B:1010:ALA:HB3	2.01	0.43
8:B:1343:ALA:H	8:B:1364:GLN:HE22	1.66	0.43
8:Y:1336:LYS:NZ	8:Y:1346:THR:OG1	2.50	0.43
8:Z:388:ASN:ND2	8:Z:1043:GLU:OE2	2.50	0.43
8:Z:585:ARG:HD2	8:Z:585:ARG:HA	1.85	0.43
8:Z:936:PRO:HB3	8:Z:952:LEU:HD12	2.01	0.43
8:Z:1366:MET:HE3	8:Z:1366:MET:HB3	1.87	0.43
1:I:48:LEU:H	1:I:133:VAL:HG13	1.84	0.43
4:M:24:HIS:HA	4:M:131:THR:HG22	2.00	0.43
6:1:266:THR:HA	6:1:269:GLU:HG3	2.00	0.43
8:a:1327:THR:HG22	8:a:1333:MET:HE2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:878:GLU:HA	8:B:881:LEU:HG	2.00	0.43
3:g:175:TRP:CE2	3:g:222:LYS:HG2	2.54	0.42
4:M:362:ALA:HA	5:N:49:GLU:HG3	2.01	0.42
8:a:650:SER:HB3	8:a:653:LEU:HB2	2.00	0.42
8:B:562:PRO:HD2	8:B:565:LEU:HD13	2.01	0.42
8:C:625:LEU:HD12	8:C:628:ARG:HD2	2.00	0.42
8:C:671:LEU:HD12	8:C:671:LEU:HA	1.86	0.42
8:C:1167:GLY:HA2	8:D:210:ILE:HD11	2.01	0.42
8:Z:812:PHE:HZ	8:Z:879:LEU:HG	1.84	0.42
3:g:259:ILE:HA	3:g:275:ARG:O	2.20	0.42
4:M:311:VAL:HG23	4:M:330:TRP:H	1.83	0.42
4:M:367:LEU:HG	4:M:424:ILE:HD12	2.01	0.42
6:1:79:GLU:HA	6:1:82:VAL:HG12	2.01	0.42
6:1:123:GLU:HB3	6:1:127:ARG:HH21	1.84	0.42
8:a:81:HIS:HE1	8:a:304:ASN:HD21	1.66	0.42
8:a:1200:LEU:HD21	8:a:1281:THR:HG21	2.00	0.42
8:a:1234:SER:OG	8:a:1235:GLN:OE1	2.36	0.42
8:B:255:LEU:HD23	8:B:255:LEU:HA	1.86	0.42
8:B:710:LEU:HG	8:B:1012:LEU:HD12	2.00	0.42
8:C:128:PRO:HB3	8:C:1076:HIS:CE1	2.54	0.42
8:C:293:LYS:HZ1	8:C:356:SER:HB2	1.84	0.42
8:Y:672:PHE:HA	8:Y:675:ARG:HG2	2.01	0.42
8:Z:184:LEU:HD13	8:Z:387:ARG:HH21	1.84	0.42
8:Z:507:ARG:NH1	8:Z:511:GLU:OE1	2.53	0.42
7:j:57:LYS:H	7:j:57:LYS:HG2	1.61	0.42
8:a:84:ASN:OD1	8:a:84:ASN:N	2.52	0.42
8:a:106:LEU:HD11	8:Z:1307:THR:HA	2.01	0.42
8:a:710:LEU:HD23	8:a:710:LEU:HA	1.92	0.42
8:B:12:LYS:HG3	8:Z:58:CYS:HB2	2.01	0.42
8:B:216:LEU:HD23	8:B:219:PHE:HD2	1.85	0.42
8:C:234:ARG:HA	8:C:234:ARG:HD3	1.81	0.42
8:C:533:LEU:HD23	8:C:539:PHE:HE2	1.84	0.42
8:D:77:ALA:HB1	8:D:302:TYR:CE1	2.53	0.42
8:Y:139:LEU:HD22	8:Y:160:VAL:HG21	2.01	0.42
8:Y:1228:THR:HG22	8:Y:1230:ASN:H	1.83	0.42
8:Z:420:VAL:HA	8:Z:423:ALA:HB3	2.00	0.42
8:Z:704:SER:HA	8:Z:707:VAL:HG12	2.01	0.42
2:P:2239:TYR:HE2	5:N:64:GLU:HG3	1.84	0.42
4:M:475:ALA:HA	4:M:523:LEU:O	2.19	0.42
8:B:78:ILE:HA	8:B:303:GLY:H	1.83	0.42
8:C:66:PHE:HD1	8:C:176:ILE:HG12	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:724:PRO:HA	8:C:773:ALA:HB3	2.02	0.42
8:D:472:GLU:HB2	8:D:475:MET:HG2	2.00	0.42
8:Z:744:ILE:HD12	8:Z:744:ILE:HA	1.93	0.42
1:I:270:ALA:HA	1:I:273:VAL:HG12	2.02	0.42
2:P:2236:ARG:HE	2:P:2236:ARG:HB2	1.55	0.42
1:n:231:LEU:O	1:n:235:GLN:HB2	2.20	0.42
3:m:19:GLU:OE2	8:C:1075:TYR:OH	2.32	0.42
4:M:585:SER:OG	4:M:586:GLY:N	2.52	0.42
7:R:67:MET:HA	7:R:70:VAL:HG12	2.01	0.42
8:a:1191:ASN:ND2	8:a:1195:ARG:O	2.43	0.42
8:B:148:LEU:HA	8:B:151:ILE:HG12	2.01	0.42
8:C:1366:MET:HE3	8:C:1366:MET:HB2	1.82	0.42
8:D:435:ARG:NH2	8:D:1364:GLN:O	2.53	0.42
8:D:993:ARG:HA	8:D:993:ARG:HD2	1.93	0.42
8:D:1182:ASP:OD1	8:D:1182:ASP:N	2.52	0.42
8:Z:1142:LEU:HD12	8:Z:1142:LEU:HA	1.89	0.42
6:1:174:VAL:HG13	6:1:175:ARG:NH1	2.32	0.42
8:a:941:ARG:NE	8:a:987:LEU:O	2.43	0.42
8:B:645:LEU:HD12	8:B:674:TYR:CZ	2.55	0.42
8:C:888:GLU:H	8:C:919:ASN:HD22	1.67	0.42
8:D:1336:LYS:NZ	8:D:1346:THR:O	2.45	0.42
8:Y:591:GLU:O	8:Y:595:ARG:HB2	2.20	0.42
8:Z:192:VAL:HA	8:Z:219:PHE:HE1	1.84	0.42
1:I:142:LEU:HD12	1:I:177:PHE:CG	2.55	0.42
1:I:244:GLU:HA	1:I:247:VAL:HG12	2.02	0.42
3:g:216:VAL:HG12	3:g:248:ILE:HG13	2.02	0.42
4:M:539:PHE:HZ	5:O:4:LEU:HD22	1.85	0.42
6:1:34:HIS:HB3	6:1:37:ILE:HD12	2.02	0.42
8:a:273:MET:HA	8:a:1048:LEU:O	2.19	0.42
8:a:424:LEU:HD13	8:a:573:LEU:HD23	2.02	0.42
8:a:1212:LYS:HE3	8:a:1212:LYS:HB2	1.85	0.42
8:B:520:ASP:HA	8:B:523:LYS:HE2	2.01	0.42
8:B:534:HIS:CD2	8:B:536:PHE:H	2.31	0.42
8:C:624:PHE:HZ	8:C:657:ILE:HD13	1.84	0.42
8:D:420:VAL:HA	8:D:423:ALA:HB3	2.01	0.42
8:D:733:VAL:HG23	8:D:894:GLU:HB3	2.01	0.42
8:D:968:ARG:HD3	8:D:969:HIS:H	1.85	0.42
8:Y:127:ILE:HD12	8:Y:128:PRO:HD2	2.02	0.42
8:Y:273:MET:HE2	8:Y:273:MET:HB3	1.85	0.42
1:I:274:MET:HE1	8:B:1148:ILE:HD13	2.01	0.42
4:M:44:TYR:HB2	4:M:150:ARG:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:a:472:GLU:HB3	8:a:475:MET:HE3	2.01	0.42
8:C:847:ALA:HA	8:C:850:ARG:HG2	2.01	0.42
8:D:273:MET:HE3	8:D:273:MET:HB2	1.92	0.42
8:Y:1210:ALA:HB1	8:Y:1272:ILE:HD12	2.01	0.42
8:Z:1290:LYS:HG2	8:Z:1312:GLU:HA	2.02	0.42
1:h:263:ASP:OD2	3:g:239:ARG:NH1	2.53	0.42
1:o:169:VAL:O	1:o:173:GLN:HB2	2.19	0.42
4:M:19:GLU:H	4:M:135:ARG:NH2	2.18	0.42
6:1:194:THR:HB	6:1:197:VAL:HG23	2.02	0.42
6:1:244:SER:N	6:1:247:SER:OG	2.51	0.42
7:T:72:ARG:NE	8:D:820:MET:O	2.42	0.42
8:a:184:LEU:HD11	8:a:385:LEU:HD23	2.02	0.42
8:a:233:THR:OG1	8:a:235:ASP:OD1	2.37	0.42
8:Y:314:THR:O	8:Y:319:HIS:N	2.38	0.42
8:Z:414:VAL:HG21	8:Z:1331:ALA:HB1	2.01	0.42
4:M:378:VAL:HG22	4:M:381:ARG:HE	1.85	0.42
7:i:73:THR:OG1	7:i:74:ARG:N	2.52	0.42
8:a:359:VAL:HG12	8:a:368:ILE:HD13	2.02	0.42
8:B:1195:ARG:NH1	8:B:1227:ALA:O	2.53	0.42
8:C:940:HIS:HD2	8:C:942:PHE:H	1.68	0.42
8:Y:622:ASP:OD1	8:Y:622:ASP:N	2.53	0.42
8:Y:970:ASP:HB2	8:Y:993:ARG:HG3	2.02	0.42
8:Z:726:ASN:HB2	8:Z:728:GLU:HG2	2.01	0.42
4:M:505:ARG:HD3	4:M:509:GLY:HA2	2.02	0.41
7:R:63:ASP:HA	7:R:66:ARG:HG2	2.01	0.41
8:a:424:LEU:HD12	8:a:425:PRO:HD2	2.01	0.41
8:a:428:ALA:HB3	8:a:440:ILE:HG23	2.02	0.41
8:a:632:ALA:HA	8:a:666:LEU:HD21	2.02	0.41
8:D:1324:ILE:HA	8:D:1358:GLU:HB3	2.01	0.41
8:Z:311:ASN:O	8:Z:314:THR:OG1	2.28	0.41
8:Z:1009:ALA:HA	8:Z:1012:LEU:HD12	2.02	0.41
8:a:647:PHE:HD2	8:a:653:LEU:HB3	1.85	0.41
8:a:1245:ASN:O	8:a:1249:ARG:N	2.51	0.41
8:B:651:TYR:HB2	8:B:784:PHE:CG	2.55	0.41
8:B:651:TYR:N	8:B:785:TYR:OH	2.54	0.41
8:C:1049:TYR:O	8:C:1092:SER:HA	2.20	0.41
8:D:597:PHE:HA	8:D:600:THR:HG22	2.03	0.41
8:D:1196:ALA:HB3	8:D:1222:ALA:HB3	2.02	0.41
8:Y:297:SER:HB3	8:Y:352:LEU:HD22	2.02	0.41
8:Y:472:GLU:OE1	8:Y:1218:ARG:NE	2.53	0.41
8:Y:600:THR:HG21	8:Y:645:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:670:LEU:HD23	8:Z:670:LEU:HA	1.88	0.41
7:T:67:MET:HA	7:T:70:VAL:HG12	2.02	0.41
8:B:73:ALA:HA	8:B:261:TYR:CZ	2.55	0.41
8:B:164:LEU:HD12	8:B:332:LEU:HD13	2.02	0.41
8:C:163:ALA:O	8:C:167:THR:OG1	2.29	0.41
8:C:618:HIS:O	8:C:721:THR:OG1	2.37	0.41
8:C:733:VAL:HG11	8:C:738:PRO:HA	2.02	0.41
8:C:913:ARG:HH21	8:C:984:HIS:CG	2.38	0.41
8:D:1044:VAL:HG13	8:D:1096:VAL:HG13	2.02	0.41
8:Y:83:LEU:HD11	8:Y:1082:ASN:HD22	1.85	0.41
8:Y:905:GLN:HA	8:Y:1123:ARG:HE	1.85	0.41
8:Y:1176:LEU:HD13	8:Y:1232:TRP:HB2	2.01	0.41
8:Z:544:GLU:HG2	8:Z:549:VAL:HG12	2.01	0.41
8:Z:814:ARG:NH2	8:Z:851:GLN:O	2.52	0.41
1:I:10:CYS:O	1:I:80:GLN:HA	2.20	0.41
2:H:2237:PHE:HB2	8:a:755:PRO:HB2	2.01	0.41
1:n:49:HIS:CD2	1:n:131:GLU:H	2.38	0.41
8:a:517:VAL:HG21	8:Z:1027:HIS:CD2	2.56	0.41
8:a:1280:LYS:HB3	8:a:1280:LYS:HE2	1.89	0.41
8:B:611:TYR:CZ	8:B:923:VAL:HG13	2.56	0.41
8:B:1286:LEU:HD23	8:B:1286:LEU:HA	1.94	0.41
8:D:1144:ASP:OD1	8:D:1144:ASP:N	2.53	0.41
8:Y:1183:VAL:HA	8:Y:1187:LYS:HE3	2.03	0.41
8:Z:292:THR:HG22	8:Z:294:GLU:HG3	2.02	0.41
8:Z:1132:ARG:HA	8:Z:1132:ARG:HD3	1.86	0.41
8:Z:1143:LEU:O	8:Z:1147:THR:OG1	2.34	0.41
1:h:48:LEU:HA	1:h:51:PHE:HD2	1.84	0.41
1:n:33:PRO:HA	1:n:69:THR:O	2.20	0.41
1:o:106:ASP:HA	3:m:69:ARG:HH21	1.85	0.41
3:m:42:ASP:O	3:m:159:LYS:NZ	2.38	0.41
4:M:171:GLU:HG3	4:M:315:ARG:NE	2.35	0.41
7:j:46:LYS:HA	7:j:49:ARG:HD2	2.02	0.41
8:a:192:VAL:O	8:a:195:THR:OG1	2.36	0.41
8:a:1148:ILE:O	8:a:1152:THR:N	2.44	0.41
8:a:1286:LEU:HD12	8:a:1286:LEU:HA	1.95	0.41
8:B:41:ASP:OD2	8:Z:132:SER:N	2.53	0.41
8:B:747:ARG:HD3	8:B:749:HIS:HE1	1.84	0.41
8:B:1061:ASN:HA	8:B:1062:PRO:HD3	1.91	0.41
8:B:1072:SER:OG	8:B:1073:THR:N	2.54	0.41
8:C:718:PRO:HG2	8:C:943:TYR:HE2	1.84	0.41
