Full wwPDB EM Validation Report

Oct 27, 2024 – 06:36 AM EDT

PDB ID	:	7TNS
EMDB ID	:	EMD-26019
Title	:	Subpellicular microtubule from detergent-extract Toxoplasma gondii cells
Authors	:	Sun, S.Y.; Pintilie, G.D.; Chen, M.; Chiu, W.
Deposited on	:	2022-01-21
Resolution	:	6.70 Å(reported)
Based on initial model	:	7MIZ

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 (i) 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 (i)) were used in the production of this report:

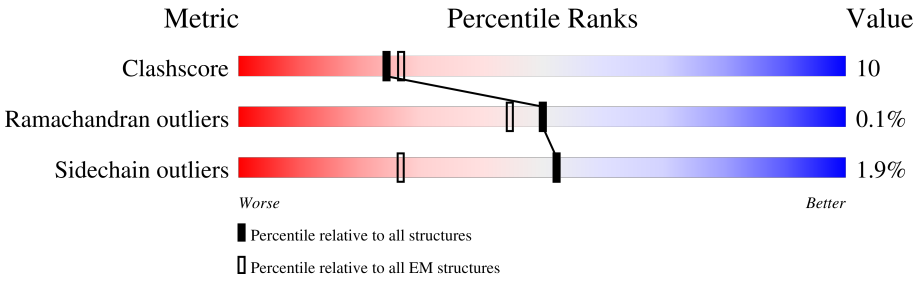
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 6.70 Å.

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



Metric	Whole archive (#Entries)	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	0	351	5% 94%
1	1	351	5% 94%
1	10	351	94%
1	11	351	94%
1	12	351	5% 94%
1	13	351	5% 94%
1	14	351	5% 6% 94%
1	15	351	5% 94%

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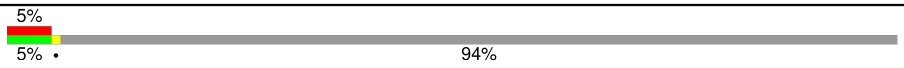
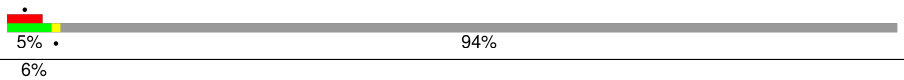
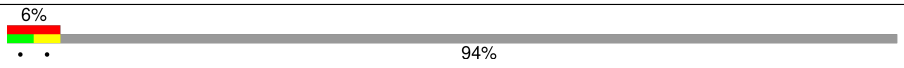
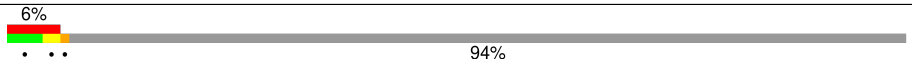
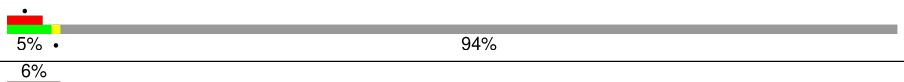
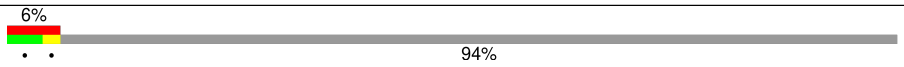
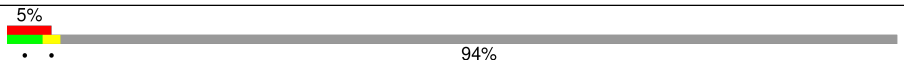
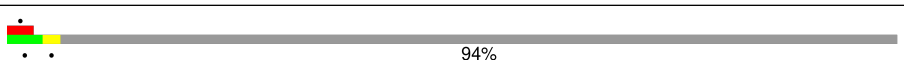
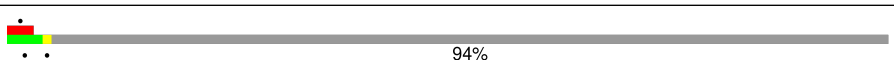
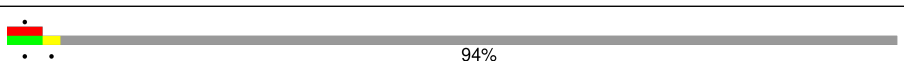
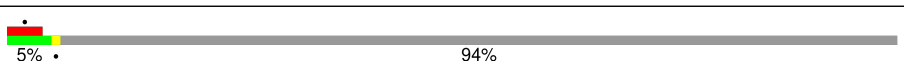
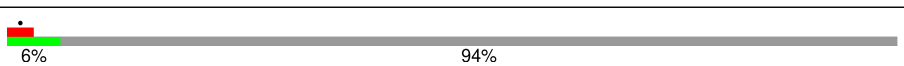
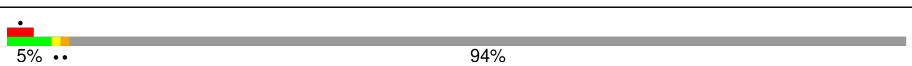
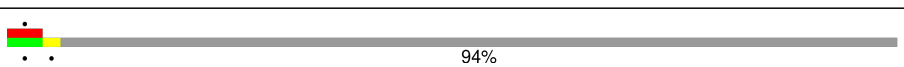
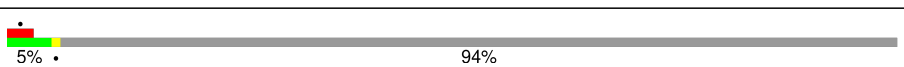
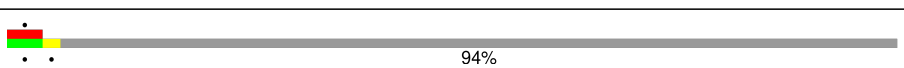
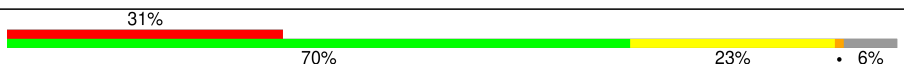
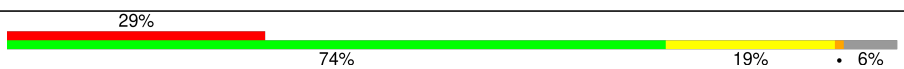
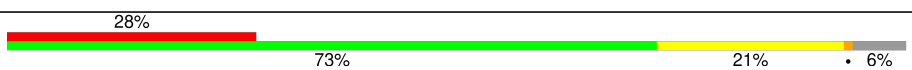
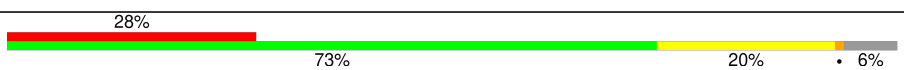
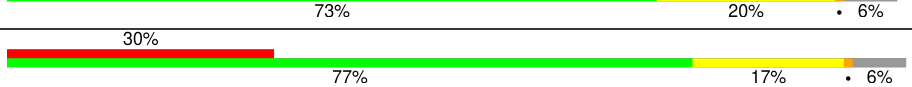
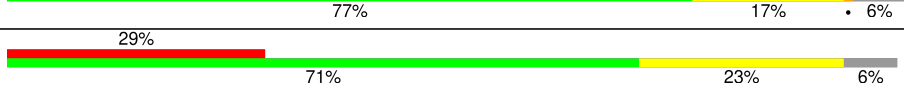
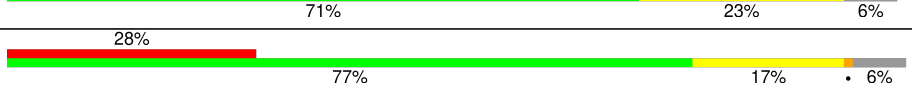
Mol	Chain	Length	Quality of chain
1	16	351	
1	17	351	
1	18	351	
1	19	351	
1	2	351	
1	20	351	
1	21	351	
1	22	351	
1	23	351	
1	3	351	
1	4	351	
1	5	351	
1	6	351	
1	7	351	
1	8	351	
1	9	351	
2	A0	453	
2	A2	453	
2	A4	453	
2	A6	453	
2	A8	453	
2	B0	453	
2	B2	453	
2	B4	453	
2	B6	453	

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Mol	Chain	Length	Quality of chain
2	B8	453	28% 74% 21% 6%
2	C0	453	29% 74% 21% 6%
2	C2	453	29% 74% 21% 6%
2	C4	453	30% 69% 25% 6%
2	C6	453	30% 65% 29% 6%
2	C8	453	31% 75% 18% 6%
2	D0	453	30% 79% 15% 6%
2	D2	453	34% 75% 18% 6%
2	D4	453	30% 73% 21% 6%
2	D6	453	40% 78% 16% 6%
2	D8	453	29% 77% 17% 6%
2	E0	453	57% 74% 20% 6%
2	E2	453	30% 77% 17% 6%
2	E4	453	74% 70% 24% 6%
2	E6	453	30% 72% 22% 6%
2	E8	453	90% 73% 22% 6%
2	F0	453	31% 66% 27% 6%
3	A1	449	32% 70% 24% 5%
3	A3	449	59% 77% 18% 5%
3	A5	449	31% 73% 22% 5%
3	A7	449	43% 78% 16% 5%
3	A9	449	31% 74% 19% 5%
3	B1	449	39% 76% 18% 5%
3	B3	449	28% 78% 16% 5%
3	B5	449	34% 75% 19% 5%

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Mol	Chain	Length	Quality of chain
3	B7	449	29% 75% 18% • 5%
3	B9	449	29% 75% 19% • 5%
3	C1	449	29% 72% 22% • 5%
3	C3	449	28% 70% 24% • 5%
3	C5	449	27% 72% 21% • 5%
3	C7	449	25% 72% 22% • 5%
3	C9	449	26% 72% 22% • 5%
3	D1	449	26% 74% 20% • 5%
3	D3	449	27% 71% 23% • 5%
3	D5	449	25% 70% 23% • 5%
3	D7	449	29% 75% 20% 5%
3	D9	449	27% 74% 20% 5%
3	E1	449	31% 73% 21% • 5%
3	E3	449	30% 78% 16% • 5%
3	E5	449	31% 68% 26% • 5%
3	E7	449	30% 74% 19% • 5%
3	E9	449	35% 73% 21% • 5%
3	F1	449	32% 73% 21% 5%
4	a	220	25% 64% • 32%
4	b	220	28% 65% • 32%
4	c	220	31% 88% • 9%
4	d	220	30% 86% 5% 9%
4	e	220	32% 87% • 9%
4	f	220	30% 86% 5% 9%
4	g	220	31% 89% • 9%

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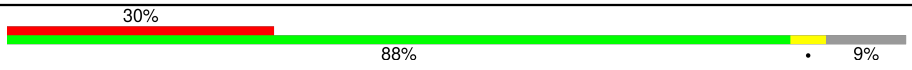
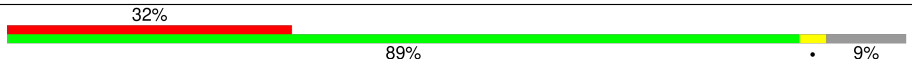
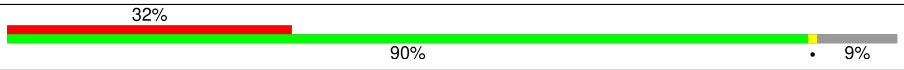
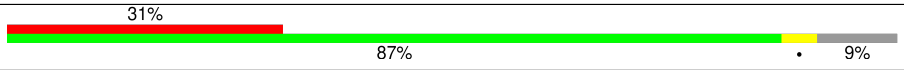
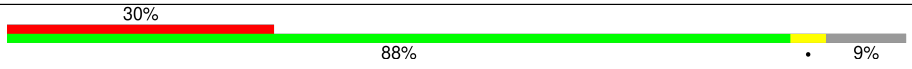
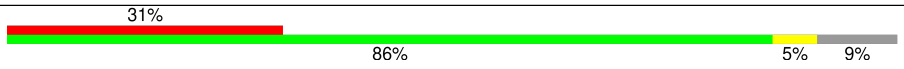
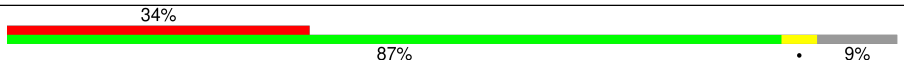
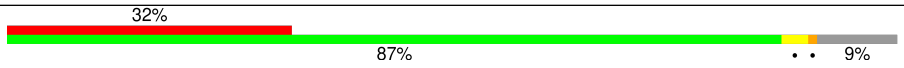
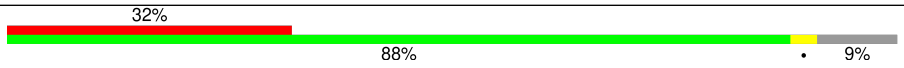
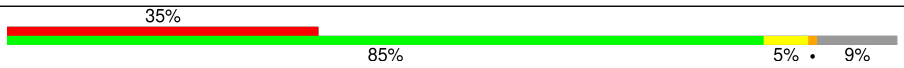
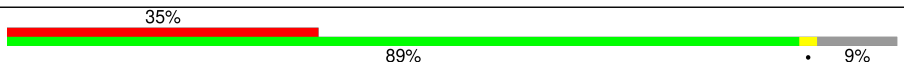
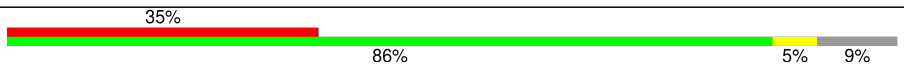
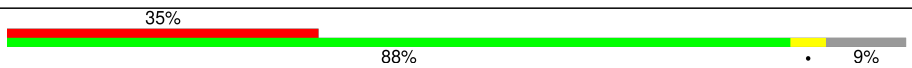
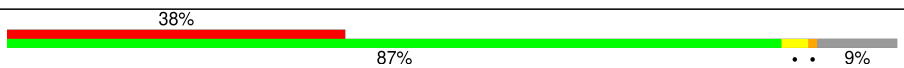
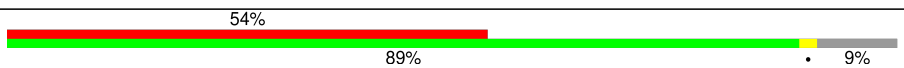
Mol	Chain	Length	Quality of chain
4	h	220	
4	i	220	
4	j	220	
4	k	220	
4	l	220	
4	m	220	
4	n	220	
4	o	220	
4	p	220	
4	q	220	
4	r	220	
4	s	220	
4	t	220	
4	u	220	
4	v	220	
4	x	220	
4	y	220	
5	w	189	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 216148 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 Microtubule associated protein SPM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	0	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	1	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	10	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	11	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	12	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	13	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	14	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	15	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	16	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	17	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	18	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	19	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	2	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	20	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	21	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	22	20	Total	C	N	O	S	0	0
			160	105	26	28	1		
1	23	20	Total	C	N	O	S	0	0
			160	105	26	28	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	3	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	4	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	5	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	6	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	7	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	8	22	Total	C	N	O	S	0	0
			174	114	28	31	1		
1	9	22	Total	C	N	O	S	0	0
			174	114	28	31	1		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
0	263	ALA	VAL	conflict	UNP S8F1Y1
1	263	ALA	VAL	conflict	UNP S8F1Y1
10	263	ALA	VAL	conflict	UNP S8F1Y1
11	263	ALA	VAL	conflict	UNP S8F1Y1
12	263	ALA	VAL	conflict	UNP S8F1Y1
13	263	ALA	VAL	conflict	UNP S8F1Y1
14	263	ALA	VAL	conflict	UNP S8F1Y1
15	263	ALA	VAL	conflict	UNP S8F1Y1
16	263	ALA	VAL	conflict	UNP S8F1Y1
17	263	ALA	VAL	conflict	UNP S8F1Y1
18	263	ALA	VAL	conflict	UNP S8F1Y1
19	263	ALA	VAL	conflict	UNP S8F1Y1
2	263	ALA	VAL	conflict	UNP S8F1Y1
20	263	ALA	VAL	conflict	UNP S8F1Y1
21	263	ALA	VAL	conflict	UNP S8F1Y1
22	263	ALA	VAL	conflict	UNP S8F1Y1
23	263	ALA	VAL	conflict	UNP S8F1Y1
3	263	ALA	VAL	conflict	UNP S8F1Y1
4	263	ALA	VAL	conflict	UNP S8F1Y1
5	263	ALA	VAL	conflict	UNP S8F1Y1
6	263	ALA	VAL	conflict	UNP S8F1Y1
7	263	ALA	VAL	conflict	UNP S8F1Y1
8	263	ALA	VAL	conflict	UNP S8F1Y1
9	263	ALA	VAL	conflict	UNP S8F1Y1

- Molecule 2 is a protein called Tubulin alpha chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	E2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	F0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		

- Molecule 3 is a protein called Tubulin beta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	C9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	F1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		

- Molecule 4 is a protein called PDI family protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	a	150	Total	C	N	O	S	0	0
			1198	763	213	217	5		
4	b	150	Total	C	N	O	S	0	0
			1198	763	213	217	5		
4	c	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	d	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	e	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	f	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	g	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	h	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	i	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	j	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	k	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	l	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	m	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	n	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	o	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	p	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	q	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	r	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	s	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	t	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	u	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	v	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	x	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
4	y	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		

- Molecule 5 is a protein called PDI family protein.

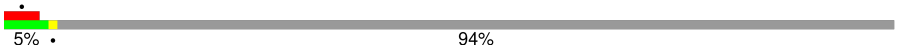
Mol	Chain	Residues	Atoms					AltConf	Trace
5	w	143	Total	C	N	O	S	0	0
			1172	755	207	205	5		

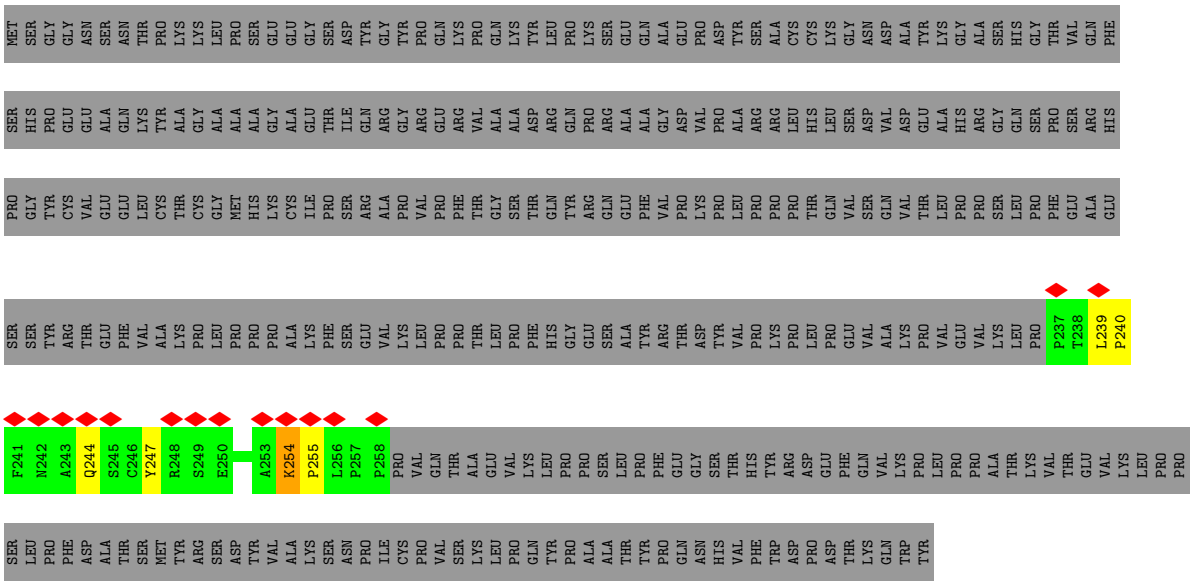
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: Microtubule associated protein SPM1

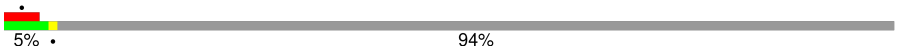
Chain 0:

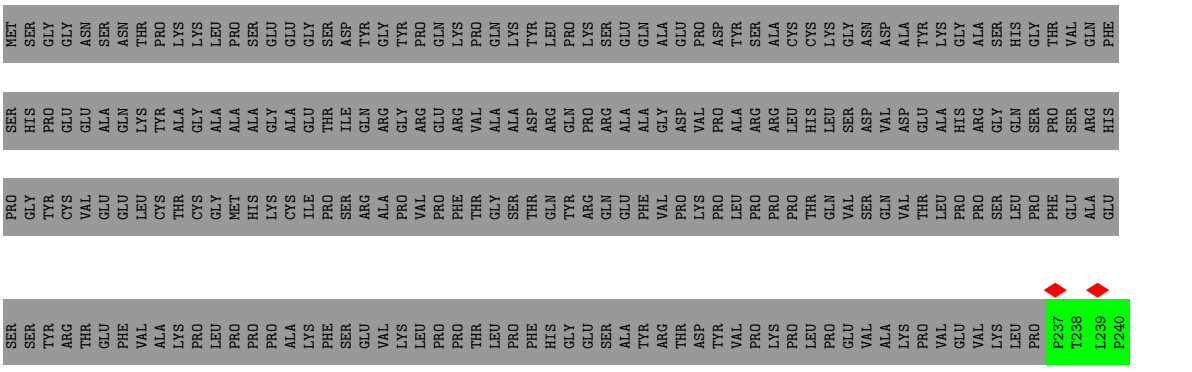


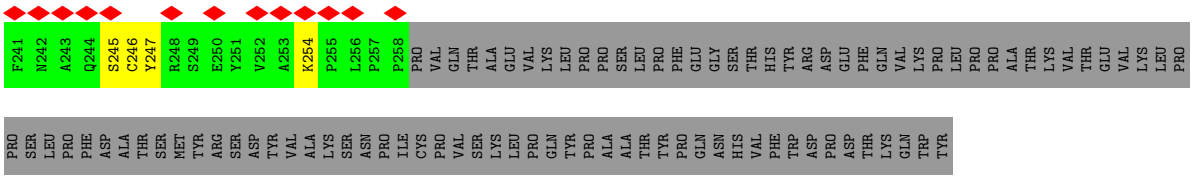


• Molecule 1: Microtubule associated protein SPM1

Chain 1:

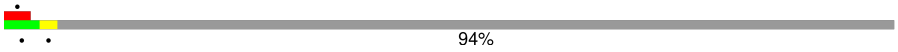


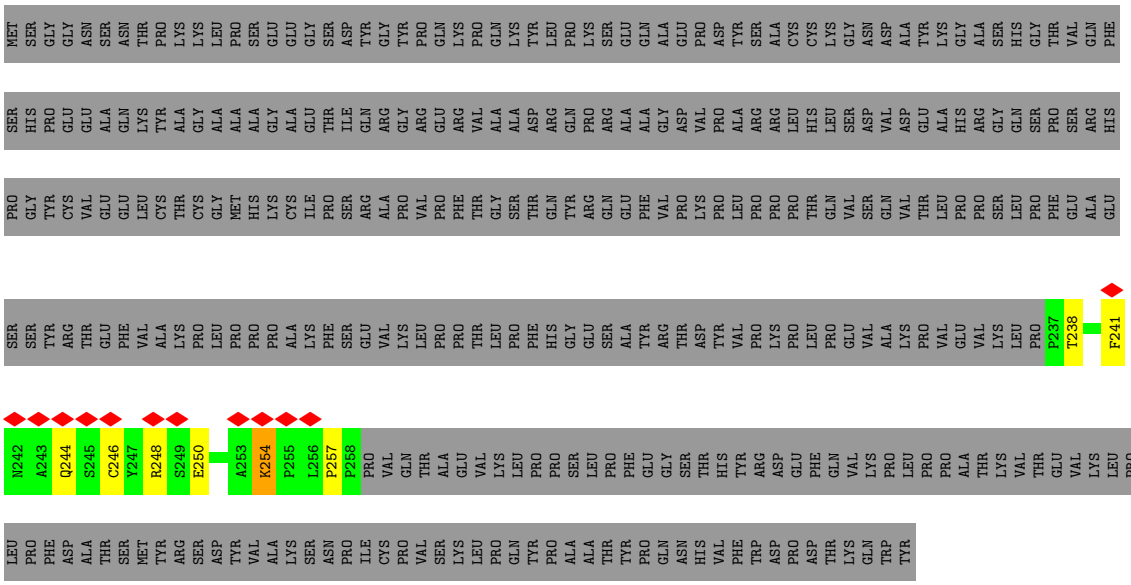




• Molecule 1: Microtubule associated protein SPM1

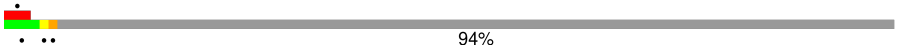
Chain 10:

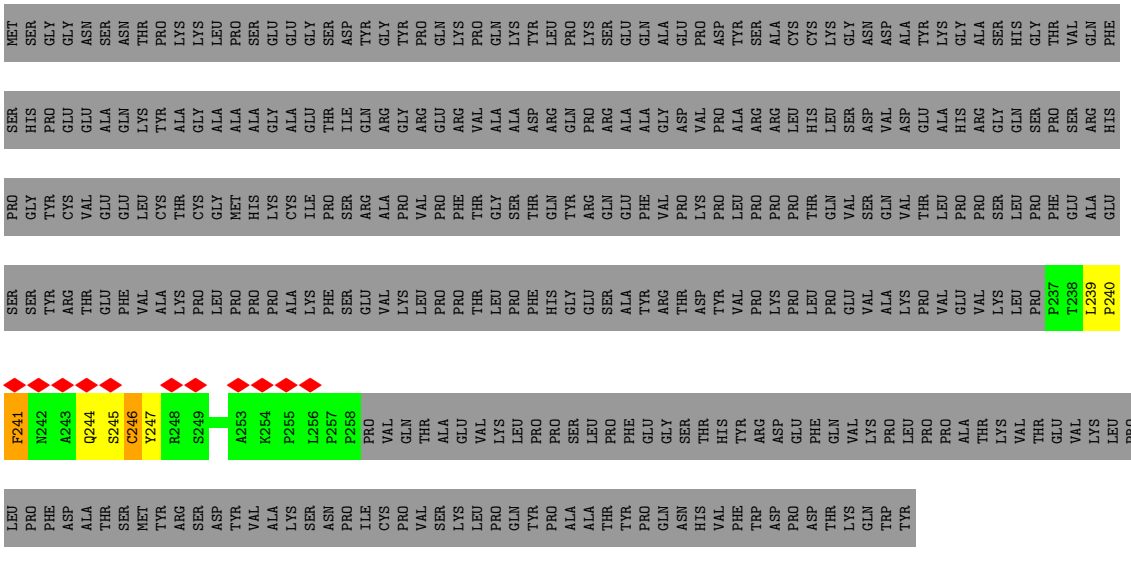




• Molecule 1: Microtubule associated protein SPM1

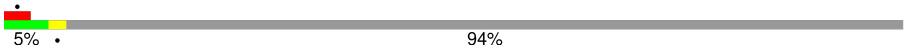
Chain 11:





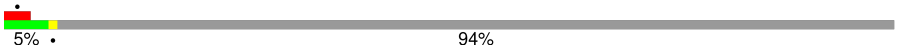
• Molecule 1: Microtubule associated protein SPM1

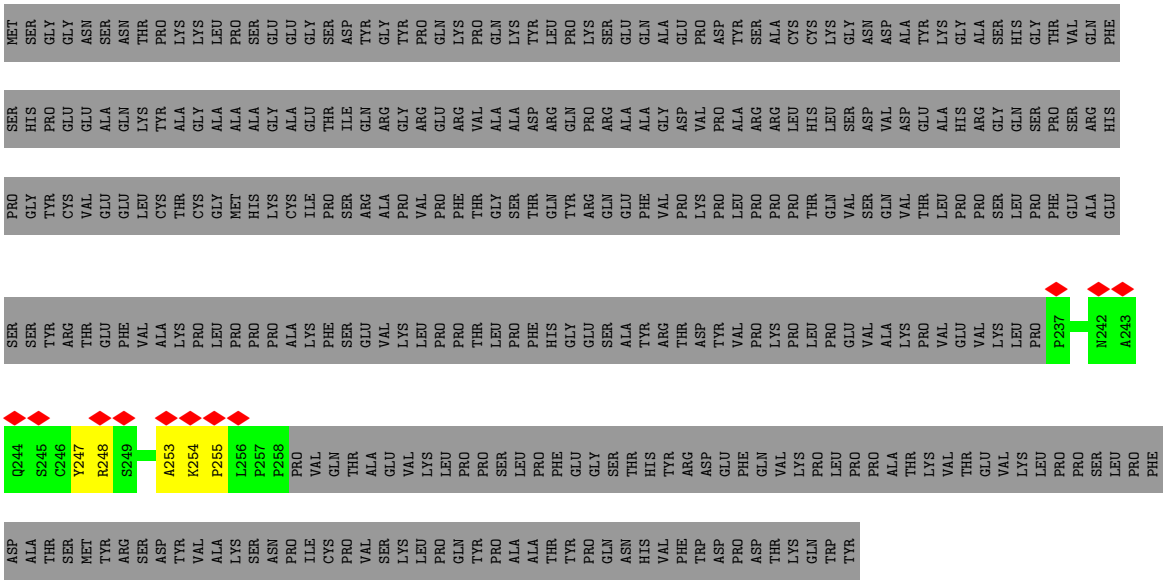
Chain 12:



• Molecule 1: Microtubule associated protein SPM1

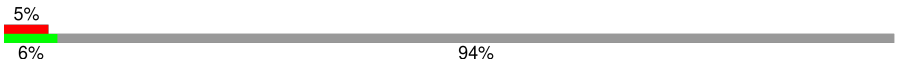
Chain 13:

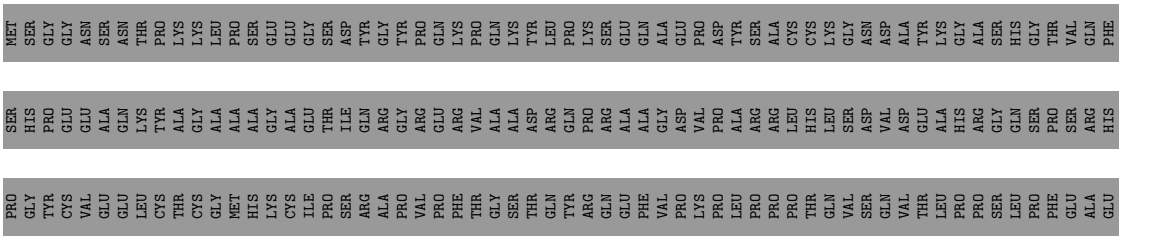


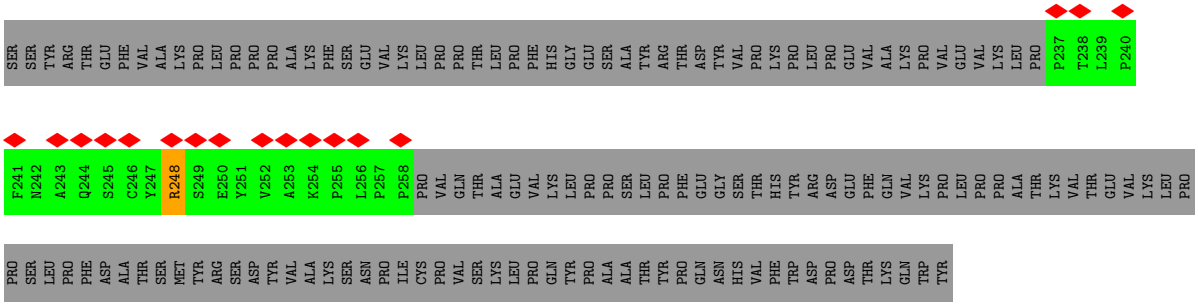


• Molecule 1: Microtubule associated protein SPM1

Chain 14:

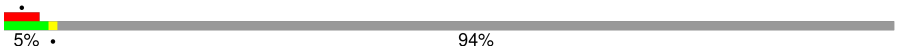


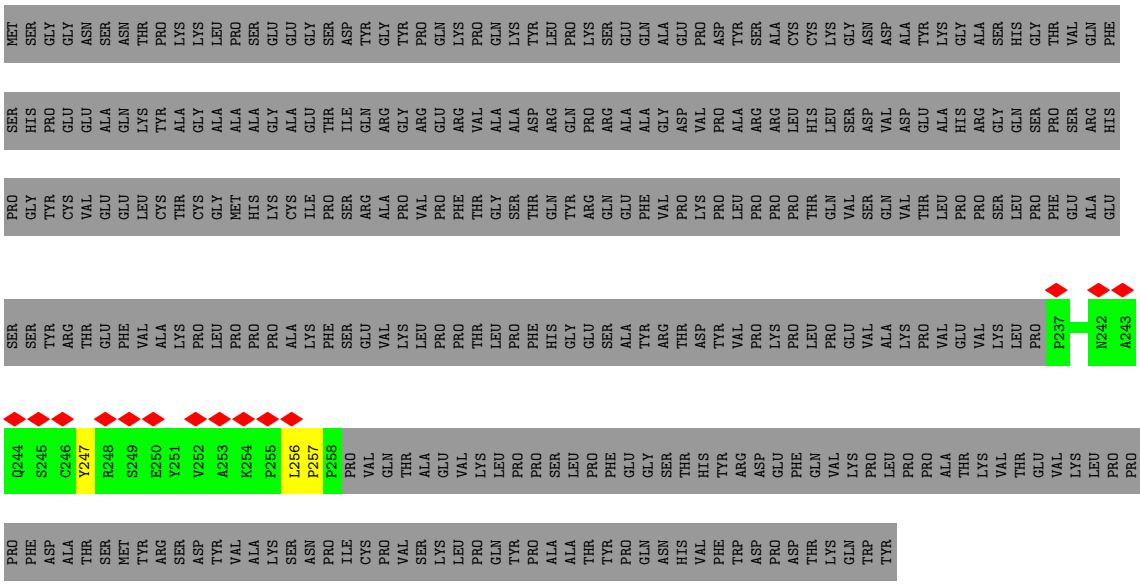




• Molecule 1: Microtubule associated protein SPM1

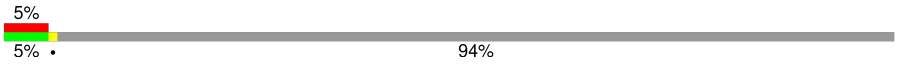
Chain 15:

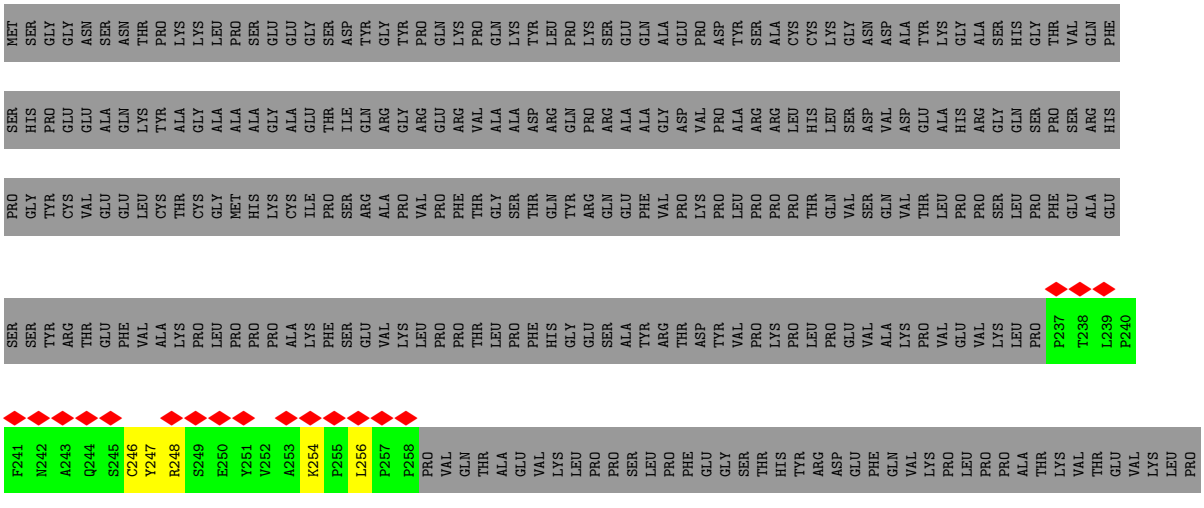




• Molecule 1: Microtubule associated protein SPM1

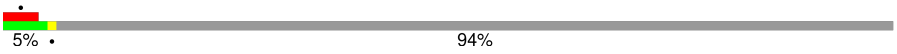
Chain 16:

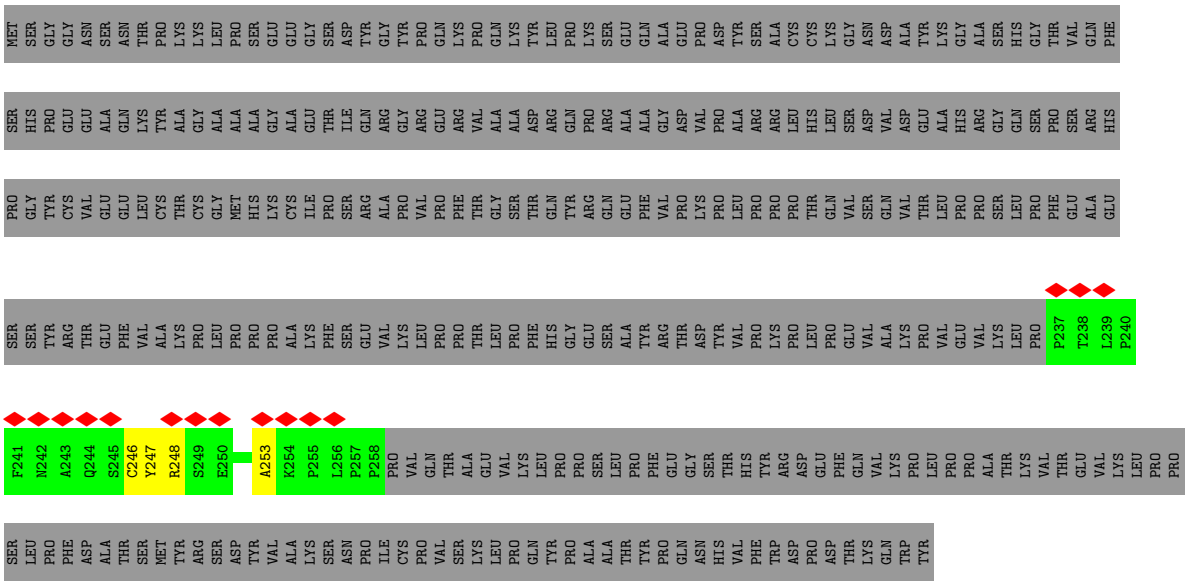




• Molecule 1: Microtubule associated protein SPM1

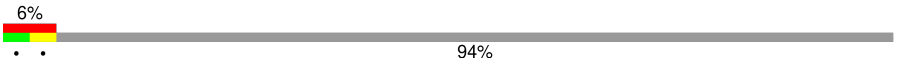
Chain 17:

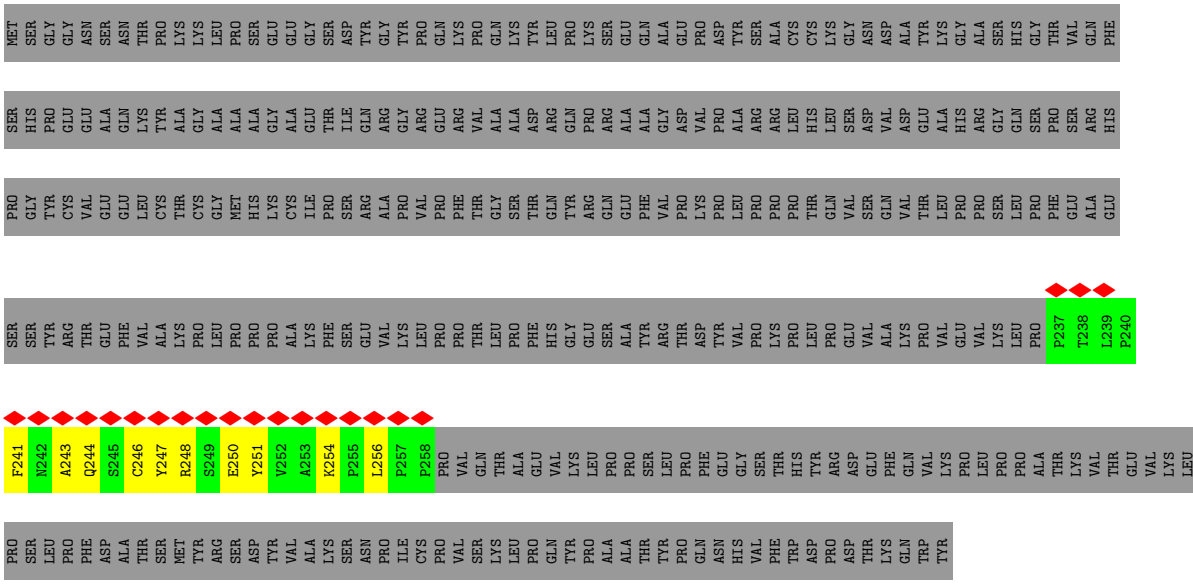




• Molecule 1: Microtubule associated protein SPM1

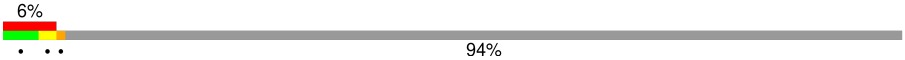
Chain 18:

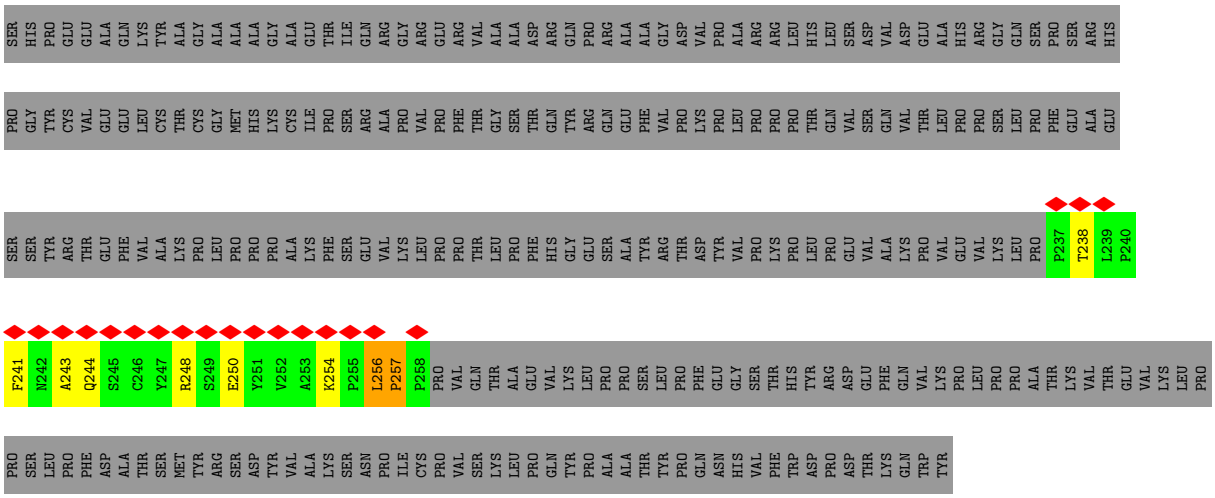




• Molecule 1: Microtubule associated protein SPM1

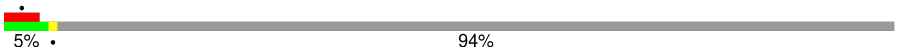
Chain 19:

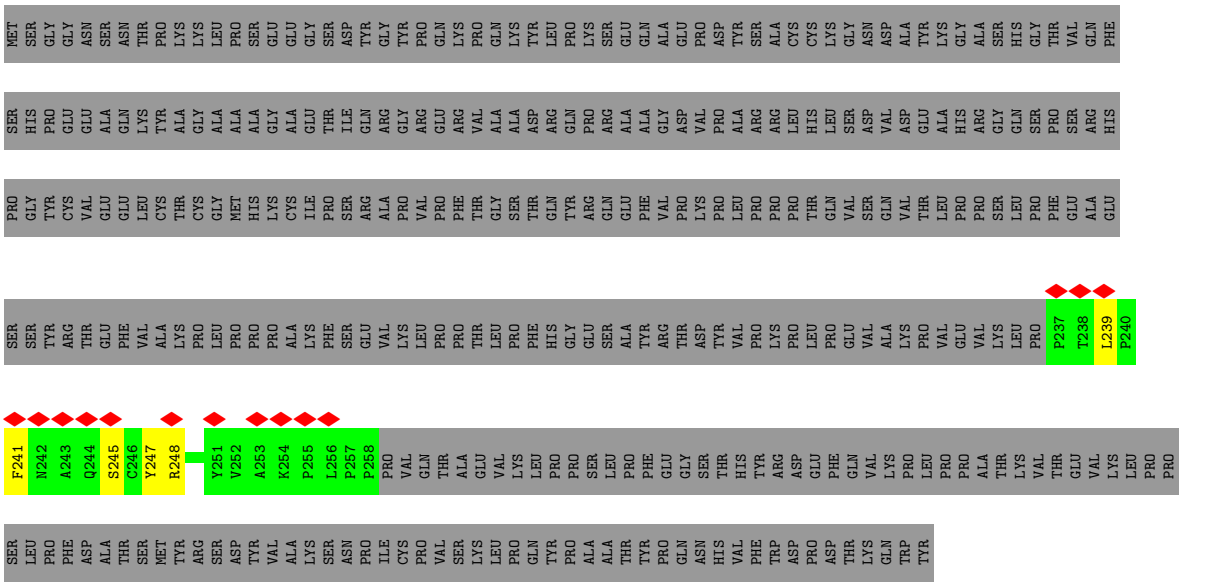




• Molecule 1: Microtubule associated protein SPM1

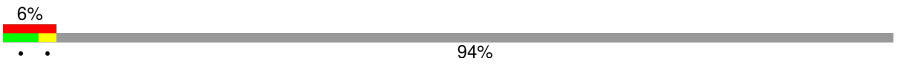
Chain 2:

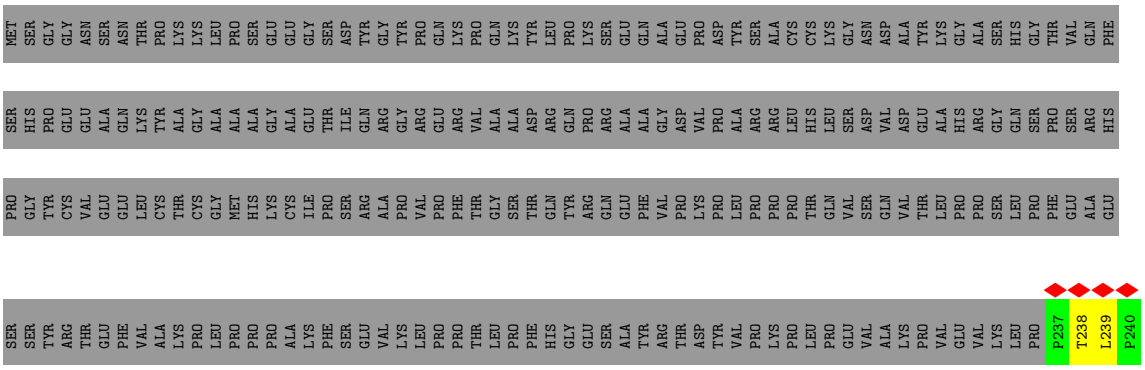


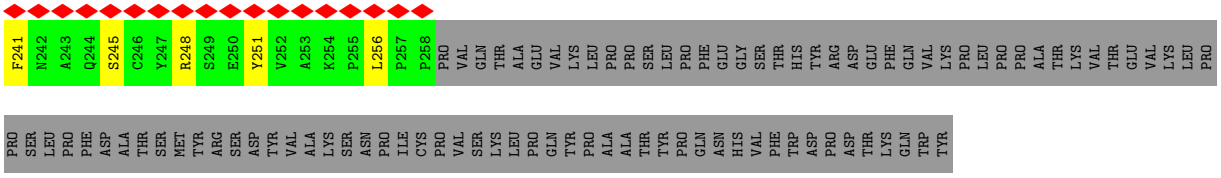


• Molecule 1: Microtubule associated protein SPM1

Chain 20:

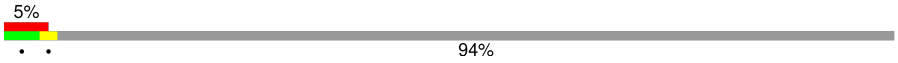


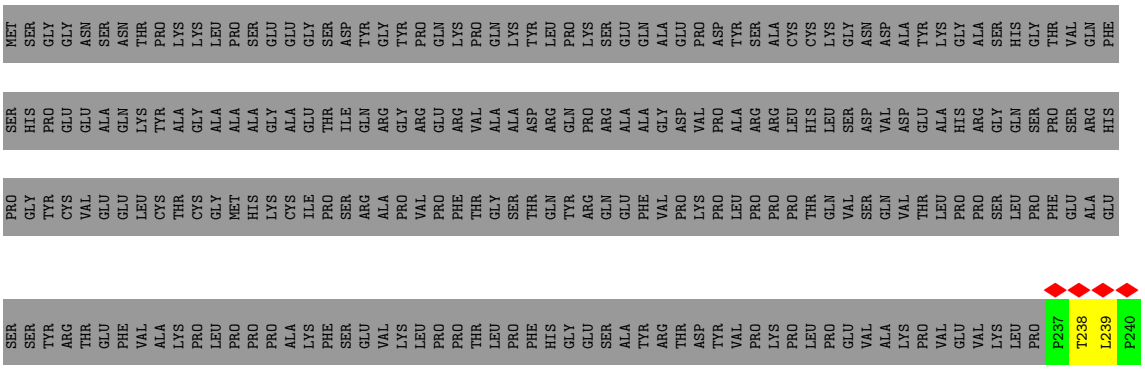


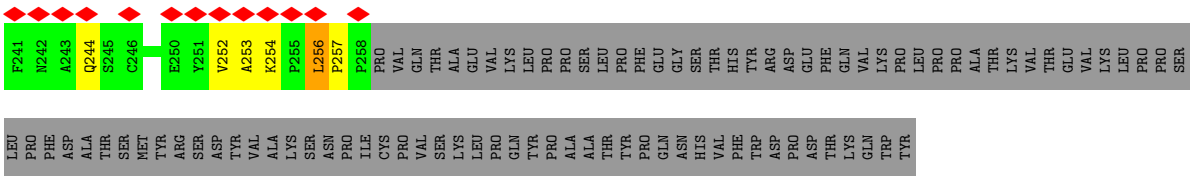


• Molecule 1: Microtubule associated protein SPM1

Chain 21:

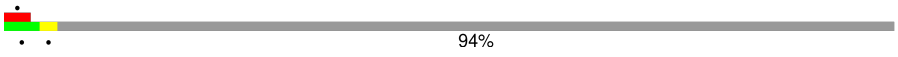


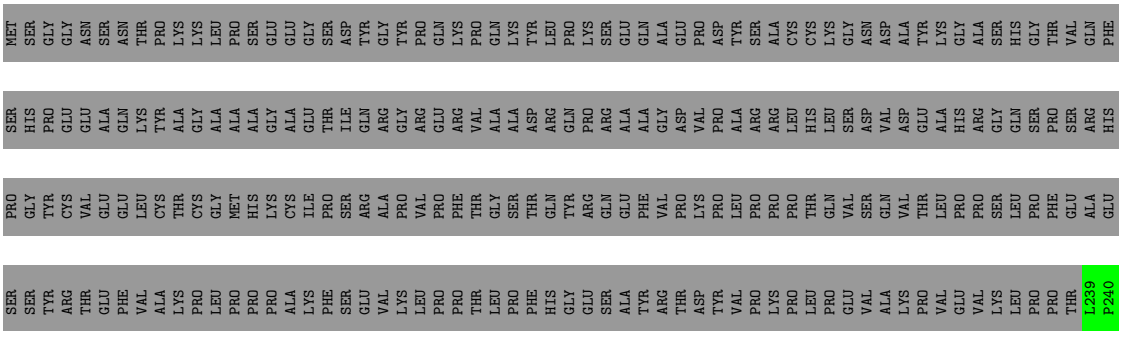


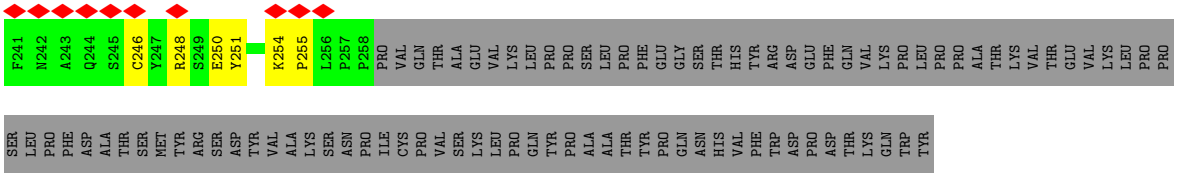


• Molecule 1: Microtubule associated protein SPM1

Chain 22:

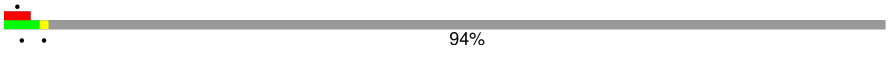


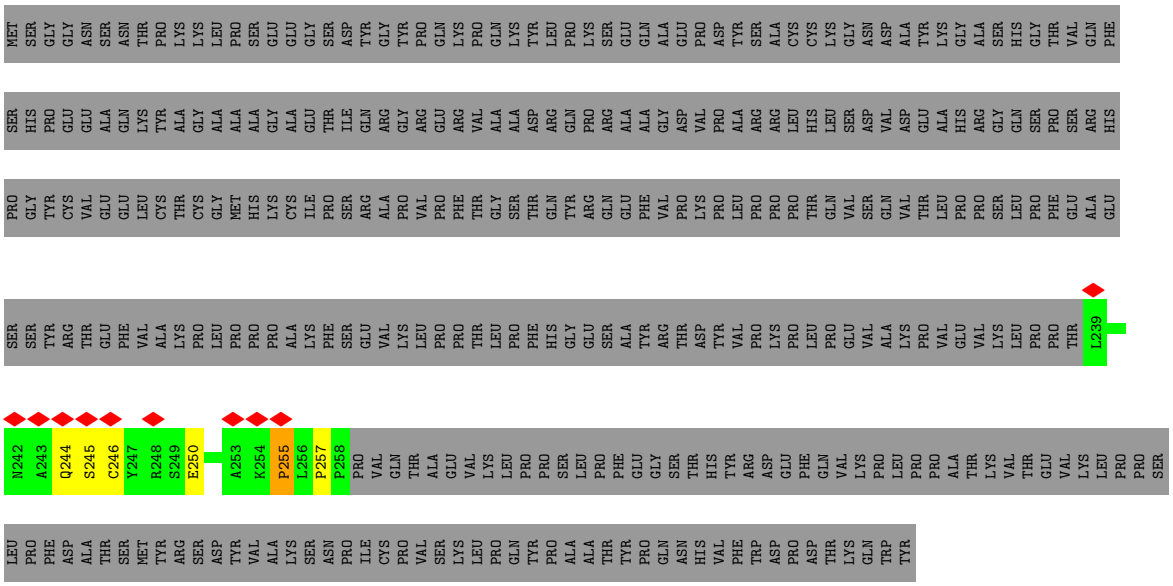




• Molecule 1: Microtubule associated protein SPM1

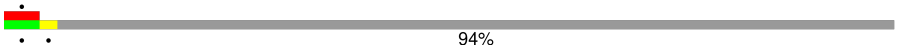
Chain 23:

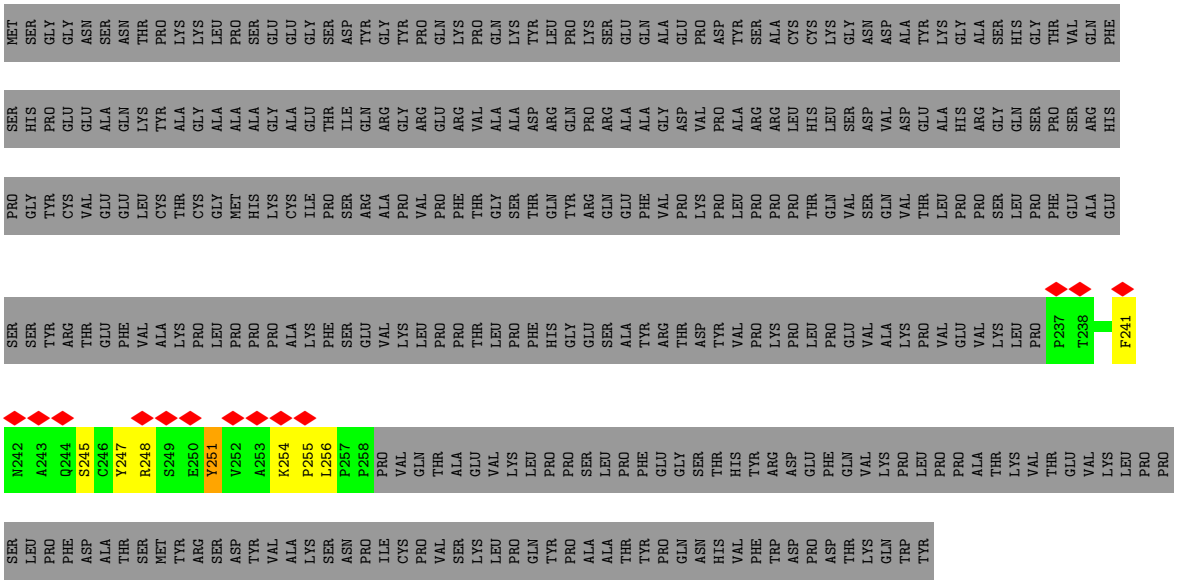




• Molecule 1: Microtubule associated protein SPM1

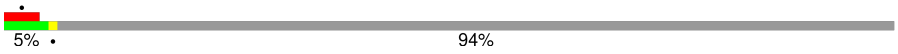
Chain 3:

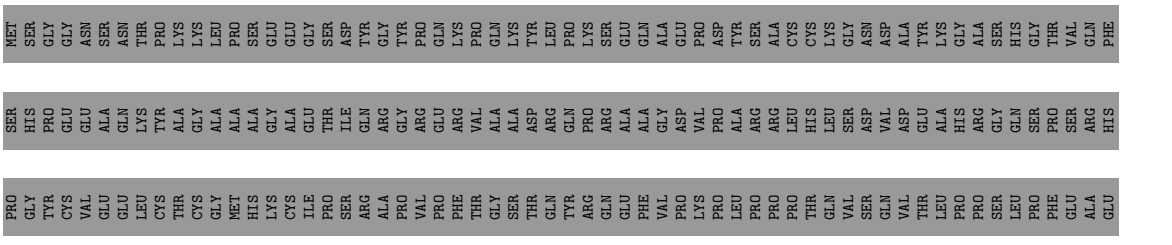


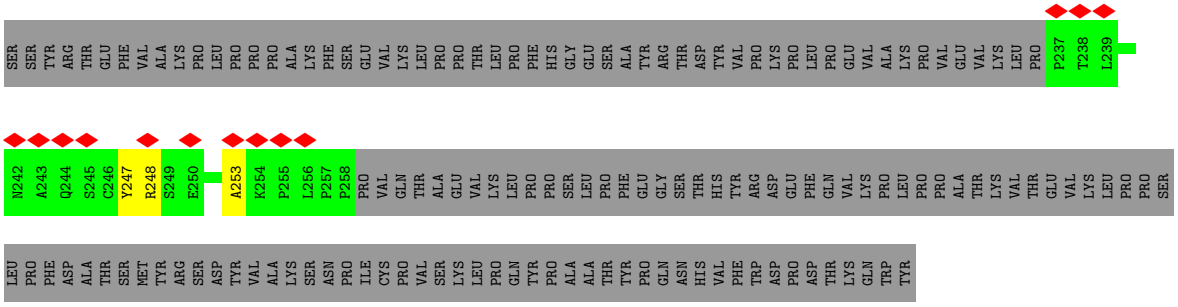


• Molecule 1: Microtubule associated protein SPM1

Chain 4:

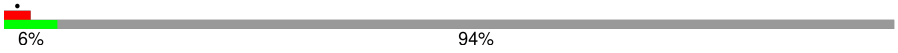


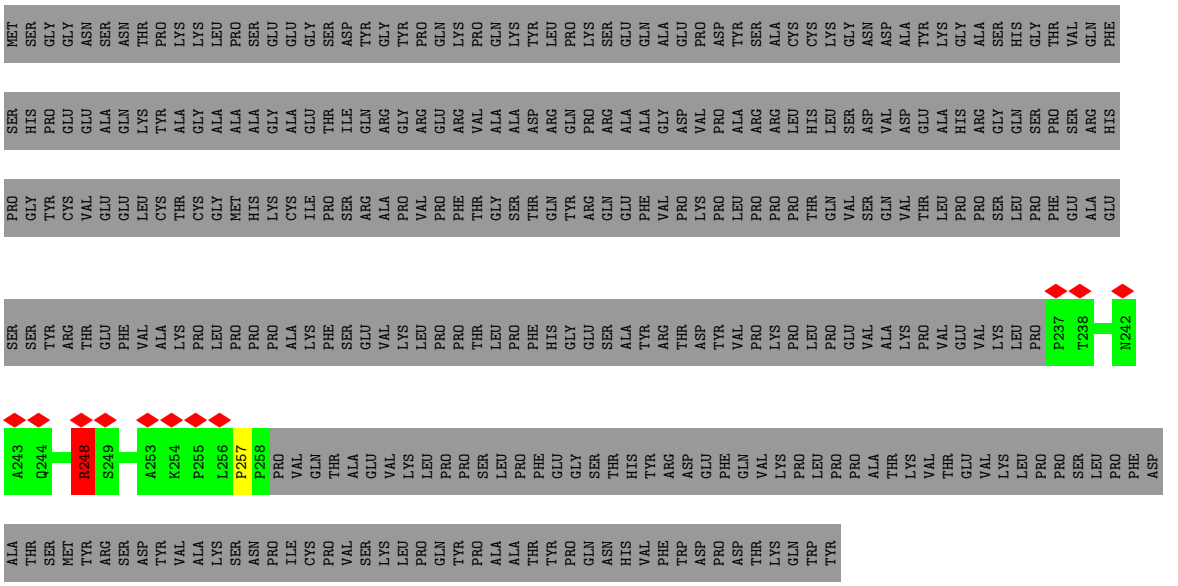




• Molecule 1: Microtubule associated protein SPM1

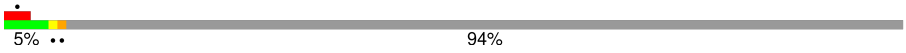
Chain 5:

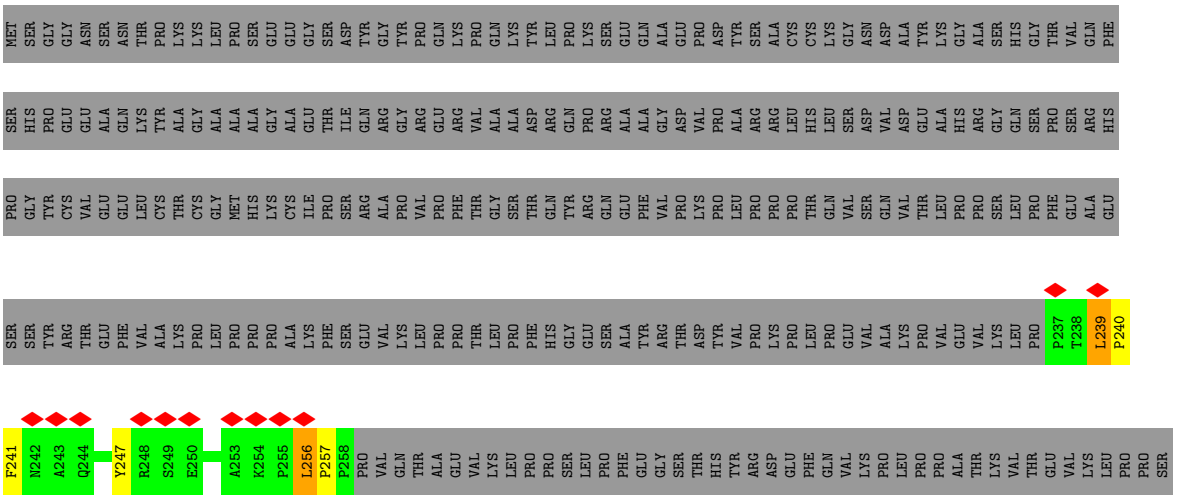


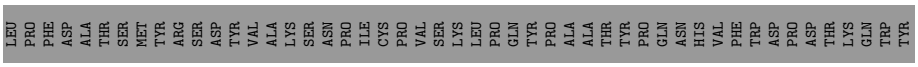


• Molecule 1: Microtubule associated protein SPM1

Chain 6:

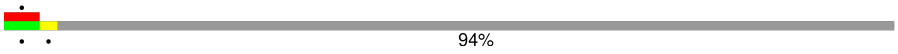


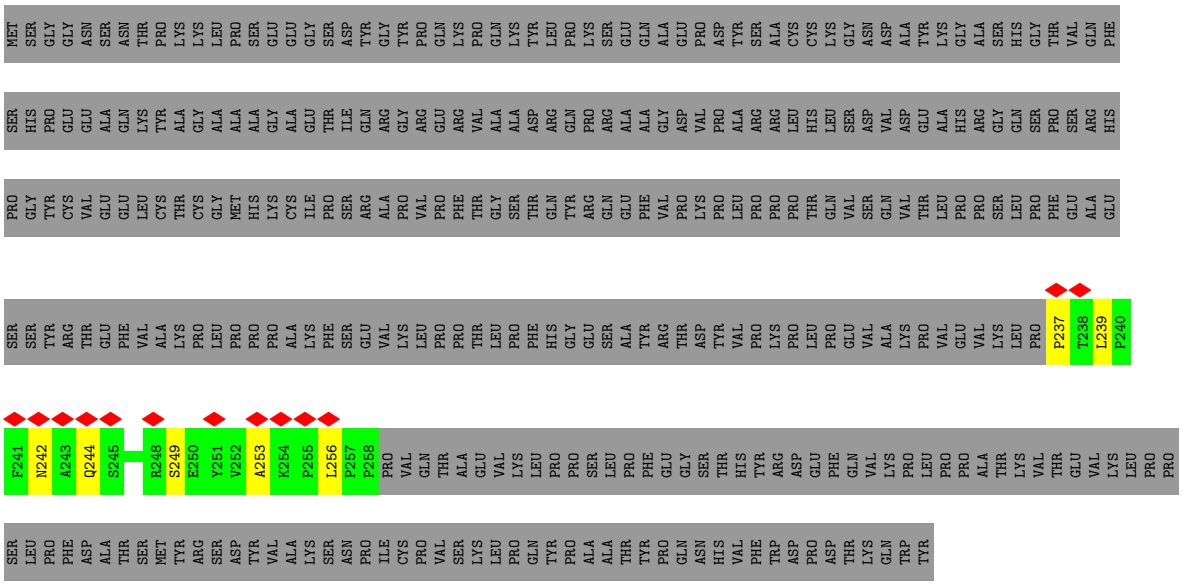




• Molecule 1: Microtubule associated protein SPM1

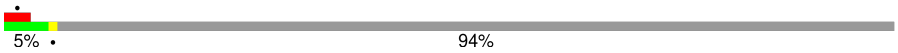
Chain 7:

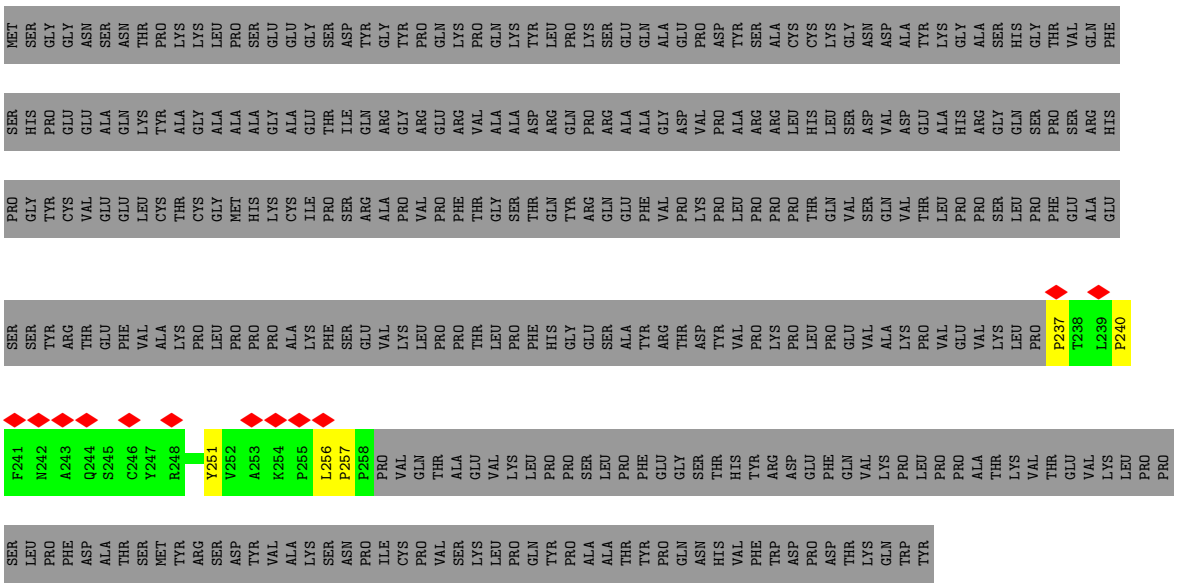




• Molecule 1: Microtubule associated protein SPM1

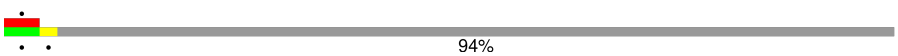
Chain 8:

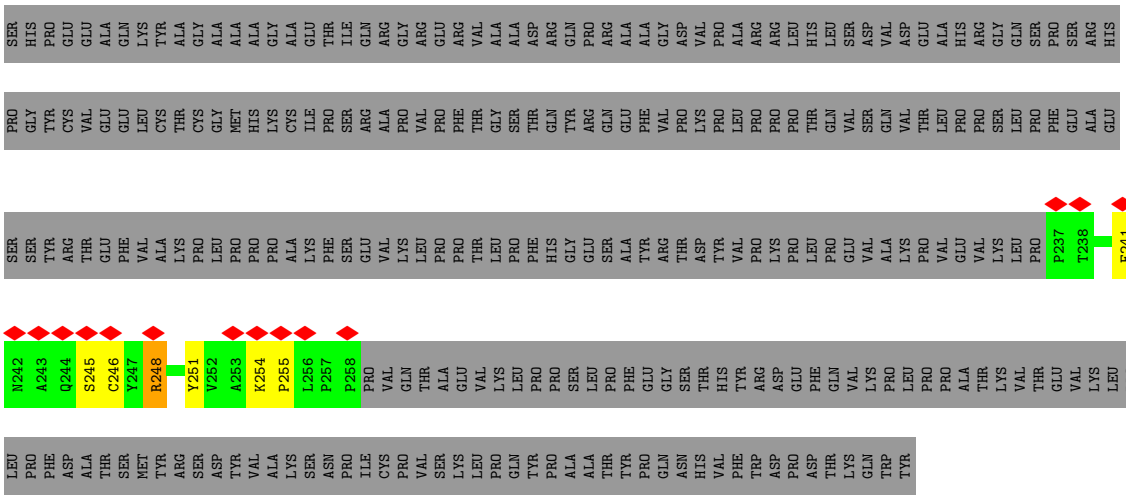




• Molecule 1: Microtubule associated protein SPM1

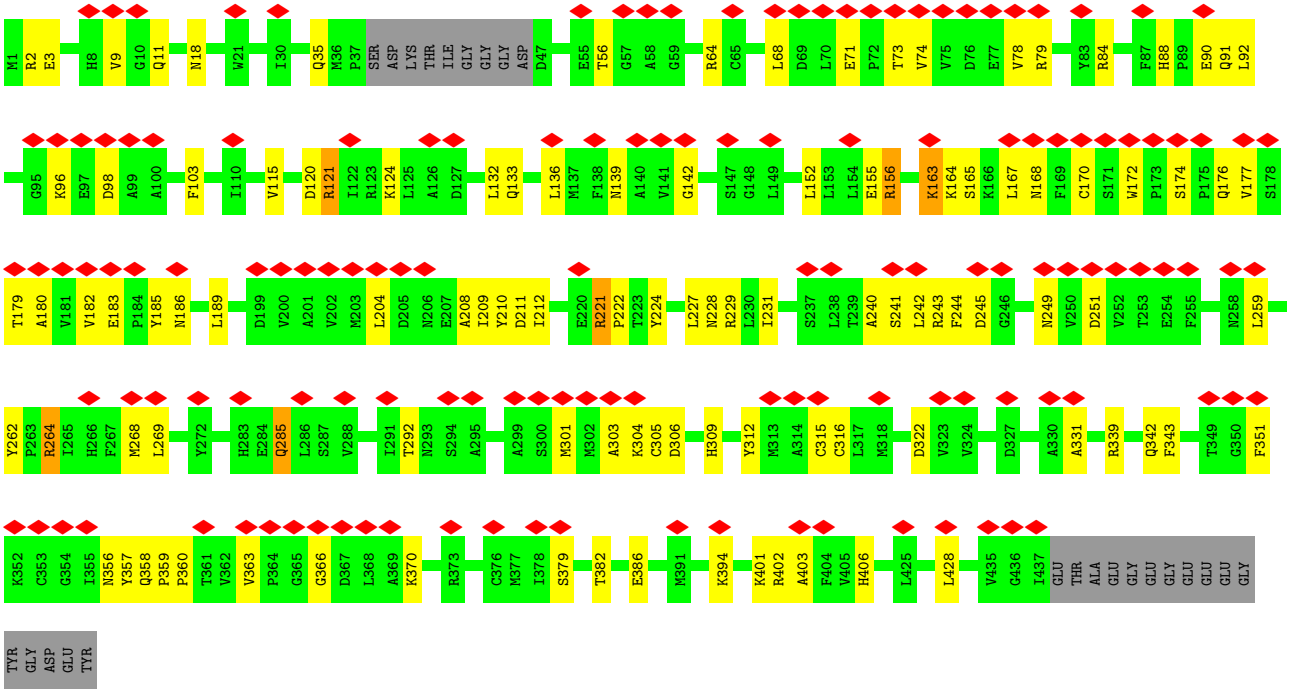
Chain 9:





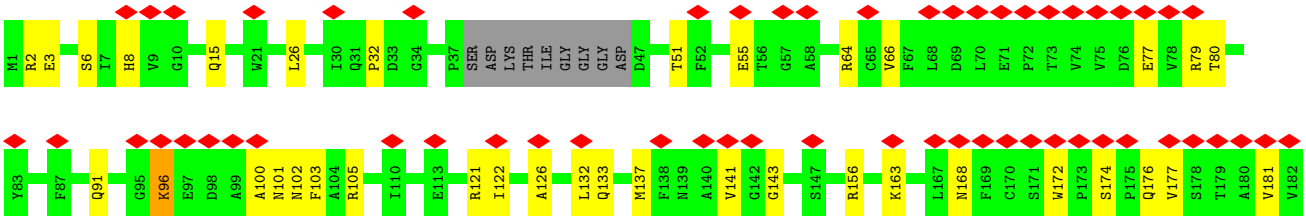
• Molecule 2: Tubulin alpha chain

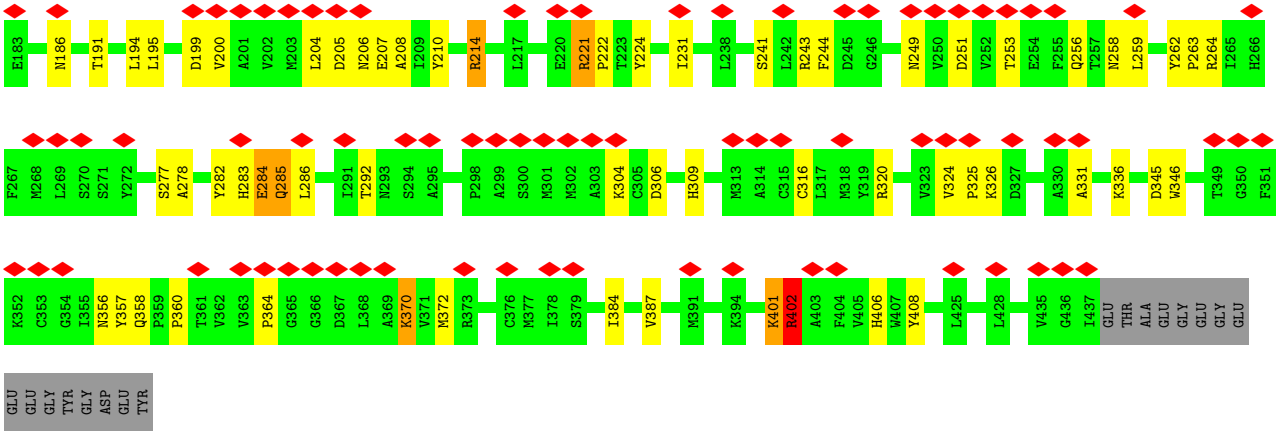
Chain A0:



• Molecule 2: Tubulin alpha chain

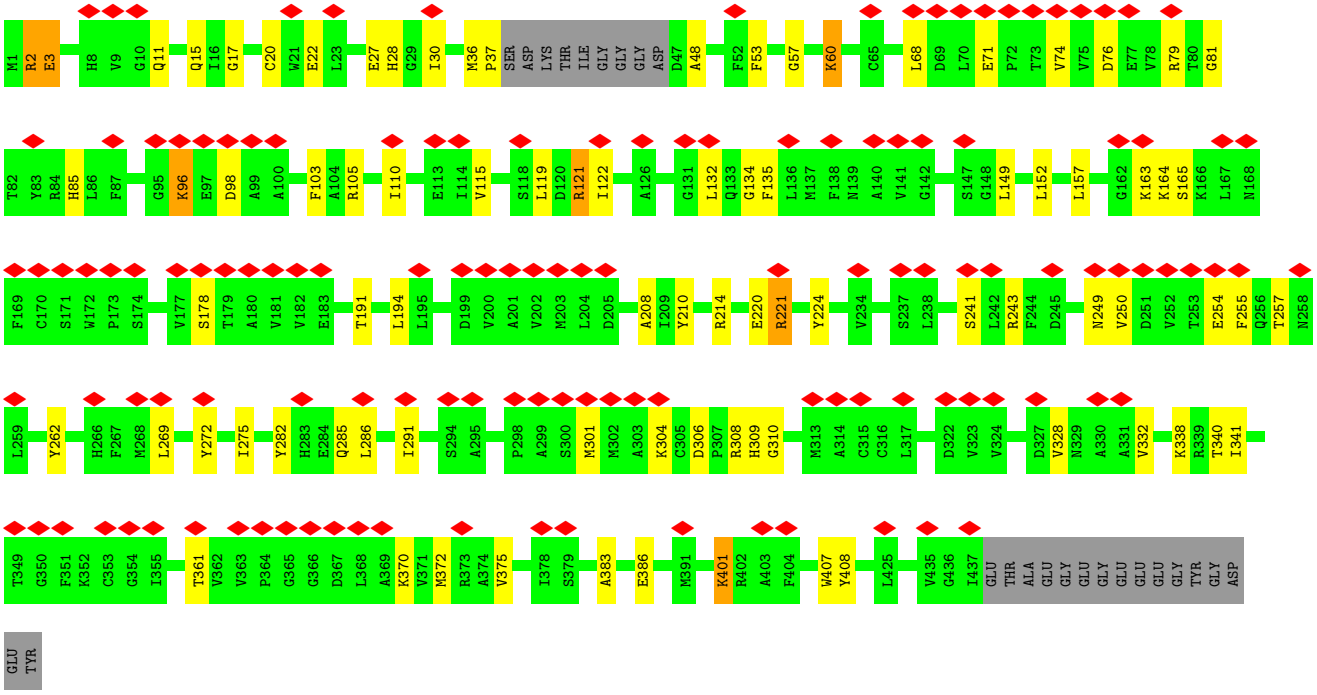
Chain A2:





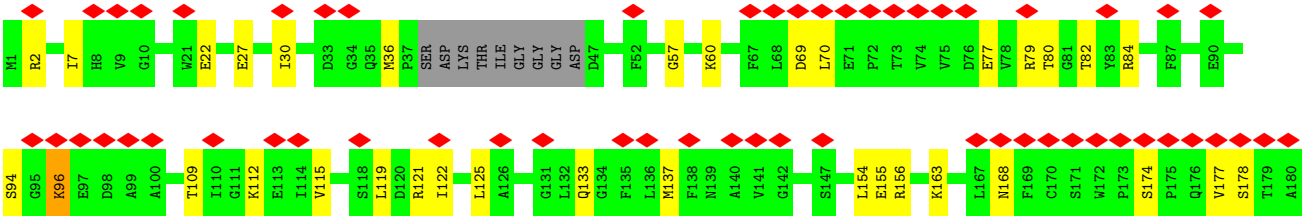
• Molecule 2: Tubulin alpha chain

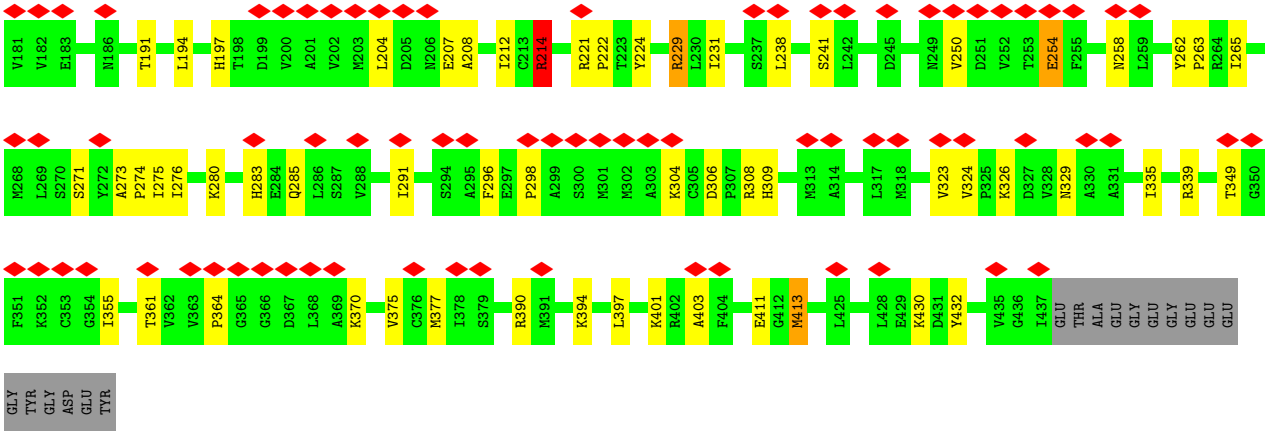
Chain A4:



• Molecule 2: Tubulin alpha chain

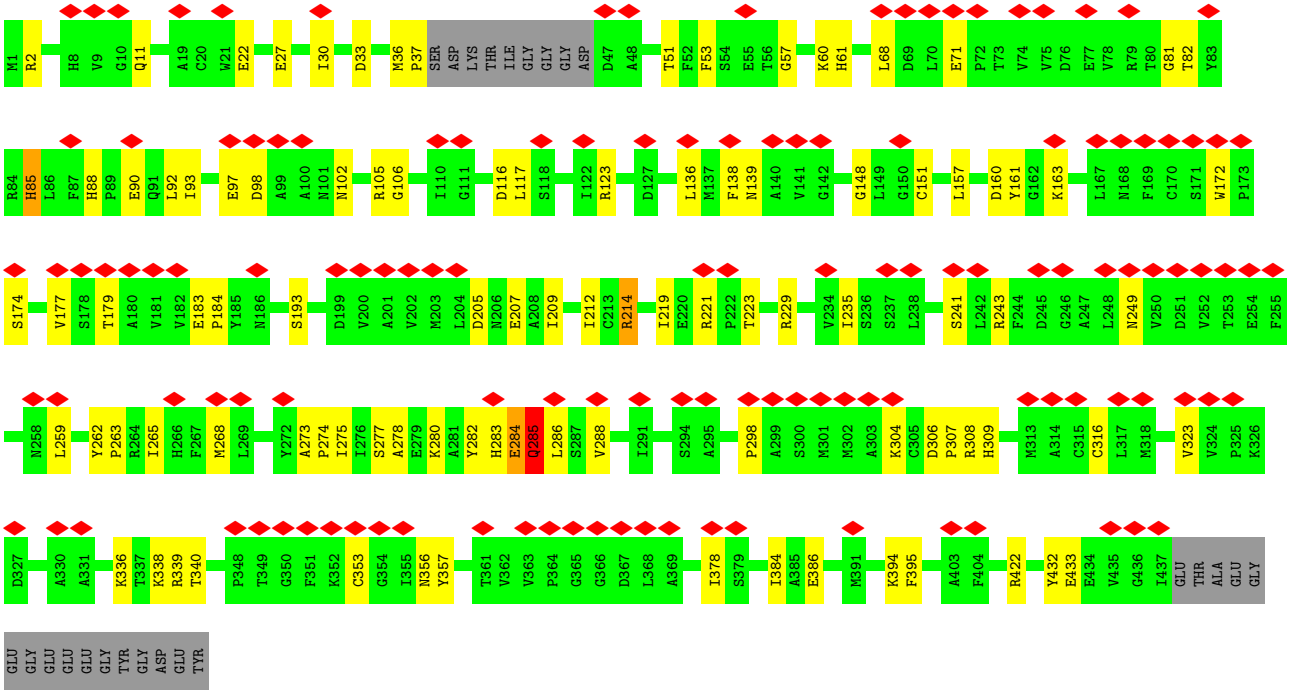
Chain A6:





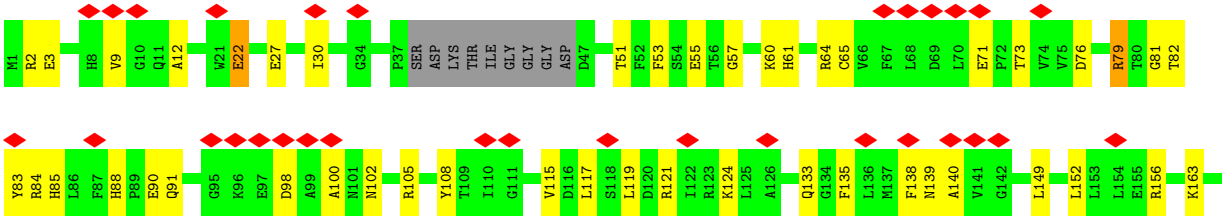
• Molecule 2: Tubulin alpha chain

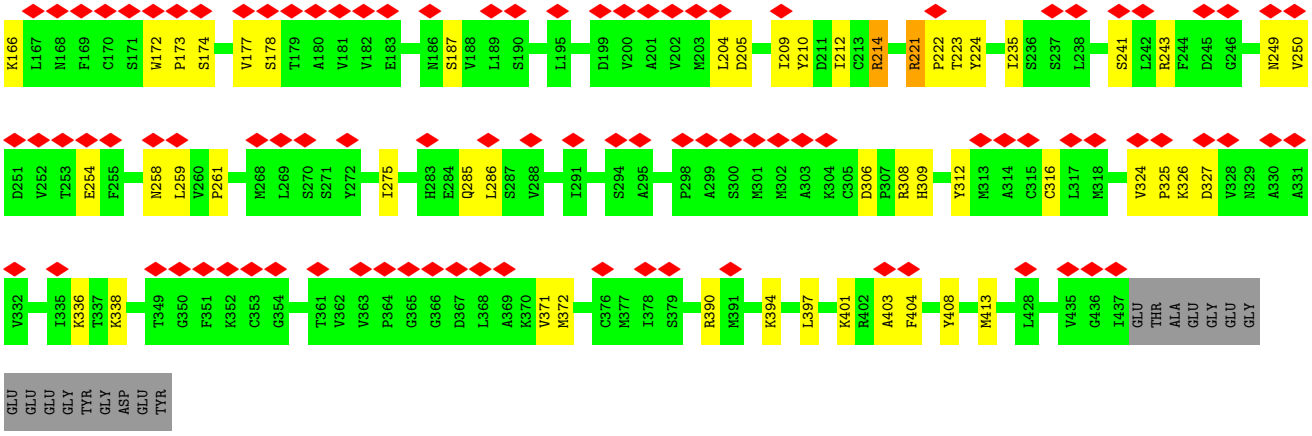
Chain A8:



• Molecule 2: Tubulin alpha chain

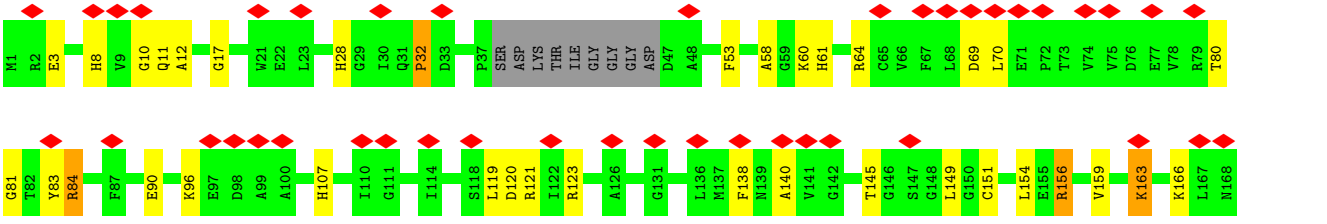
Chain B0:





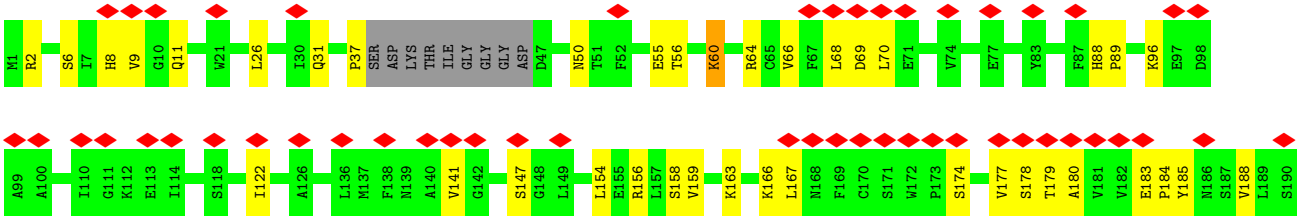
• Molecule 2: Tubulin alpha chain

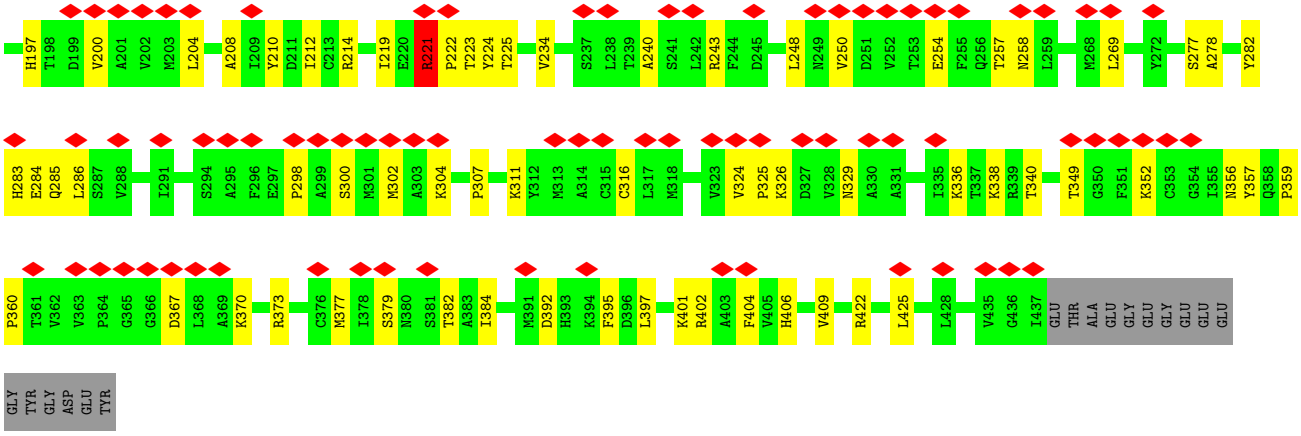
Chain B2:



• Molecule 2: Tubulin alpha chain

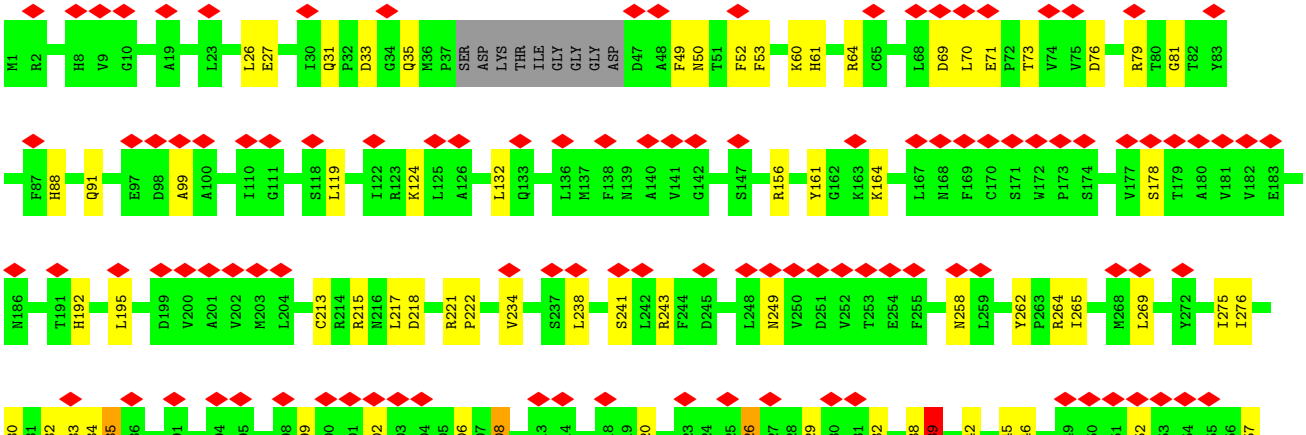
Chain B4:





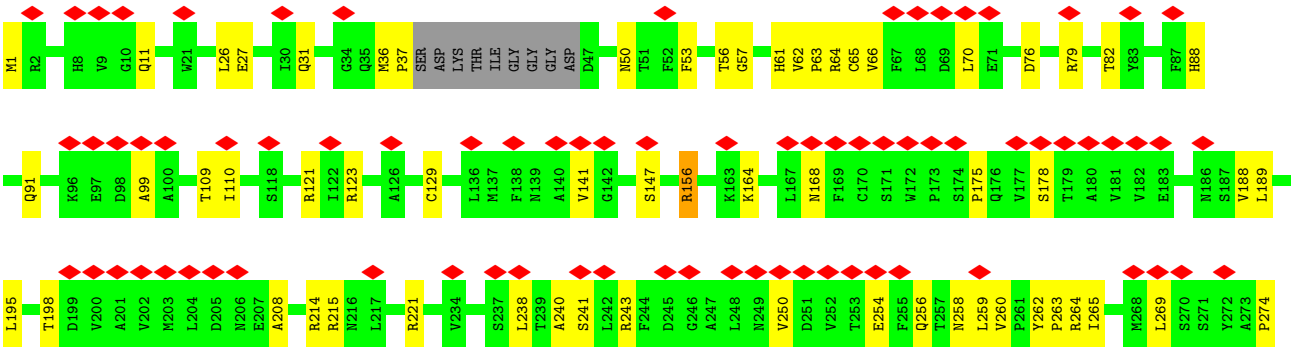
• Molecule 2: Tubulin alpha chain

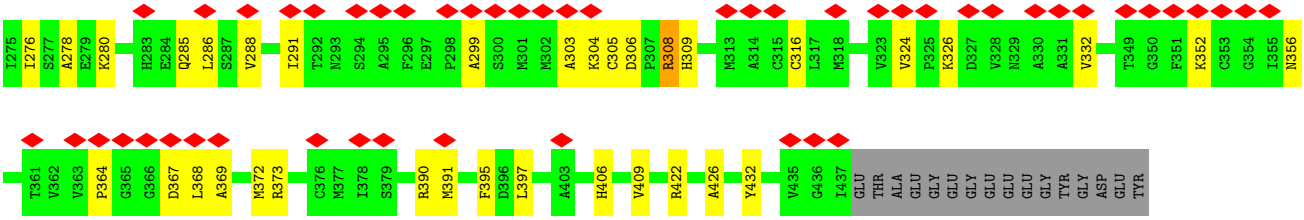
Chain B6:



• Molecule 2: Tubulin alpha chain

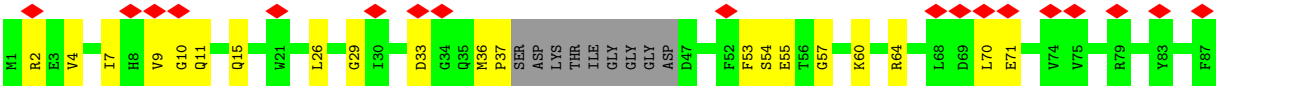
Chain B8:

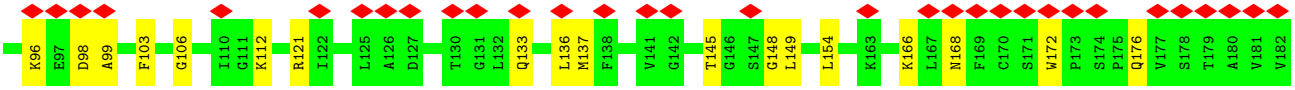


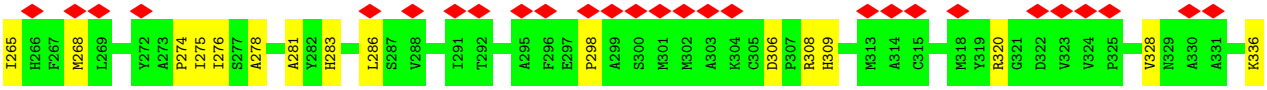


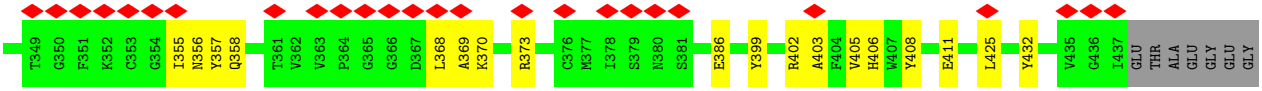
• Molecule 2: Tubulin alpha chain

Chain C0:



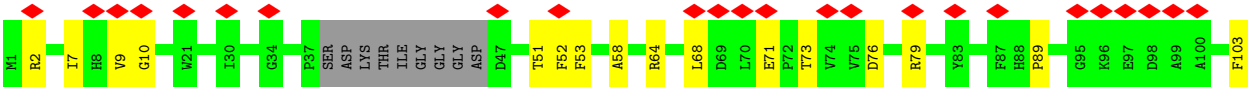


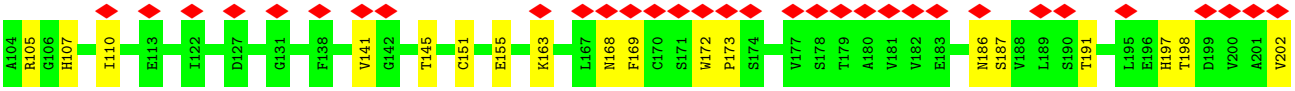


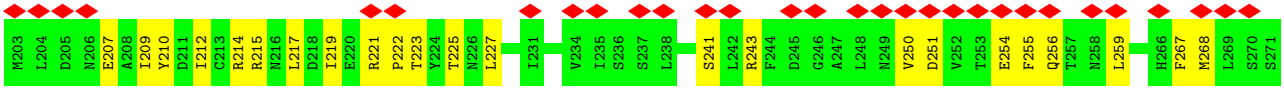


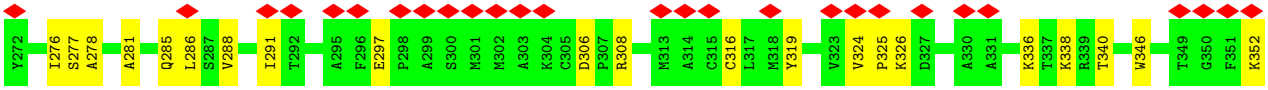
• Molecule 2: Tubulin alpha chain

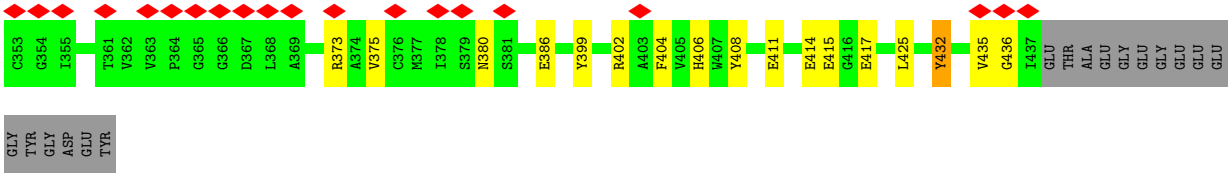
Chain C2:





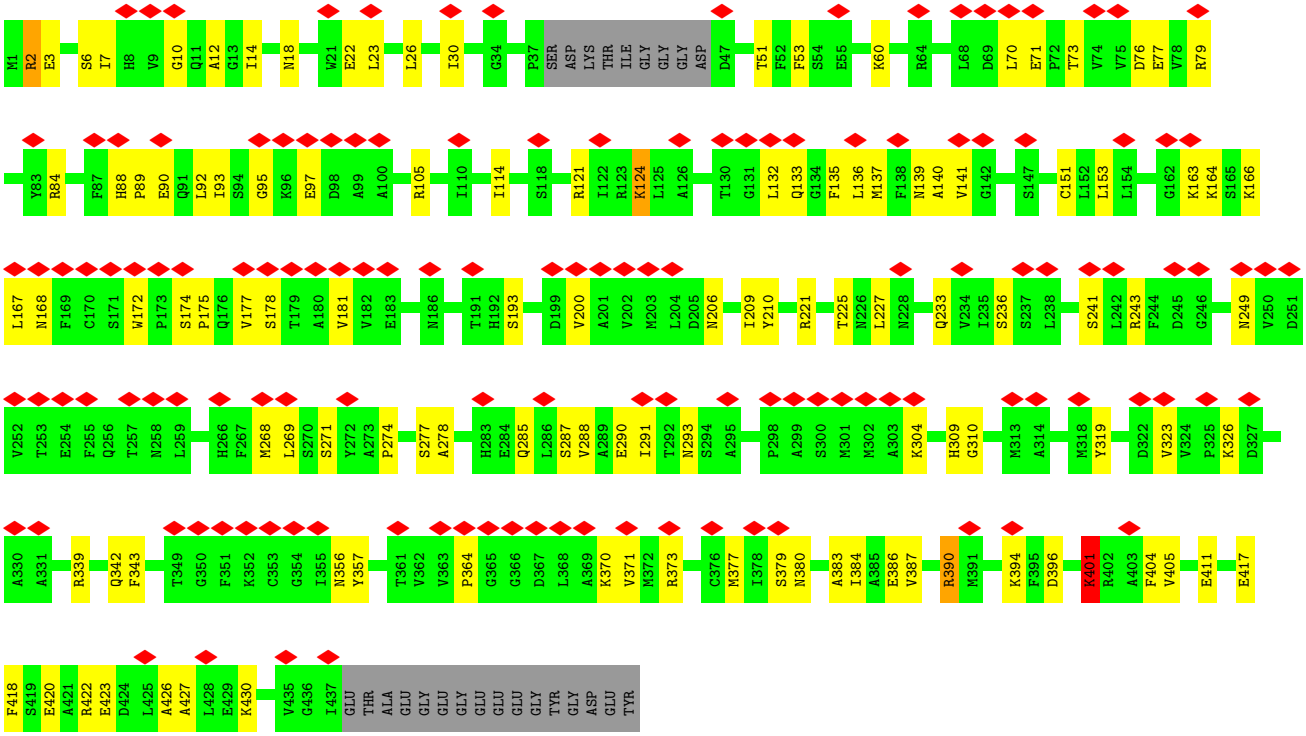






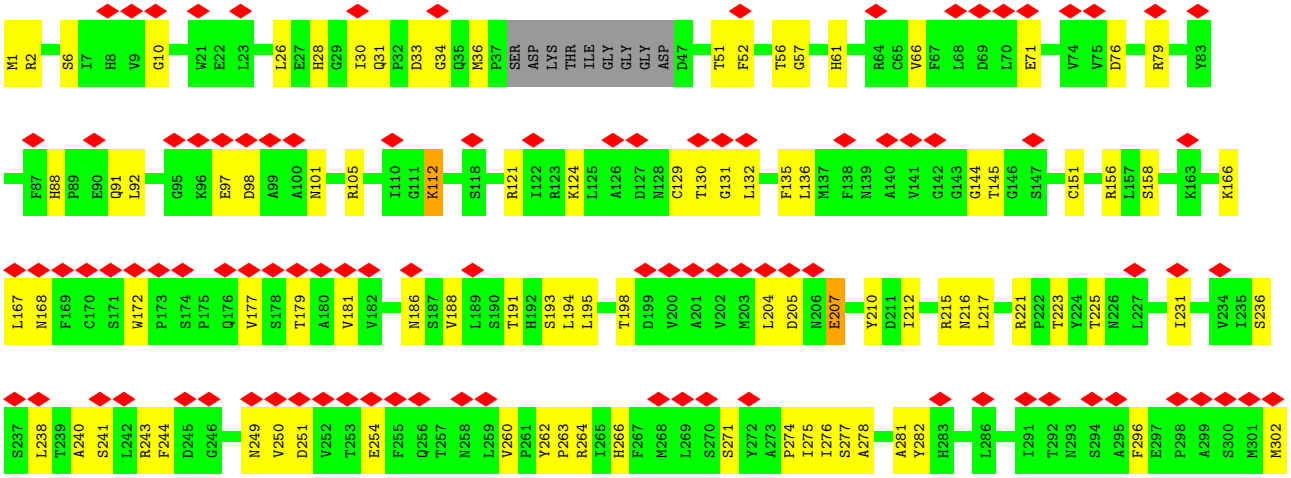
• Molecule 2: Tubulin alpha chain

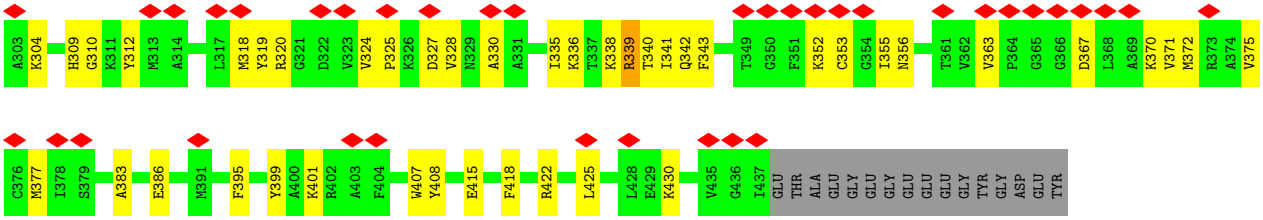
Chain C4:



• Molecule 2: Tubulin alpha chain

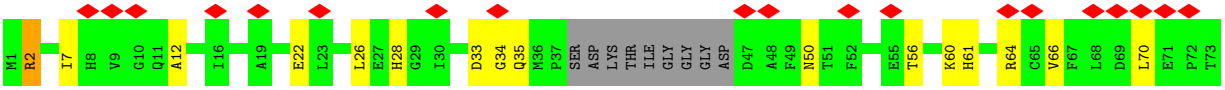
Chain C6:

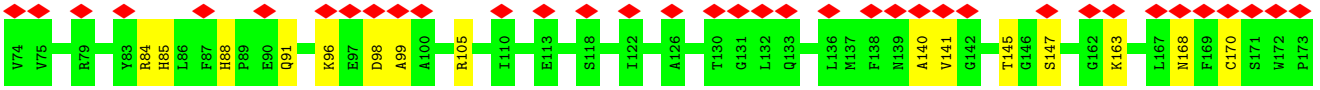


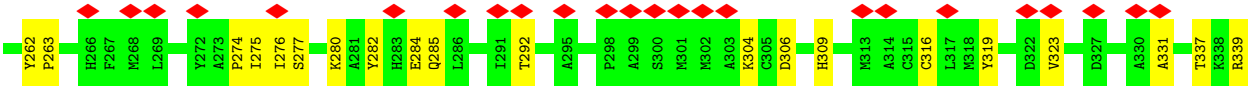


• Molecule 2: Tubulin alpha chain

Chain C8:

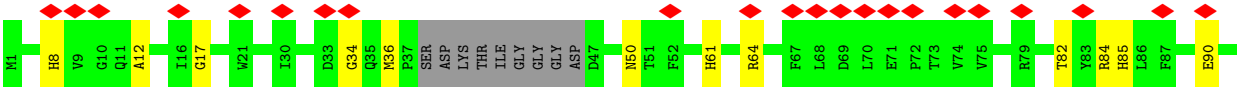


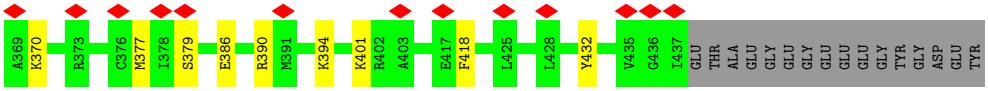




• Molecule 2: Tubulin alpha chain

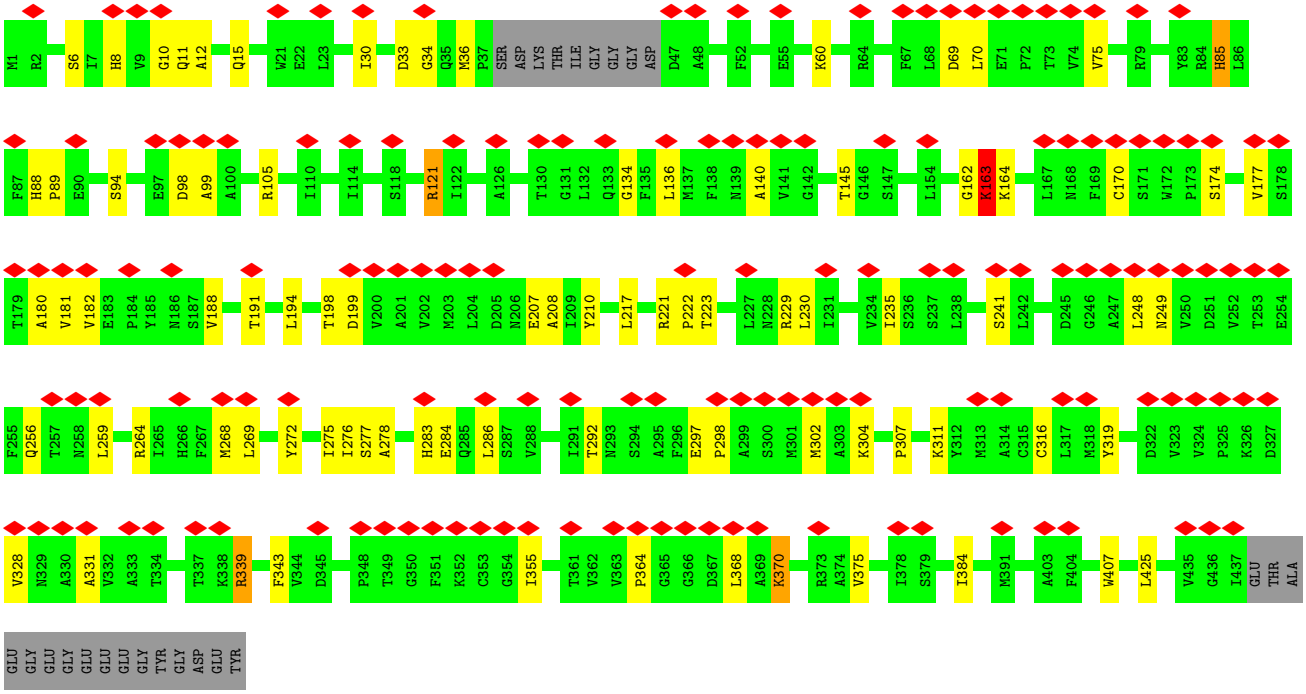
Chain D0:





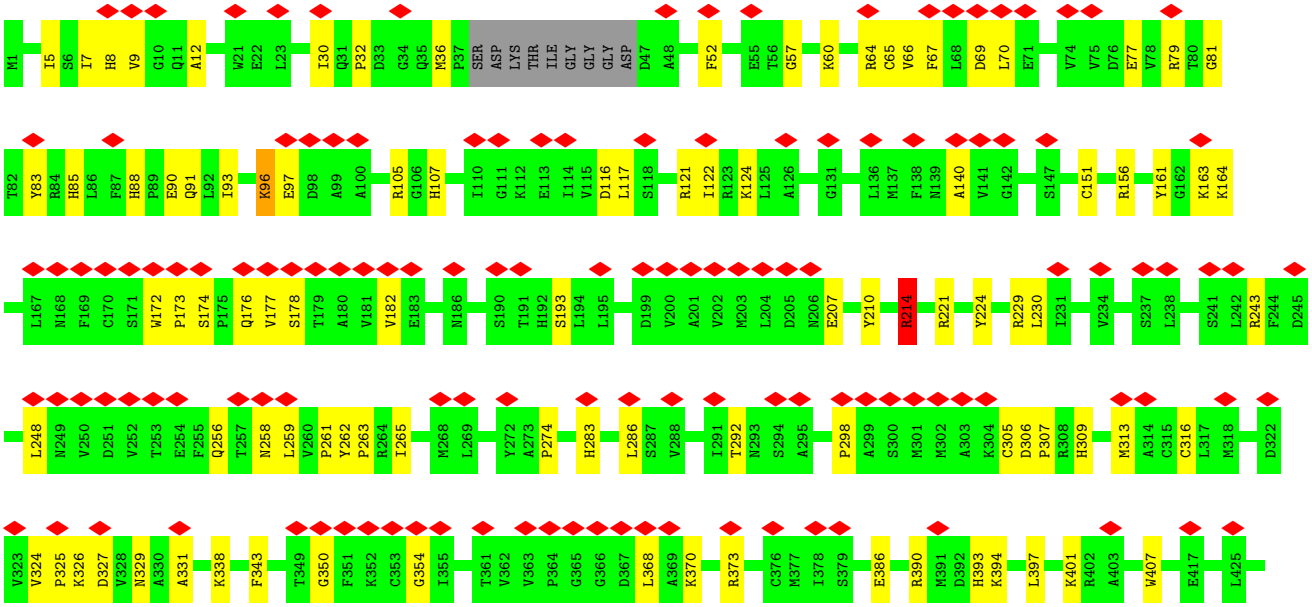
• Molecule 2: Tubulin alpha chain

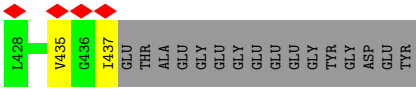
Chain D2:



• Molecule 2: Tubulin alpha chain

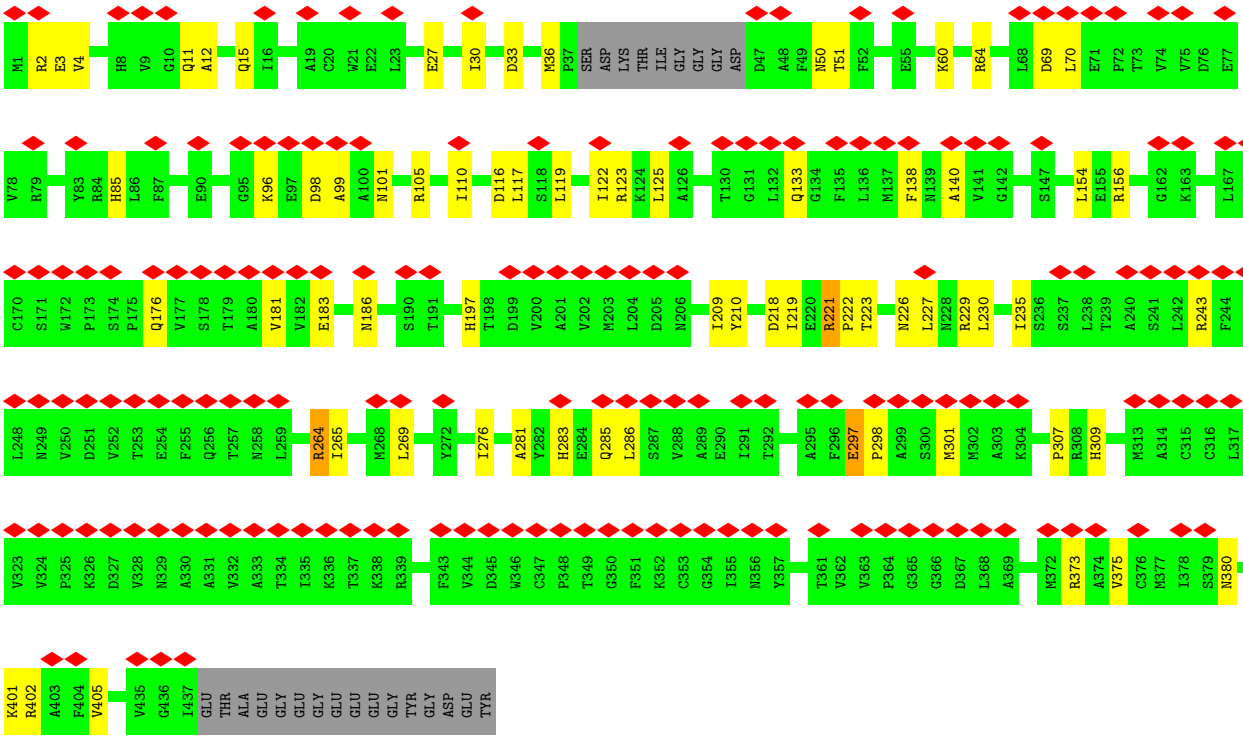
Chain D4:





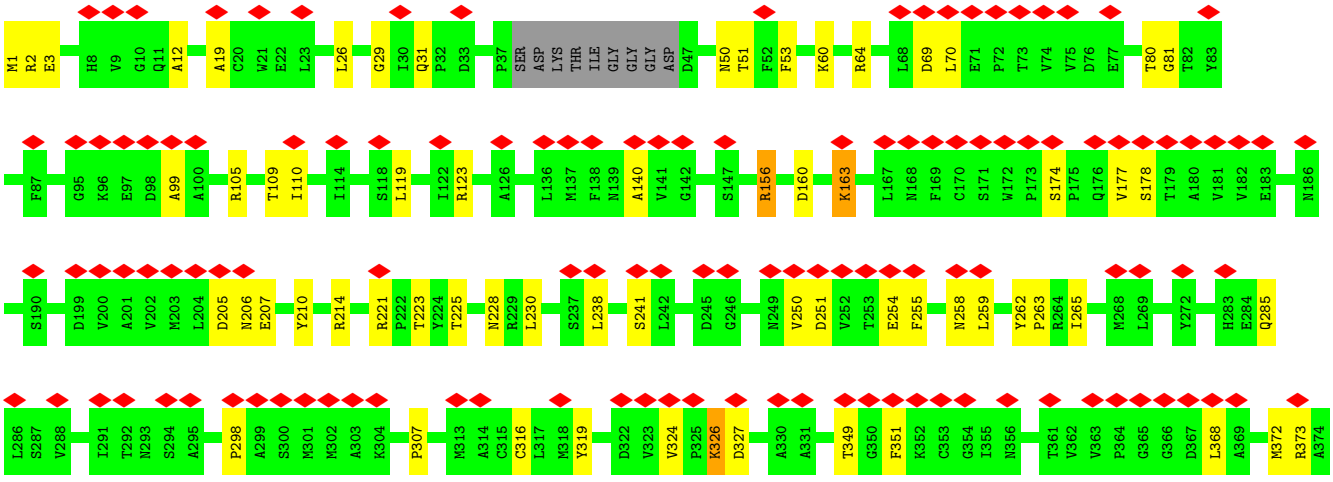
• Molecule 2: Tubulin alpha chain

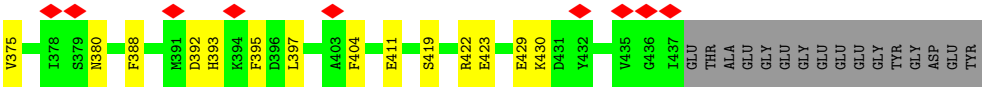
Chain D6:



• Molecule 2: Tubulin alpha chain

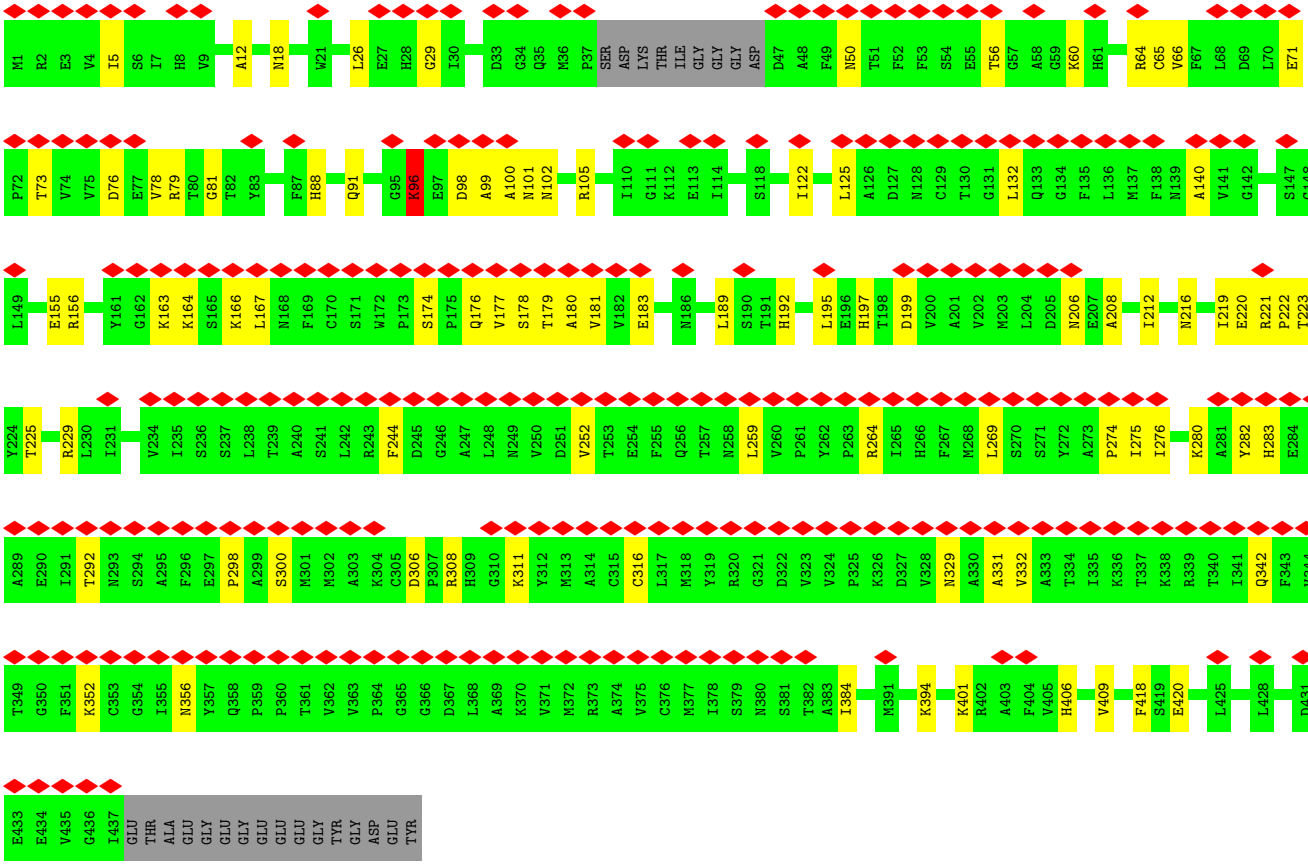
Chain D8:





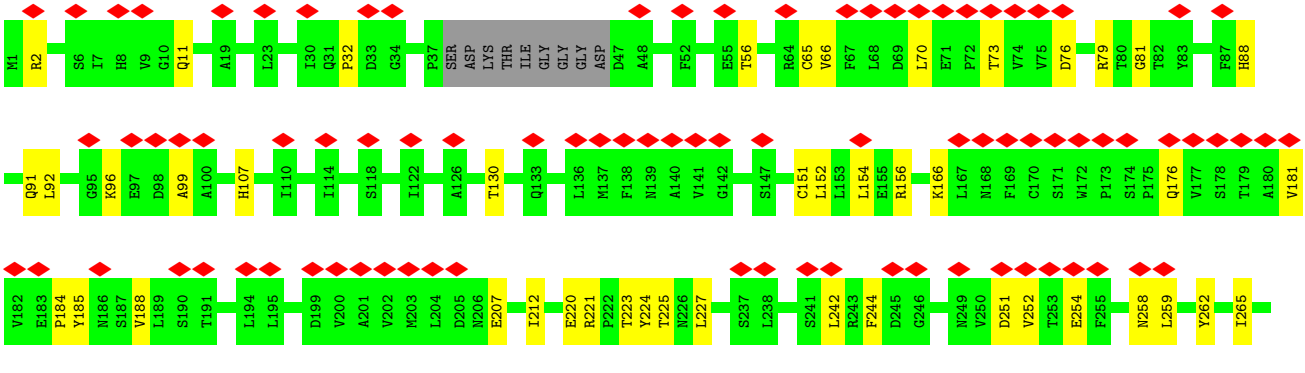
• Molecule 2: Tubulin alpha chain

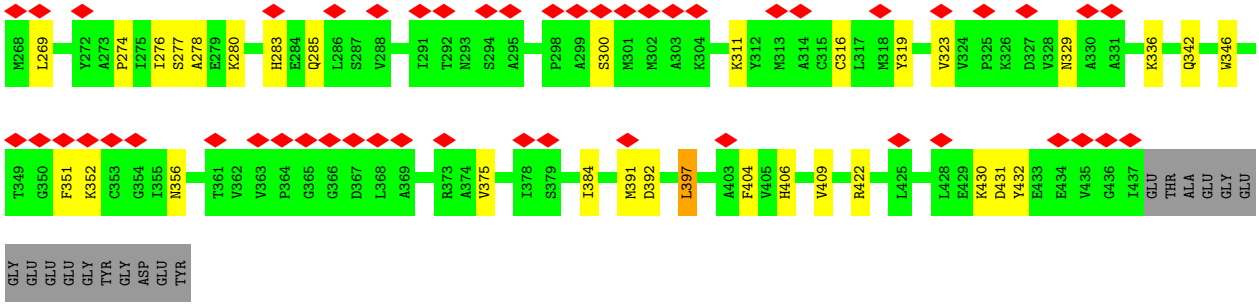
Chain E0:



• Molecule 2: Tubulin alpha chain

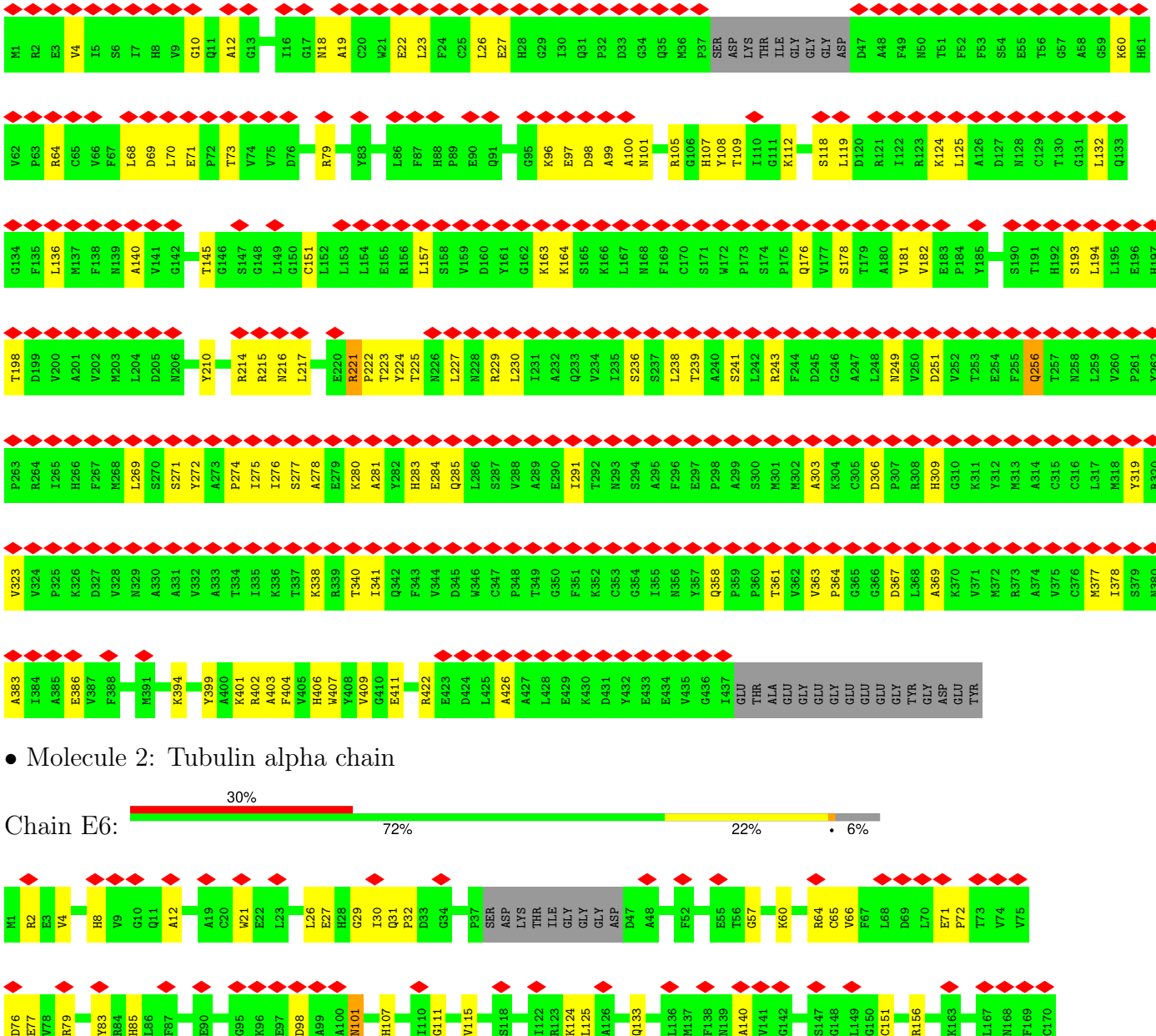
Chain E2:





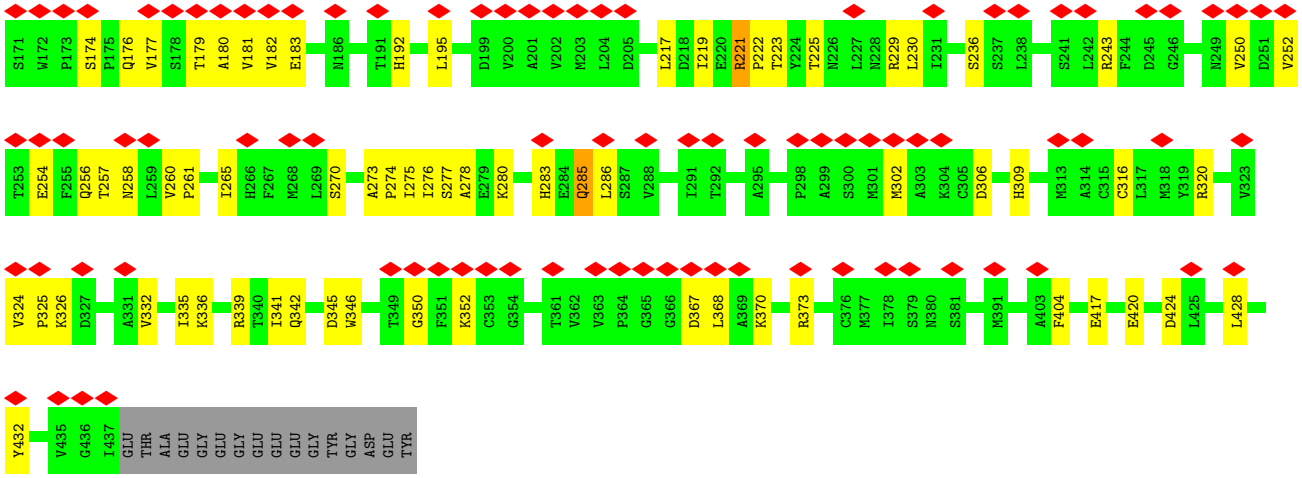
• Molecule 2: Tubulin alpha chain

Chain E4:



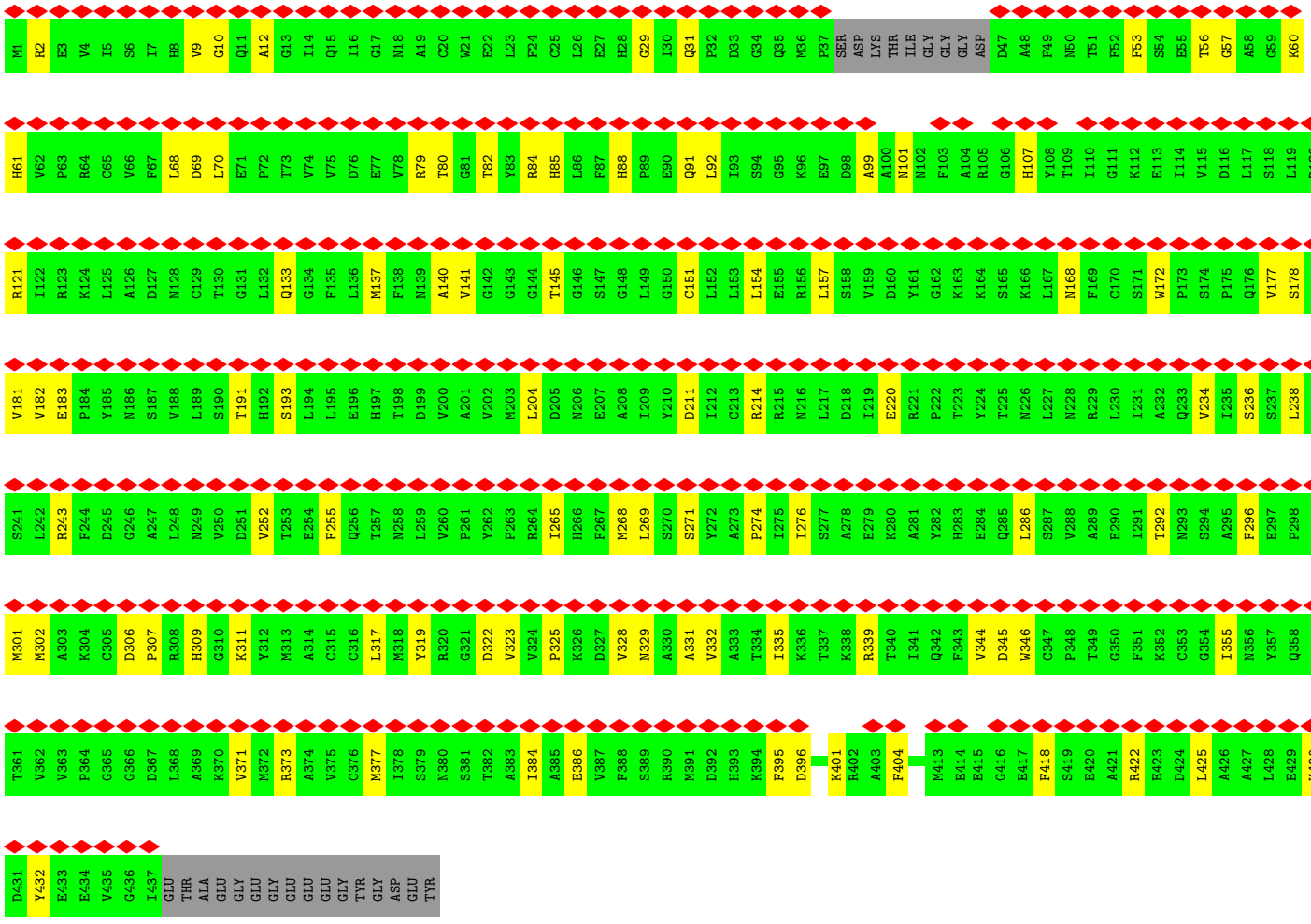
• Molecule 2: Tubulin alpha chain

Chain E6:



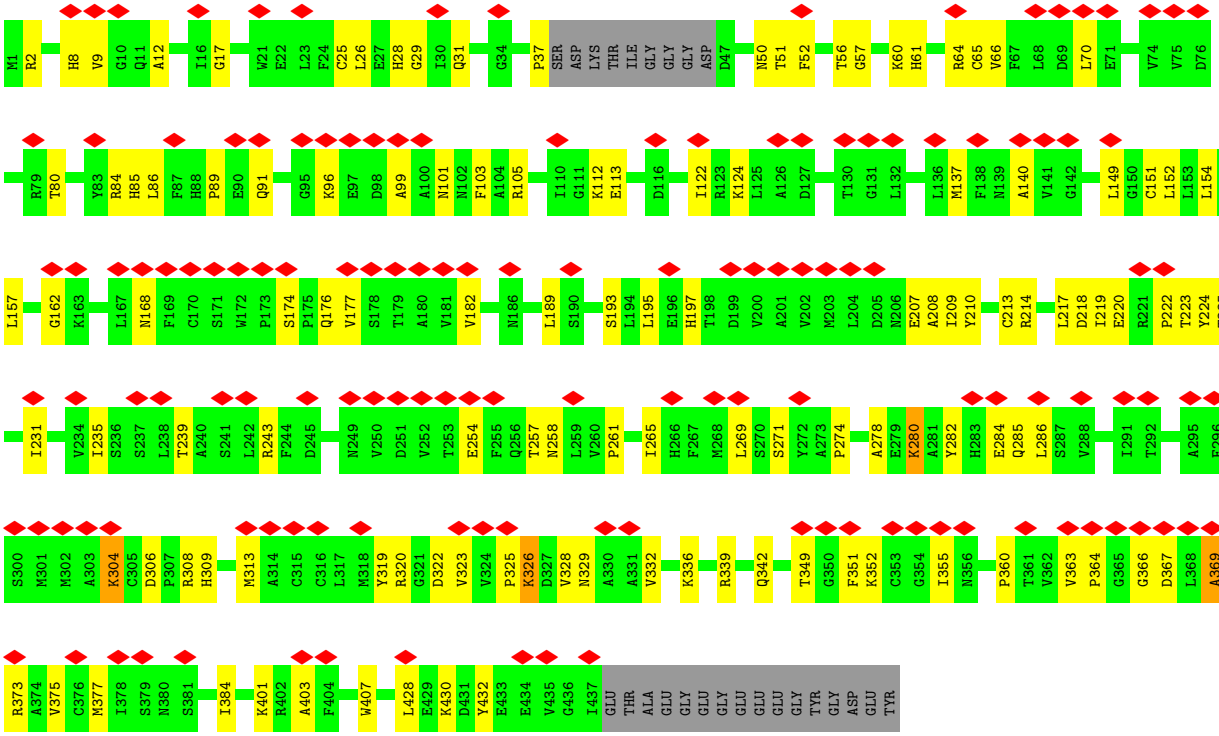
• Molecule 2: Tubulin alpha chain

Chain E8:



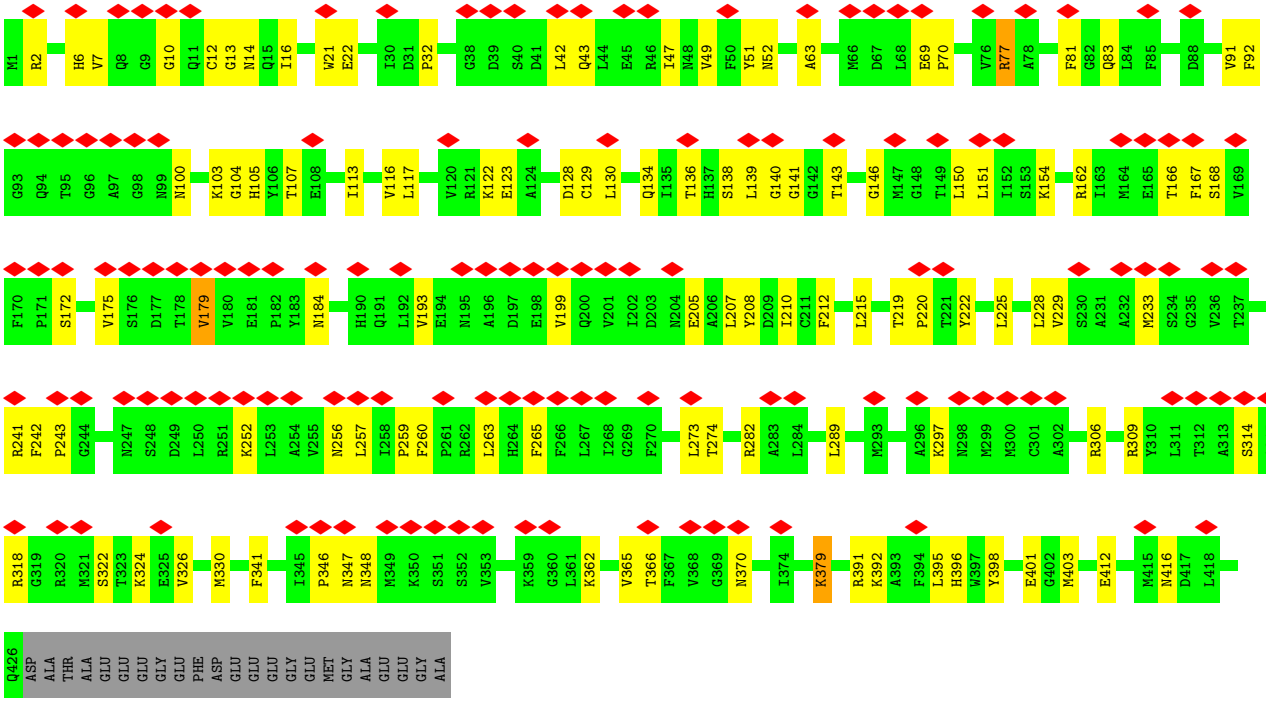
• Molecule 2: Tubulin alpha chain

Chain F0:



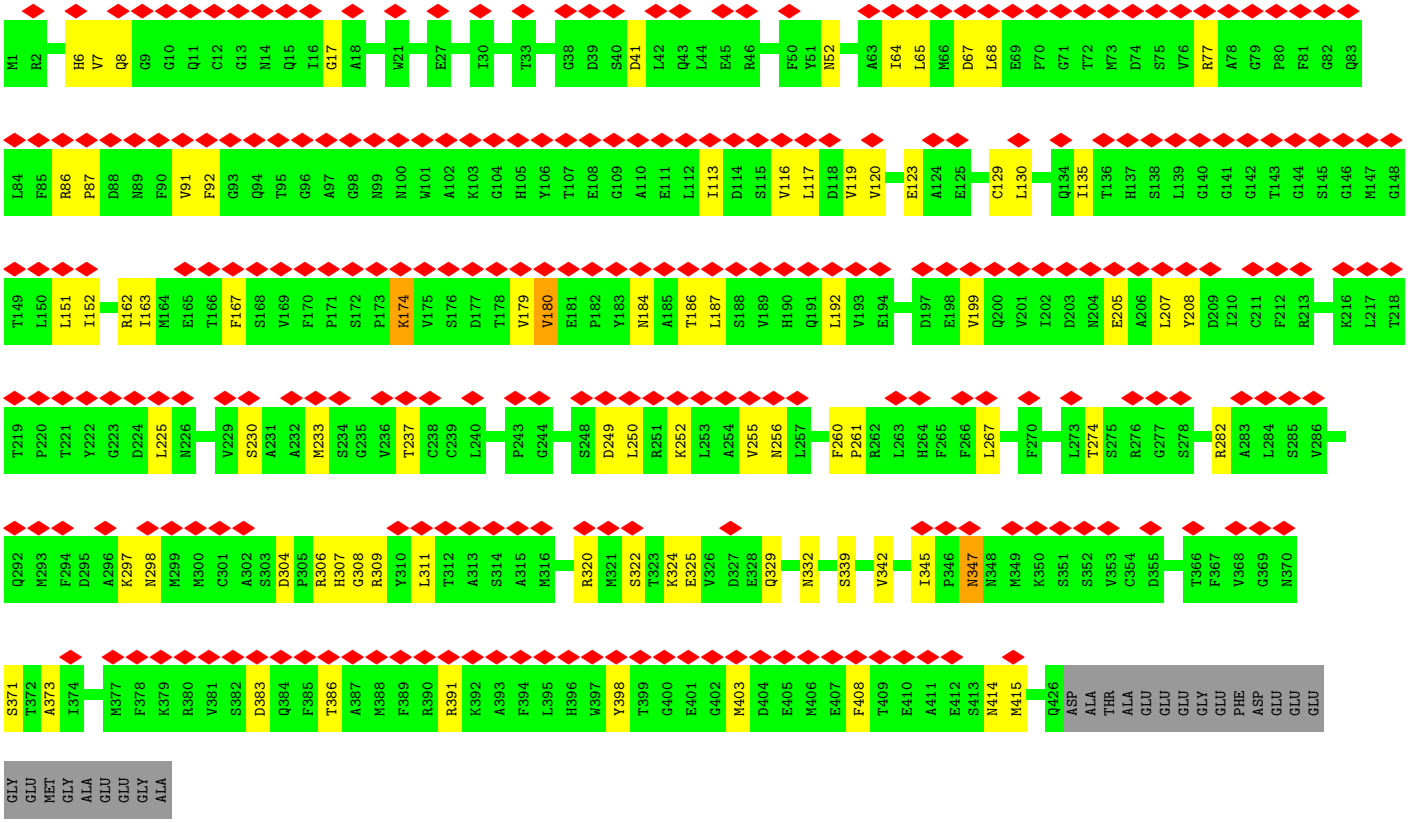
• Molecule 3: Tubulin beta chain

Chain A1:



• Molecule 3: Tubulin beta chain

Chain A3:

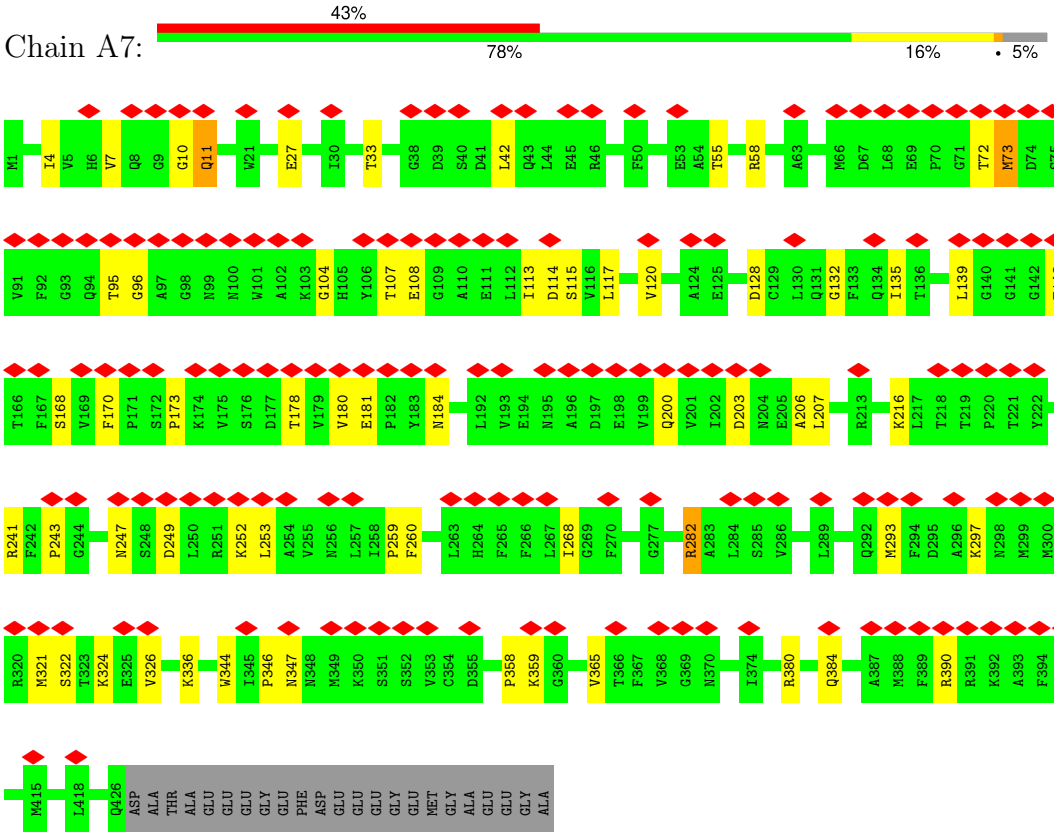


• Molecule 3: Tubulin beta chain

Chain A5:

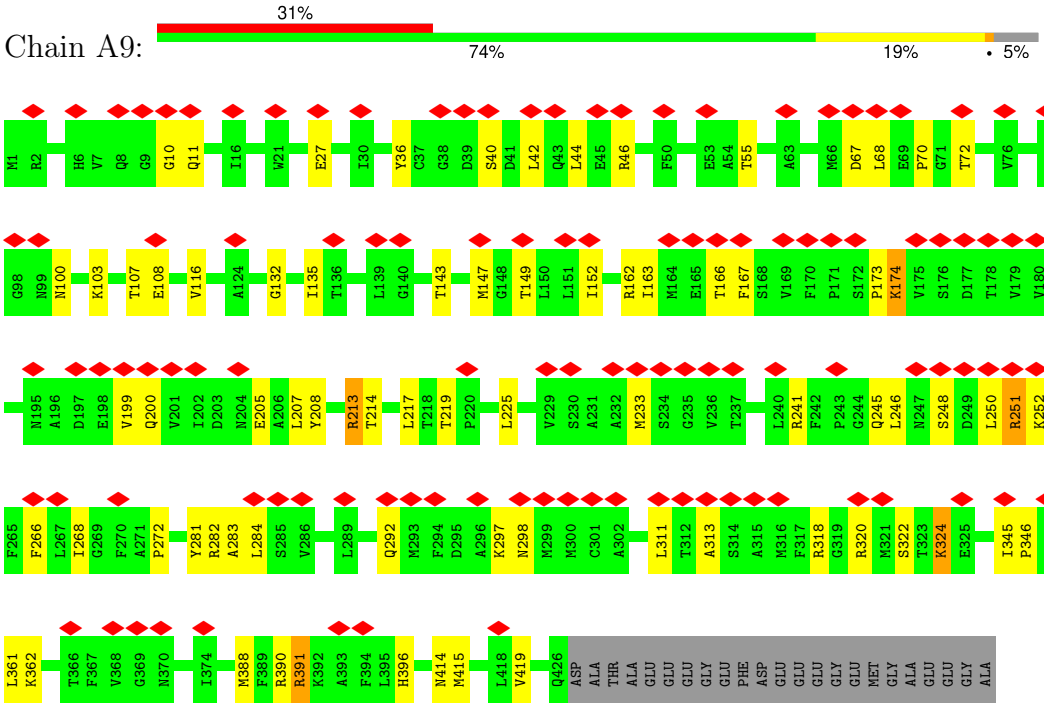
• Molecule 3: Tubulin beta chain

Chain A7:



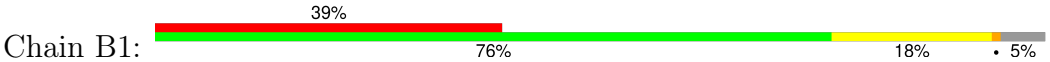
• Molecule 3: Tubulin beta chain

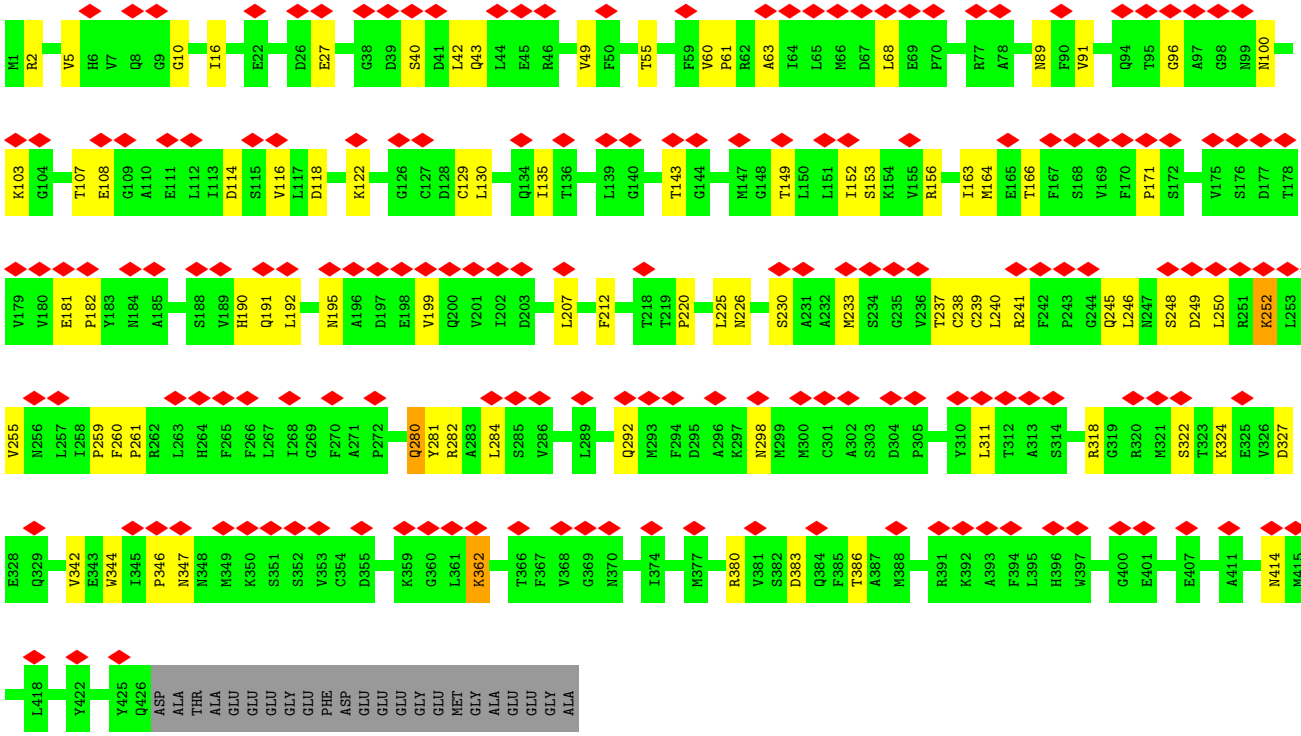
Chain A9:



• Molecule 3: Tubulin beta chain

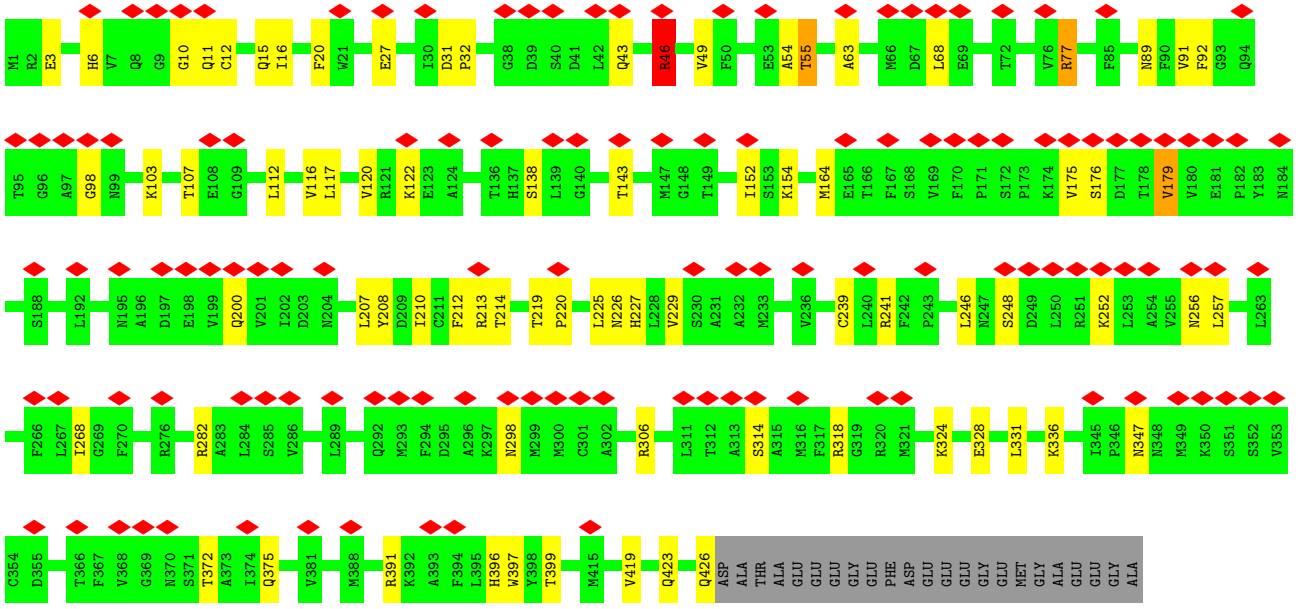
Chain B1:





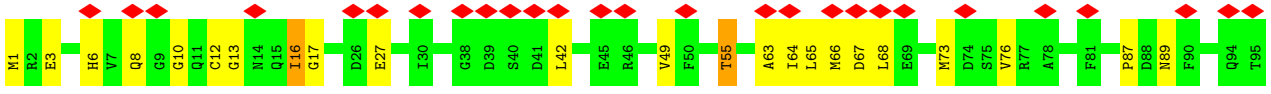
• Molecule 3: Tubulin beta chain

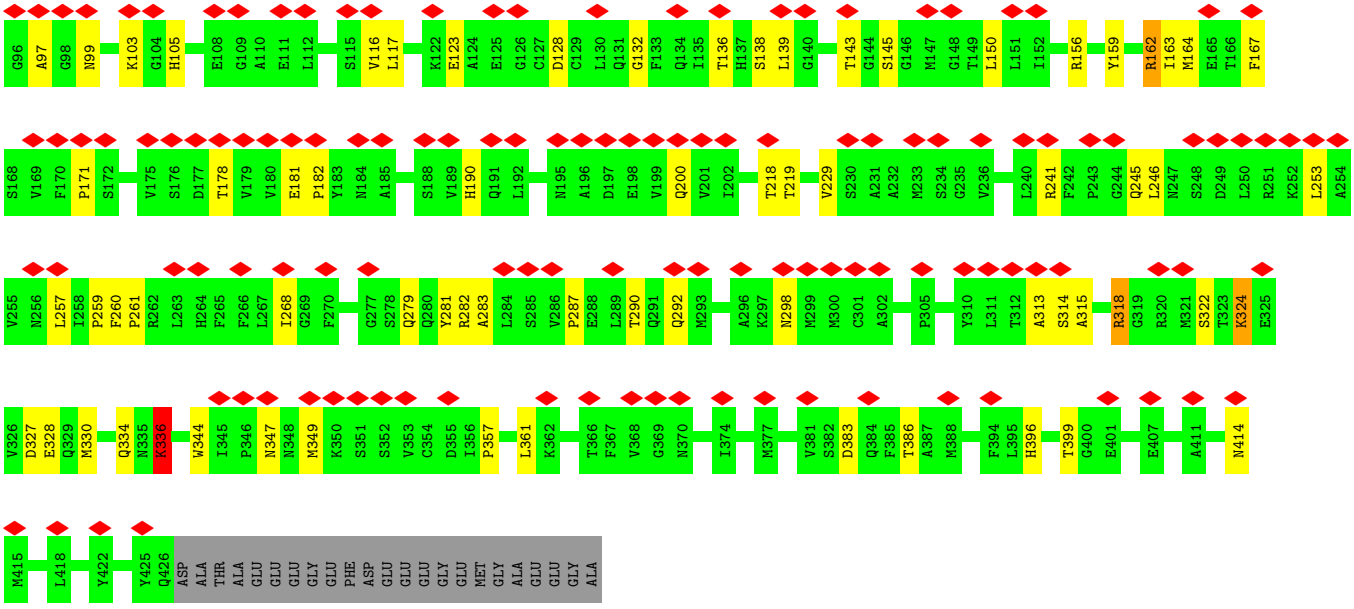
Chain B3:



• Molecule 3: Tubulin beta chain