8:Y:359:VAL:HG12	8:Y:368:ILE:HD13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Y:912:SER:OG	8:Y:914:GLN:NE2	2.53	0.41
8:Z:399:LEU:HD22	8:Z:1033:ALA:HB1	2.03	0.41
8:Z:775:ASP:OD1	8:Z:775:ASP:N	2.52	0.41
8:Z:780:LEU:HA	8:Z:783:VAL:HG12	2.01	0.41
1:n:275:LEU:HD23	1:n:275:LEU:HA	1.86	0.41
8:a:209:ARG:HH12	8:Z:1160:ASN:HD22	1.69	0.41
8:a:1242:VAL:HA	8:a:1248:HIS:HD2	1.85	0.41
8:B:122:LYS:HG2	8:B:124:PRO:HD3	2.01	0.41
8:C:212:ARG:NH2	8:C:1202:VAL:O	2.53	0.41
8:C:677:LEU:HD23	8:C:677:LEU:HA	1.92	0.41
8:D:1150:MET:O	8:D:1154:GLY:N	2.50	0.41
8:Y:209:ARG:HA	8:Y:212:ARG:HG2	2.03	0.41
8:Y:391:LEU:HD13	8:Y:1042:PHE:HE2	1.85	0.41
8:Z:608:GLU:H	8:Z:608:GLU:HG2	1.70	0.41
1:h:161:SER:OG	1:h:162:TYR:N	2.53	0.41
3:g:234:ARG:NH1	3:g:240:GLN:O	2.53	0.41
3:m:17:ASP:N	3:m:17:ASP:OD1	2.54	0.41
7:i:19:ARG:HA	7:i:22:VAL:HG12	2.02	0.41
8:a:297:SER:HA	8:a:353:THR:O	2.21	0.41
8:a:612:LEU:HD21	8:a:860:LEU:HD21	2.01	0.41
8:a:814:ARG:NE	8:a:853:VAL:O	2.53	0.41
8:B:275:SER:HB3	8:B:280:MET:HE2	2.02	0.41
8:B:1297:THR:OG1	8:B:1299:THR:O	2.31	0.41
8:C:241:LYS:HG3	8:C:245:ARG:HH12	1.85	0.41
8:C:1038:ARG:NH1	8:C:1107:GLY:O	2.54	0.41
8:C:1160:ASN:OD1	8:C:1160:ASN:N	2.54	0.41
8:D:1098:TYR:OH	8:D:1370:SER:OXT	2.35	0.41
8:Y:957:LYS:HE2	8:Y:957:LYS:HB3	1.86	0.41
8:Z:717:PRO:HB3	8:Z:782:LYS:HA	2.03	0.41
3:g:64:GLY:HA3	3:g:166:MET:HG2	2.02	0.41
3:g:170:ASP:N	3:g:170:ASP:OD1	2.52	0.41
7:T:37:HIS:CE1	8:D:818:LEU:HB3	2.56	0.41
8:a:392:THR:HA	8:a:1038:ARG:O	2.21	0.41
8:a:569:PRO:HA	8:a:572:GLU:HG2	2.03	0.41
8:C:311:ASN:HD22	8:C:311:ASN:HA	1.72	0.41
8:C:499:TYR:OH	8:C:974:PRO:O	2.33	0.41
8:D:431:LEU:HD23	8:D:435:ARG:HA	2.03	0.41
8:D:469:PRO:HA	8:D:470:PRO:HD3	1.94	0.41
8:Y:734:ALA:HB2	8:Y:893:LEU:HD13	2.02	0.41
8:Z:91:MET:HE2	8:Z:91:MET:HB3	1.96	0.41
8:Z:416:LEU:HD13	8:Z:422:ASN:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:h:294:SER:HA	1:h:295:PRO:HD3	1.92	0.41
1:o:33:PRO:HD2	1:o:47:GLY:HA2	2.02	0.41
1:o:34:ILE:HD11	1:o:46:LEU:HD12	2.03	0.41
1:o:61:LEU:HD22	1:o:112:PRO:HG3	2.03	0.41
3:g:126:HIS:HA	3:g:129:LEU:HB2	2.03	0.41
4:M:398:MET:HE1	5:O:24:LEU:HD23	2.03	0.41
6:1:40:LYS:HE3	6:1:40:LYS:HB2	1.88	0.41
8:a:175:LEU:HD13	8:a:1081:ILE:HD13	2.03	0.41
8:a:420:VAL:HG11	8:a:577:GLU:HA	2.03	0.41
8:a:682:ARG:HD3	8:a:682:ARG:HA	1.92	0.41
8:a:1144:ASP:HB3	8:a:1148:ILE:HG23	2.03	0.41
8:a:1310:LEU:HD23	8:a:1310:LEU:HA	1.97	0.41
8:B:457:PRO:HG3	8:B:537:PHE:CG	2.56	0.41
8:B:995:SER:HA	8:B:998:CYS:HB3	2.03	0.41
8:B:1281:THR:HA	8:B:1284:GLU:HG3	2.03	0.41
8:C:9:LEU:HD23	8:C:9:LEU:HA	1.93	0.41
8:C:646:VAL:O	8:C:674:TYR:OH	2.38	0.41
8:C:999:PRO:HG2	8:C:1004:SER:HB2	2.02	0.41
8:D:534:HIS:HD2	8:D:536:PHE:H	1.68	0.41
8:D:536:PHE:HD1	8:D:1015:ILE:HD12	1.86	0.41
8:Y:534:HIS:H	8:Y:539:PHE:HE2	1.69	0.41
8:Y:653:LEU:HD23	8:Y:653:LEU:HA	1.84	0.41
8:a:310:GLU:HA	8:a:313:VAL:HG22	2.03	0.41
8:a:967:HIS:O	8:a:967:HIS:ND1	2.53	0.41
8:B:636:VAL:O	8:B:640:HIS:HB2	2.20	0.41
8:B:785:TYR:O	8:B:943:TYR:OH	2.30	0.41
8:D:1264:GLN:HE22	8:D:1315:CYS:HB2	1.85	0.41
8:D:1350:HIS:CD2	8:D:1351:PHE:H	2.39	0.41
8:Y:588:PRO:HD2	8:Y:683:LEU:HD11	2.03	0.41
1:I:162:TYR:HB2	1:I:165:VAL:HG12	2.03	0.40
2:P:2221:LEU:HB3	2:P:2222:ARG:H	1.77	0.40
6:1:194:THR:HG22	6:1:196:LEU:H	1.86	0.40
8:a:638:MET:SD	8:a:642:ARG:NH1	2.94	0.40
8:B:273:MET:HA	8:B:1048:LEU:O	2.21	0.40
8:C:534:HIS:CE1	8:C:1239:LEU:HD12	2.56	0.40
8:D:209:ARG:HA	8:D:212:ARG:HE	1.85	0.40
8:D:814:ARG:NH2	8:D:855:GLU:OE1	2.53	0.40
8:Y:314:THR:O	8:Y:318:TYR:N	2.54	0.40
8:Y:332:LEU:HD23	8:Y:332:LEU:HA	1.91	0.40
8:Z:42:ASP:OD1	8:Z:42:ASP:N	2.53	0.40
1:h:278:LEU:HG	1:I:275:LEU:HD22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:m:234:ARG:HA	3:m:234:ARG:HD2	1.85	0.40
3:m:265:VAL:HG22	3:m:270:LYS:HG2	2.03	0.40
4:M:49:ASP:OD1	4:M:49:ASP:N	2.51	0.40
8:a:563:ASP:N	8:a:563:ASP:OD1	2.53	0.40
8:B:276:THR:OG1	8:B:277:ALA:N	2.54	0.40
8:B:615:VAL:HG11	8:B:802:LEU:HD12	2.03	0.40
8:B:915:HIS:NE2	8:B:978:ALA:O	2.54	0.40
8:B:946:PRO:HA	8:B:949:CYS:HB2	2.03	0.40
8:D:222:LYS:O	8:D:226:THR:OG1	2.34	0.40
8:D:429:TYR:HD2	8:D:1327:THR:HG23	1.86	0.40
8:D:572:GLU:OE2	8:D:994:TYR:OH	2.38	0.40
8:D:1055:THR:OG1	8:D:1056:SER:N	2.54	0.40
8:D:1132:ARG:HD2	8:D:1139:ARG:HB3	2.03	0.40
8:Z:705:ALA:HB1	8:Z:712:ASP:HB3	2.03	0.40
1:h:153:MET:O	1:h:157:SER:HB3	2.22	0.40
1:h:268:LEU:HD13	1:h:271:LEU:HD23	2.03	0.40
1:o:127:LEU:HB2	1:o:130:TRP:HB3	2.03	0.40
4:M:478:VAL:HG23	4:M:485:VAL:HG22	2.04	0.40
7:R:58:CYS:HA	7:R:61:LYS:HE3	2.03	0.40
8:a:635:ILE:HG21	8:a:666:LEU:HD13	2.04	0.40
8:a:759:ALA:HB1	8:a:762:ALA:HB3	2.03	0.40
8:a:786:LEU:HD23	8:a:786:LEU:HA	1.88	0.40
8:a:1276:LYS:HD3	8:a:1280:LYS:HE2	2.01	0.40
8:B:675:ARG:HH12	8:C:602:THR:HG23	1.85	0.40
8:C:114:ILE:HG22	8:Z:37:ILE:HG23	2.03	0.40
8:C:134:ALA:HA	8:C:137:THR:HG22	2.03	0.40
8:C:251:THR:HG21	8:Z:19:PHE:HA	2.03	0.40
8:D:454:LEU:HD12	8:D:1239:LEU:HD11	2.02	0.40
8:D:789:MET:HE2	8:D:789:MET:HB2	1.96	0.40
8:Z:369:MET:HE2	8:Z:369:MET:HB3	1.92	0.40
8:Z:796:ARG:HA	8:Z:945:ASN:HD22	1.86	0.40
1:n:268:LEU:HG	1:o:152:ILE:HD11	2.03	0.40
3:g:90:ARG:HG3	3:g:118:LEU:HD22	2.03	0.40
3:g:220:ARG:O	3:g:227:ARG:NH1	2.54	0.40
6:1:244:SER:H	6:1:247:SER:HG	1.67	0.40
7:T:37:HIS:HE1	8:D:818:LEU:HB3	1.86	0.40
8:C:811:LEU:HD12	8:C:857:LEU:HD13	2.03	0.40
8:D:222:LYS:HD3	8:D:222:LYS:HA	1.96	0.40
8:D:341:ASN:ND2	8:D:345:SER:OG	2.54	0.40
8:D:976:PRO:HB2	8:D:979:PHE:HD1	1.86	0.40
8:Z:321:ILE:HD13	8:Z:321:ILE:HA	1.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:h:273:VAL:HA	1:h:276:ARG:HE	1.87	0.40
1:I:113:PRO:HD3	1:I:135:PRO:HA	2.04	0.40
3:g:211:HIS:NE2	3:g:213:GLN:HB3	2.37	0.40
8:a:811:LEU:HD12	8:a:811:LEU:HA	1.91	0.40
8:a:1173:GLU:O	8:a:1244:TYR:OH	2.31	0.40
8:C:177:HIS:ND1	8:C:376:TYR:OH	2.43	0.40
8:C:250:ALA:HB2	8:C:1093:ASN:HD21	1.87	0.40
8:C:283:ILE:HG23	8:C:287:LEU:HD12	2.02	0.40
8:D:463:THR:HG21	8:D:1237:GLY:HA3	2.03	0.40
8:D:475:MET:HG2	8:D:475:MET:H	1.75	0.40
8:Y:796:ARG:HD3	8:Y:796:ARG:HA	1.88	0.40
8:Y:808:LEU:HA	8:Y:811:LEU:HB3	2.02	0.40
8:Y:983:TYR:HA	8:Y:988:ARG:HE	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	I	279/306 (91%)	264 (95%)	15 (5%)	0	100	100
1	h	281/306 (92%)	262 (93%)	19 (7%)	0	100	100
1	n	289/306 (94%)	267 (92%)	22 (8%)	0	100	100
1	o	276/306 (90%)	263 (95%)	13 (5%)	0	100	100
2	H	18/2241 (1%)	17 (94%)	1 (6%)	0	100	100
2	P	18/2241 (1%)	17 (94%)	1 (6%)	0	100	100
3	g	233/290 (80%)	214 (92%)	19 (8%)	0	100	100
3	m	288/290 (99%)	273 (95%)	15 (5%)	0	100	100
4	M	462/594 (78%)	432 (94%)	30 (6%)	0	100	100
5	N	63/642 (10%)	61 (97%)	2 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	O	65/642 (10%)	64 (98%)	1 (2%)	0	100	100
6	1	283/1048 (27%)	270 (95%)	13 (5%)	0	100	100
7	R	61/75 (81%)	57 (93%)	4 (7%)	0	100	100
7	S	61/75 (81%)	58 (95%)	3 (5%)	0	100	100
7	T	61/75 (81%)	60 (98%)	1 (2%)	0	100	100
7	i	61/75 (81%)	59 (97%)	2 (3%)	0	100	100
7	j	61/75 (81%)	60 (98%)	1 (2%)	0	100	100
8	B	1324/1370 (97%)	1245 (94%)	79 (6%)	0	100	100
8	C	1322/1370 (96%)	1244 (94%)	78 (6%)	0	100	100
8	D	1293/1370 (94%)	1228 (95%)	65 (5%)	0	100	100
8	Y	1343/1370 (98%)	1254 (93%)	89 (7%)	0	100	100
8	Z	1331/1370 (97%)	1252 (94%)	79 (6%)	0	100	100
8	a	1280/1370 (93%)	1192 (93%)	88 (7%)	0	100	100
All	All	10753/17807 (60%)	10113 (94%)	640 (6%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	I	257/273 (94%)	257 (100%)	0	100	100
1	h	256/273 (94%)	254 (99%)	2 (1%)	79	84
1	n	262/273 (96%)	262 (100%)	0	100	100
1	o	254/273 (93%)	254 (100%)	0	100	100
2	H	19/1941 (1%)	19 (100%)	0	100	100
2	P	19/1941 (1%)	19 (100%)	0	100	100
3	g	207/252 (82%)	207 (100%)	0	100	100
3	m	252/252 (100%)	250 (99%)	2 (1%)	79	84

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	M	395/500 (79%)	394 (100%)	1 (0%)	91 92
5	N	58/526 (11%)	58 (100%)	0	100 100
5	O	64/526 (12%)	63 (98%)	1 (2%)	58 73
6	1	256/883 (29%)	255 (100%)	1 (0%)	89 91
7	R	59/68 (87%)	59 (100%)	0	100 100
7	S	59/68 (87%)	58 (98%)	1 (2%)	56 72
7	T	59/68 (87%)	59 (100%)	0	100 100
7	i	59/68 (87%)	59 (100%)	0	100 100
7	j	59/68 (87%)	57 (97%)	2 (3%)	32 53
8	B	1162/1192 (98%)	1156 (100%)	6 (0%)	86 90
8	C	1158/1192 (97%)	1154 (100%)	4 (0%)	91 92
8	D	1130/1192 (95%)	1126 (100%)	4 (0%)	89 91
8	Y	1174/1192 (98%)	1166 (99%)	8 (1%)	81 86
8	Z	1163/1192 (98%)	1161 (100%)	2 (0%)	92 94
8	a	1120/1192 (94%)	1114 (100%)	6 (0%)	86 90
All	All	9501/15405 (62%)	9461 (100%)	40 (0%)	88 91

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	h	71	THR
1	h	259	VAL
3	m	185	VAL
3	m	281	VAL
4	M	584	VAL
5	O	4	LEU
6	1	6	ILE
7	S	44	LEU
7	j	40	LEU
7	j	44	LEU
8	a	479	LEU
8	a	861	VAL
8	a	1001	VAL
8	a	1096	VAL
8	a	1179	VAL
8	a	1304	VAL
8	B	518	VAL

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Mol	Chain	Res	Type
8	B	677	LEU
8	B	937	VAL
8	B	1084	VAL
8	B	1228	THR
8	B	1303	CYS
8	C	116	VAL
8	C	740	ASN
8	C	861	VAL
8	C	937	VAL
8	D	740	ASN
8	D	916	VAL
8	D	1179	VAL
8	D	1297	THR
8	Y	82	ASP
8	Y	418	ASP
8	Y	644	LEU
8	Y	864	VAL
8	Y	870	THR
8	Y	1112	ASP
8	Y	1176	LEU
8	Y	1239	LEU
8	Z	446	LEU
8	Z	937	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (179) such sidechains are listed below:

Mol	Chain	Res	Type
1	h	116	HIS
1	h	129	GLN
1	h	257	GLN
1	I	209	ASN
2	H	2226	GLN
2	H	2229	GLN
2	P	2226	GLN
1	n	39	HIS
1	n	79	ASN
1	n	84	HIS
1	n	173	GLN
1	n	209	ASN
1	n	258	HIS
1	n	277	GLN
1	n	297	ASN

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Mol	Chain	Res	Type
1	o	147	ASN
1	o	170	GLN
1	o	297	ASN
3	g	183	GLN
3	g	232	ASN
3	m	31	ASN
3	m	213	GLN
3	m	240	GLN
3	m	249	GLN
3	m	266	HIS
4	M	47	ASN
4	M	471	GLN
4	M	571	HIS
5	N	63	GLN
5	O	63	GLN
6	1	170	ASN
6	1	177	ASN
6	1	252	ASN
7	R	37	HIS
7	S	18	HIS
7	T	55	ASN
8	a	81	HIS
8	a	208	ASN
8	a	217	GLN
8	a	438	GLN
8	a	484	GLN
8	a	534	HIS
8	a	643	GLN
8	a	660	HIS
8	a	694	ASN
8	a	919	ASN
8	a	940	HIS
8	a	945	ASN
8	a	1003	HIS
8	a	1061	ASN
8	a	1082	ASN
8	a	1111	GLN
8	a	1264	GLN
8	a	1275	ASN
8	a	1350	HIS
8	a	1363	GLN
8	a	1364	GLN

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Mol	Chain	Res	Type
8	B	158	HIS
8	B	181	GLN
8	B	208	ASN
8	B	438	GLN
8	B	514	GLN
8	B	534	HIS
8	B	543	GLN
8	B	571	HIS
8	B	618	HIS
8	B	620	ASN
8	B	749	HIS
8	B	945	ASN
8	B	1000	ASN
8	B	1027	HIS
8	B	1079	GLN
8	B	1093	ASN
8	B	1100	ASN
8	B	1124	HIS
8	B	1191	ASN
8	B	1264	GLN
8	B	1309	GLN
8	B	1319	GLN
8	B	1350	HIS
8	C	153	ASN
8	C	194	GLN
8	C	211	GLN
8	C	231	ASN
8	C	338	HIS
8	C	346	GLN
8	C	422	ASN
8	C	514	GLN
8	C	534	HIS
8	C	618	HIS
8	C	849	GLN
8	C	884	GLN
8	C	903	GLN
8	C	919	ASN
8	C	940	HIS
8	C	985	ASN
8	C	1061	ASN
8	C	1363	GLN
8	C	1364	GLN

Continued on next page...

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Mol	Chain	Res	Type
8	D	76	HIS
8	D	111	GLN
8	D	194	GLN
8	D	205	GLN
8	D	208	ASN
8	D	214	ASN
8	D	331	HIS
8	D	341	ASN
8	D	484	GLN
8	D	534	HIS
8	D	543	GLN
8	D	637	ASN
8	D	660	HIS
8	D	676	ASN
8	D	722	HIS
8	D	737	GLN
8	D	945	ASN
8	D	1000	ASN
8	D	1076	HIS
8	D	1080	ASN
8	D	1093	ASN
8	D	1100	ASN
8	D	1124	HIS
8	D	1223	GLN
8	D	1264	GLN
8	D	1313	ASN
8	D	1350	HIS
8	D	1363	GLN
8	Y	3	ASN
8	Y	47	ASN
8	Y	153	ASN
8	Y	158	HIS
8	Y	194	GLN
8	Y	199	ASN
8	Y	331	HIS
8	Y	422	ASN
8	Y	476	GLN
8	Y	484	GLN
8	Y	534	HIS
8	Y	695	ASN
8	Y	748	HIS
8	Y	889	HIS

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Mol	Chain	Res	Type
8	Y	914	GLN
8	Y	940	HIS
8	Y	1000	ASN
8	Y	1003	HIS
8	Y	1100	ASN
8	Y	1120	ASN
8	Y	1190	ASN
8	Y	1191	ASN
8	Y	1313	ASN
8	Y	1350	HIS
8	Z	47	ASN
8	Z	76	HIS
8	Z	81	HIS
8	Z	111	GLN
8	Z	153	ASN
8	Z	181	GLN
8	Z	214	ASN
8	Z	217	GLN
8	Z	257	ASN
8	Z	534	HIS
8	Z	620	ASN
8	Z	637	ASN
8	Z	640	HIS
8	Z	676	ASN
8	Z	849	GLN
8	Z	919	ASN
8	Z	969	HIS
8	Z	1027	HIS
8	Z	1029	HIS
8	Z	1061	ASN
8	Z	1079	GLN
8	Z	1080	ASN
8	Z	1093	ASN
8	Z	1223	GLN
8	Z	1248	HIS
8	Z	1350	HIS
8	Z	1353	ASN
8	Z	1364	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

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.

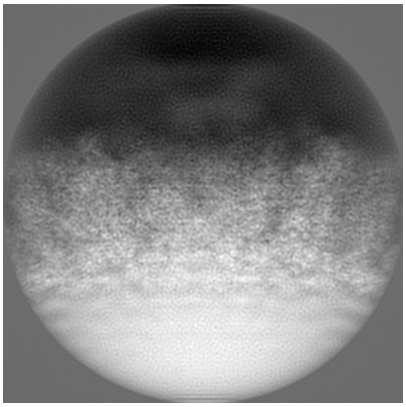
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-31297. These allow visual inspection of the internal detail of the map and identification of artifacts.

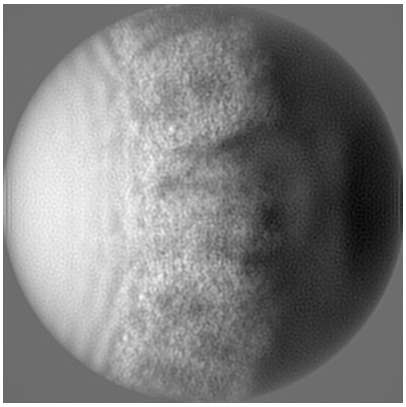
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

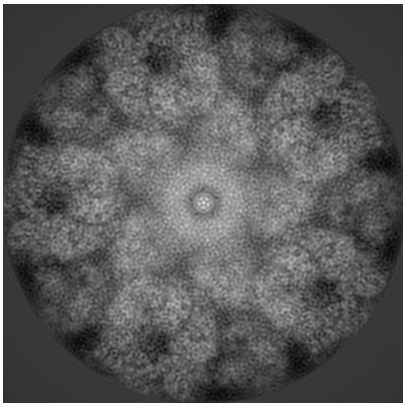
6.1.1 Primary map



X



Y

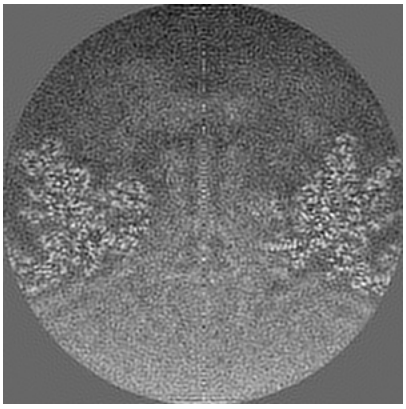


Z

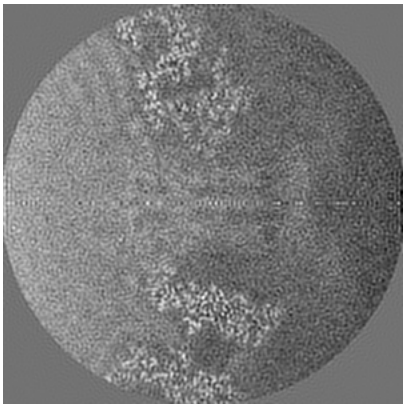
The images above show the map projected in three orthogonal directions.

6.2 Central slices

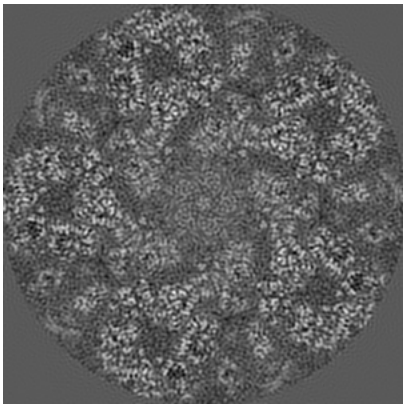
6.2.1 Primary map



X Index: 128



Y Index: 128

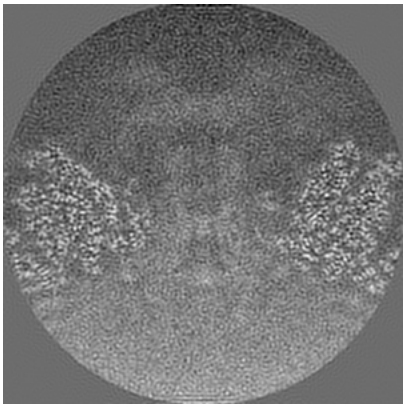


Z Index: 128

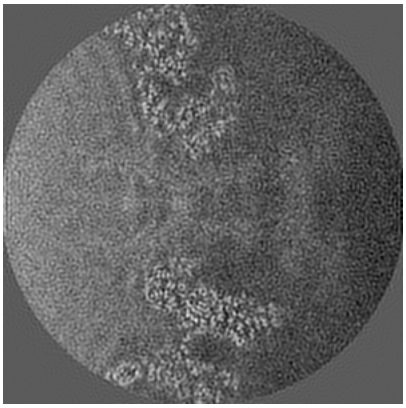
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

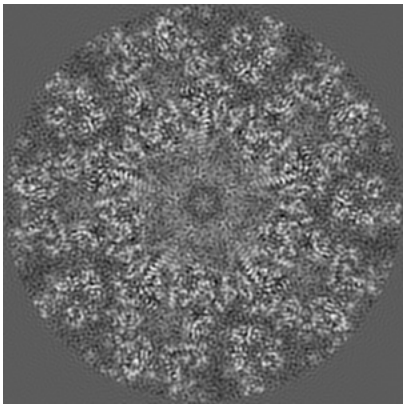
6.3.1 Primary map



X Index: 123



Y Index: 123

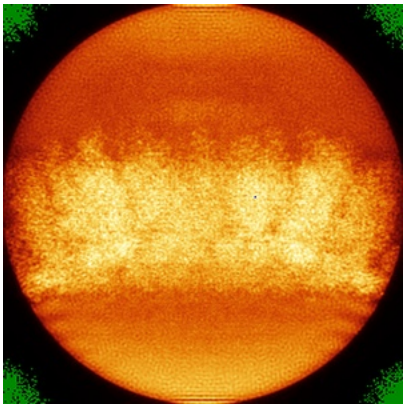


Z Index: 101

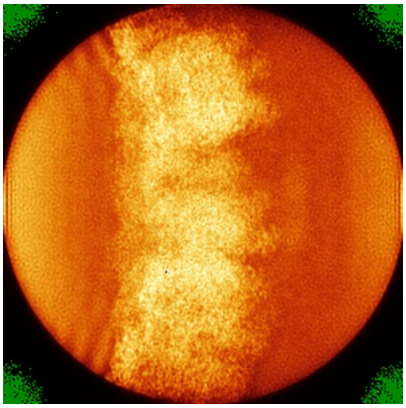
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

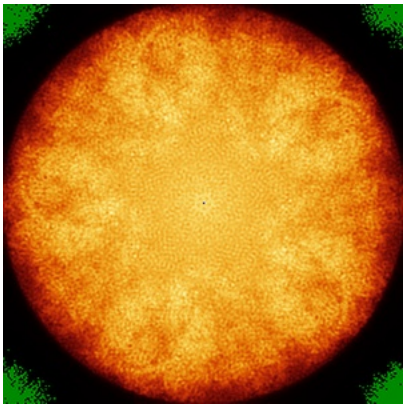
6.4.1 Primary map



X



Y



Z

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 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

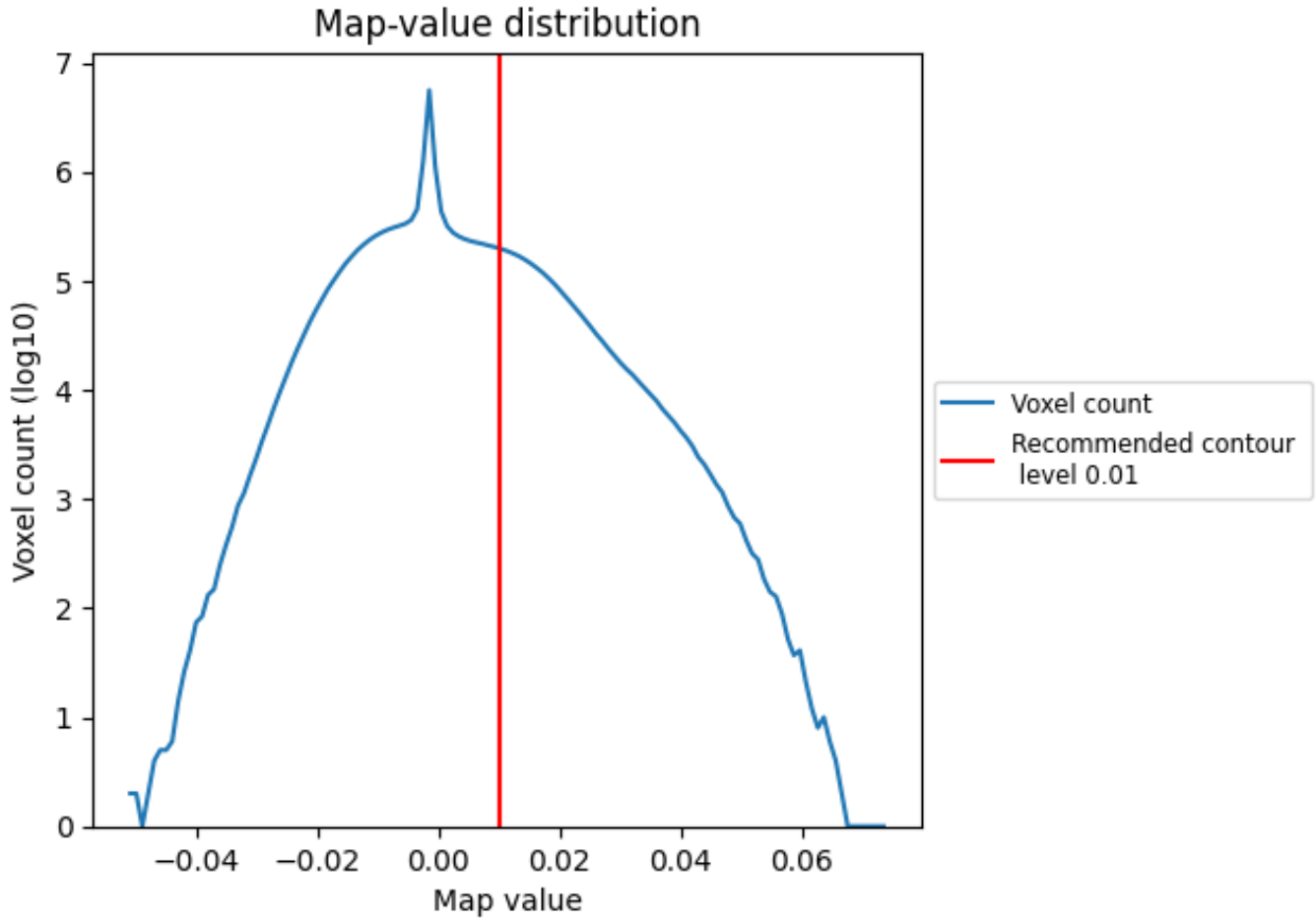
6.6 Mask visualisation (i)

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

7 Map analysis

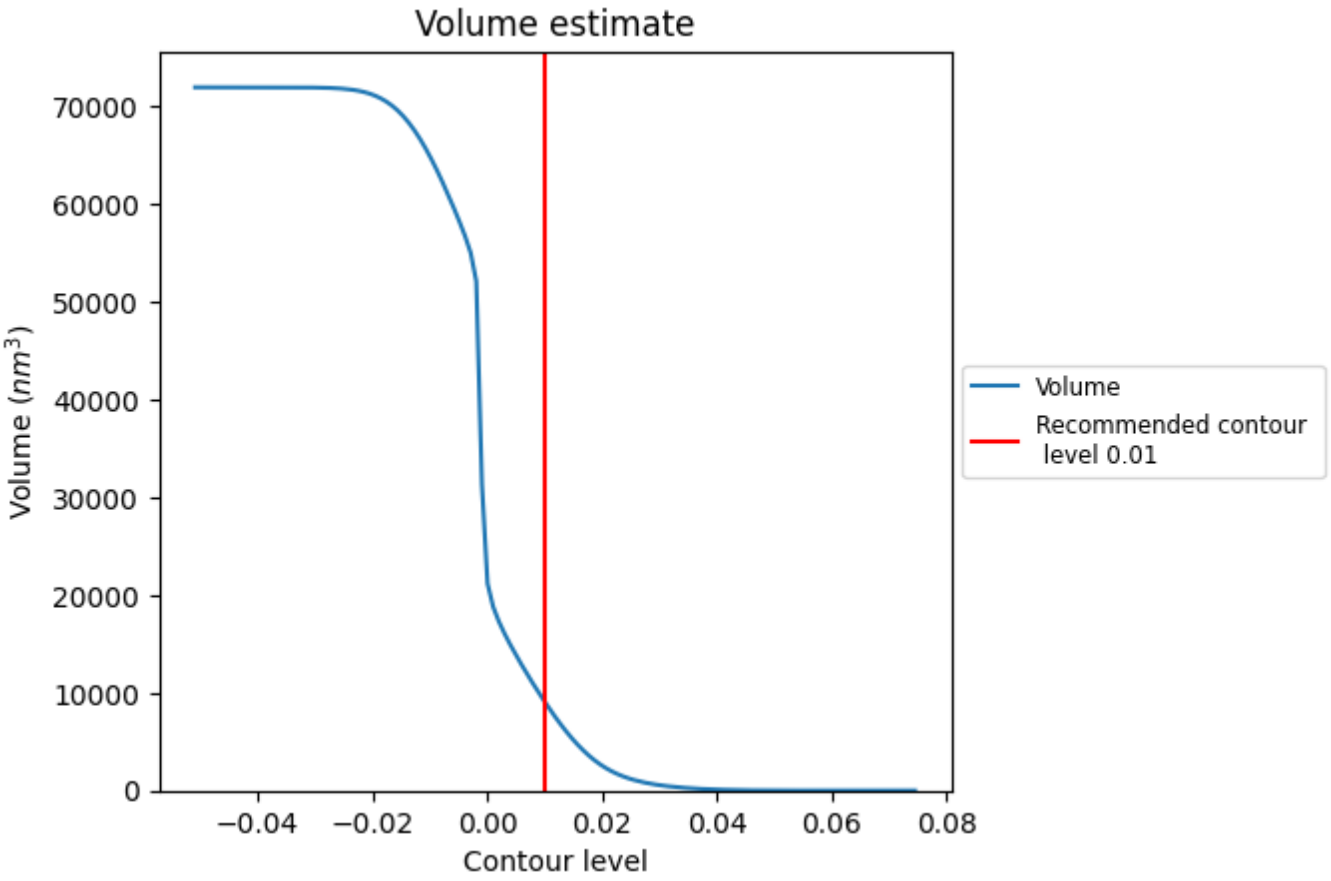
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

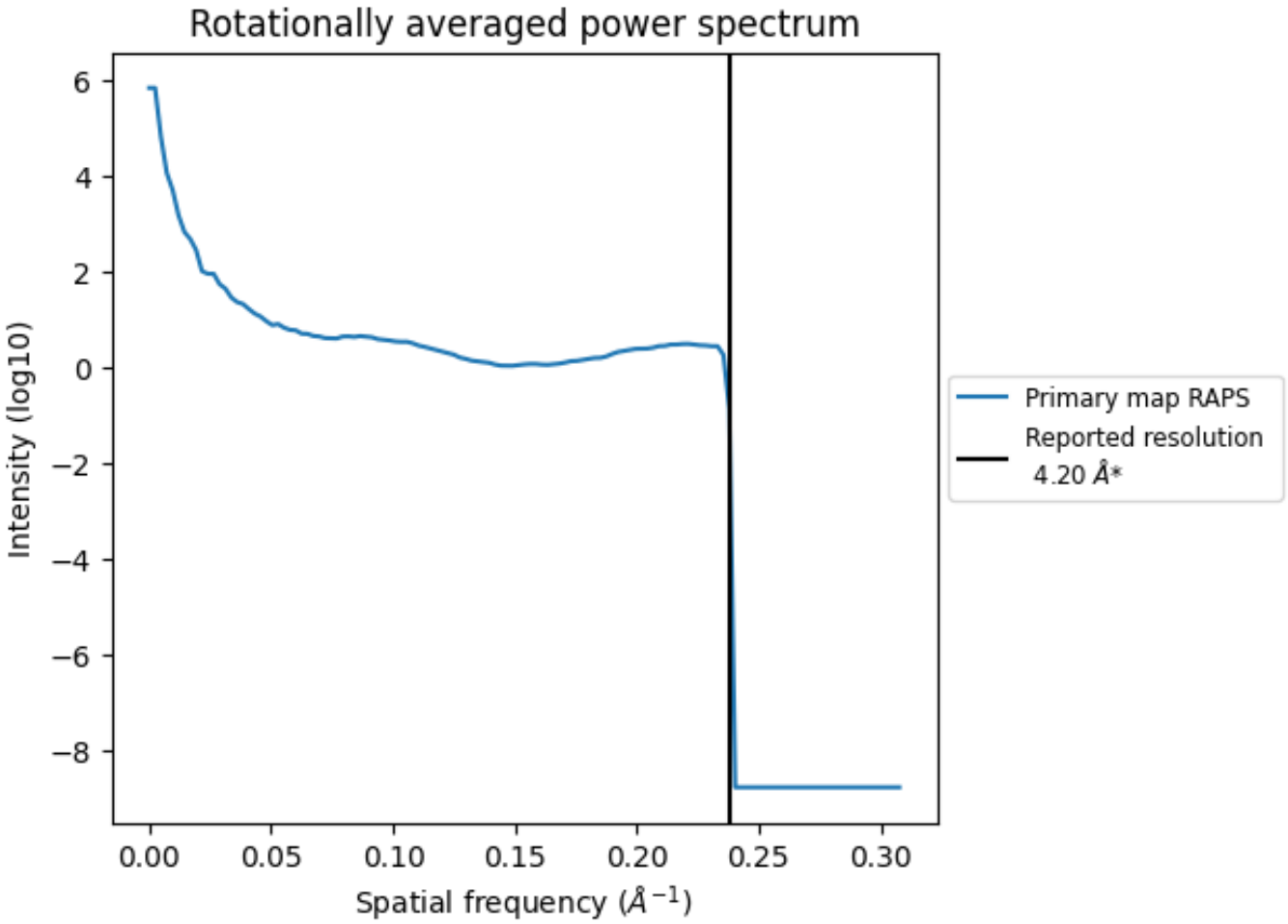
7.2 Volume estimate



The volume at the recommended contour level is 9110 nm^3; this corresponds to an approximate mass of 8230 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 (i)



*Reported resolution corresponds to spatial frequency of 0.238 Å^{-1}

8 Fourier-Shell correlation

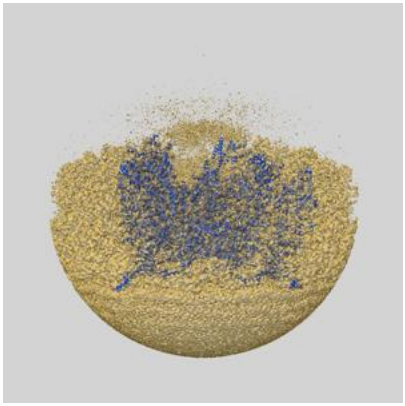
This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

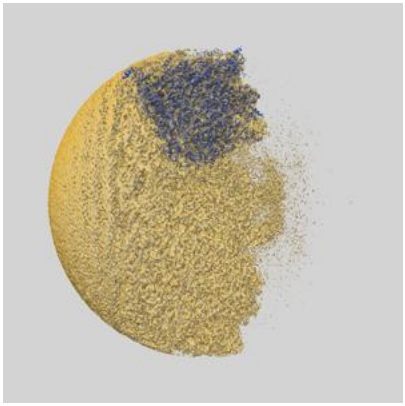
This section contains information regarding the fit between EMDB map EMD-31297 and PDB model 7ET3. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlays

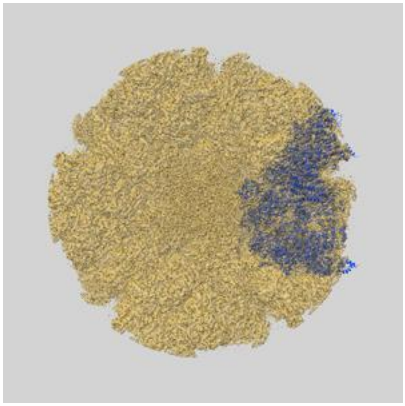
9.1.1 Map-model overlay



X

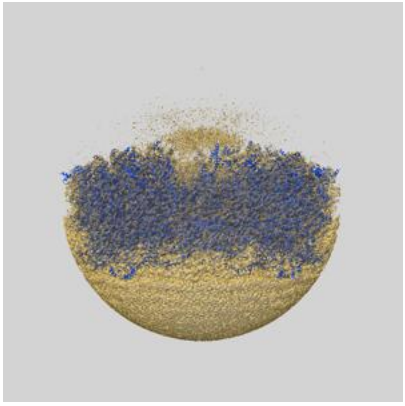


Y

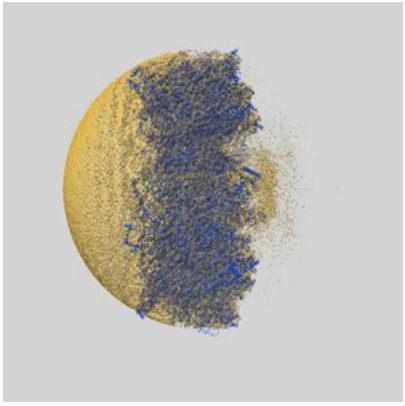


Z

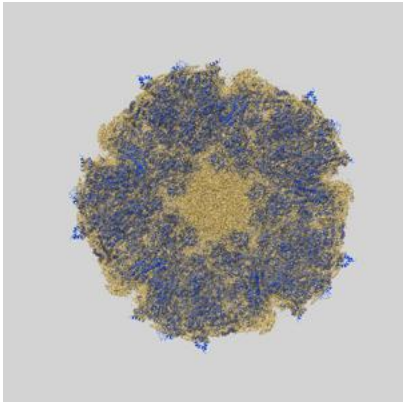
9.1.2 Map-model assembly overlay



X



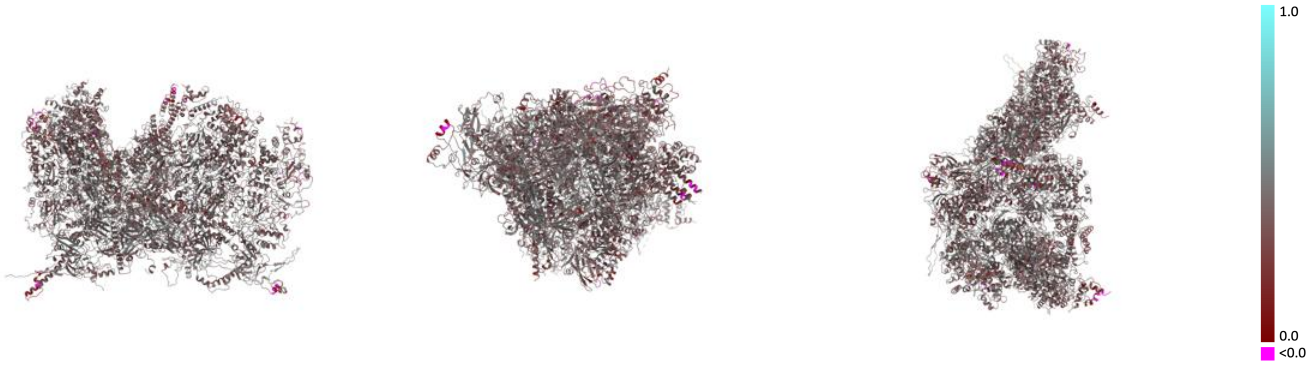
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.01 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.

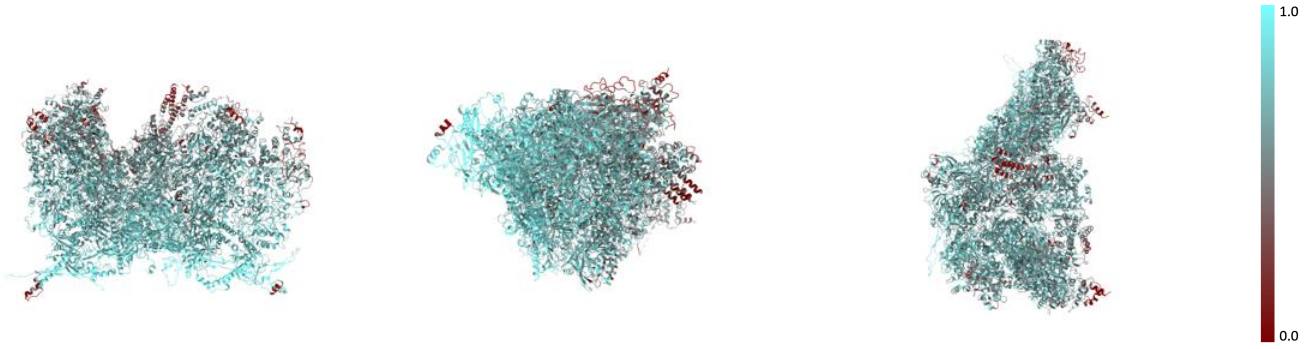
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

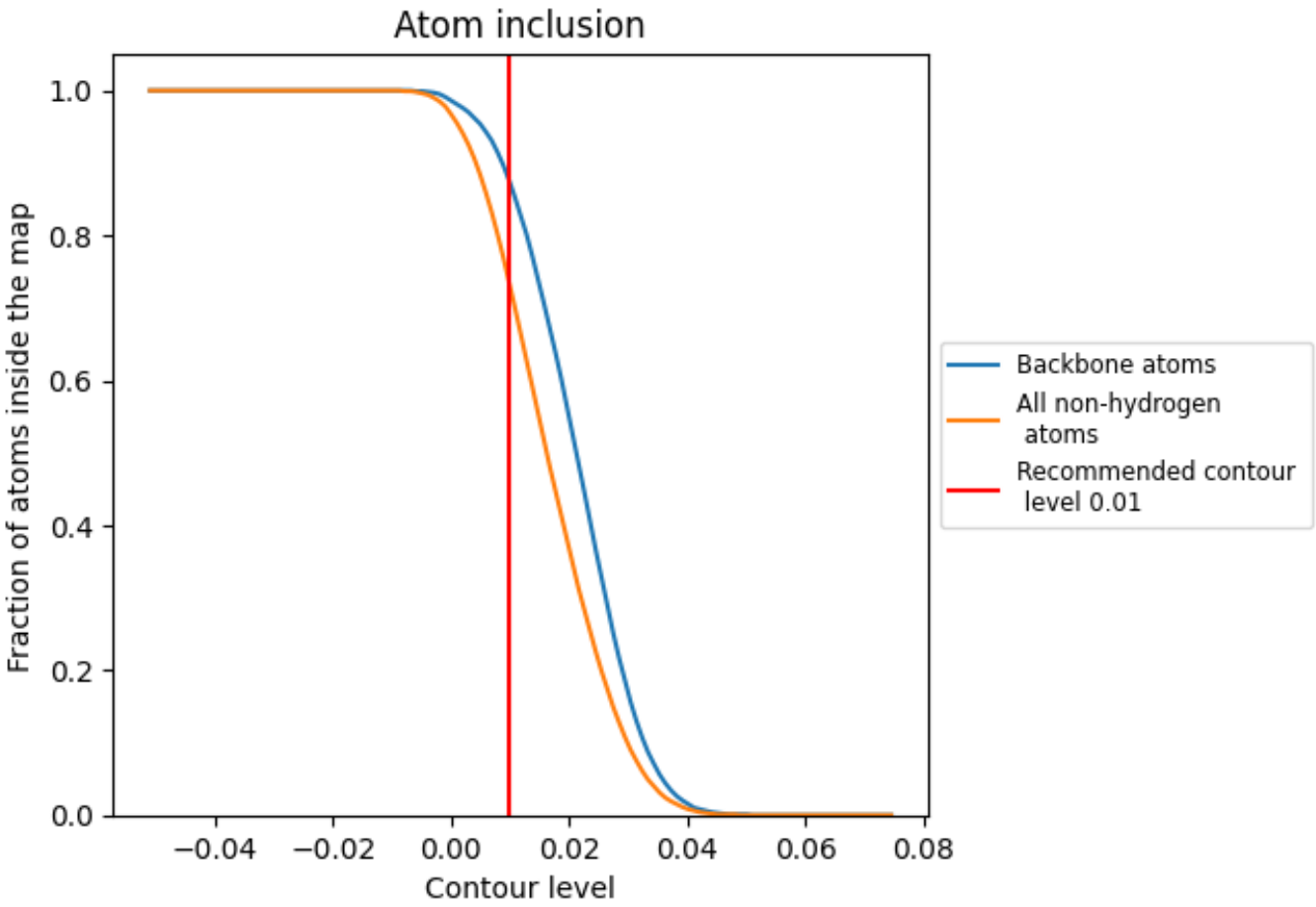
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.01).

9.4 Atom inclusion (i)



At the recommended contour level, 87% of all backbone atoms, 73% 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 (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7310	0.3980
1	0.5500	0.3720
B	0.7680	0.4060
C	0.7790	0.4130
D	0.7550	0.4000
H	0.2870	0.3060
I	0.7260	0.3830
M	0.6010	0.3910
N	0.4520	0.3440
O	0.3990	0.3210
P	0.2640	0.2900
R	0.4780	0.3630
S	0.5200	0.3800
T	0.2790	0.2660
Y	0.7390	0.3930
Z	0.7650	0.4070
a	0.7750	0.4090
g	0.6770	0.3630
h	0.7020	0.3750
i	0.3590	0.3420
j	0.4900	0.3610
m	0.8030	0.4100
n	0.7570	0.4000
o	0.7730	0.4000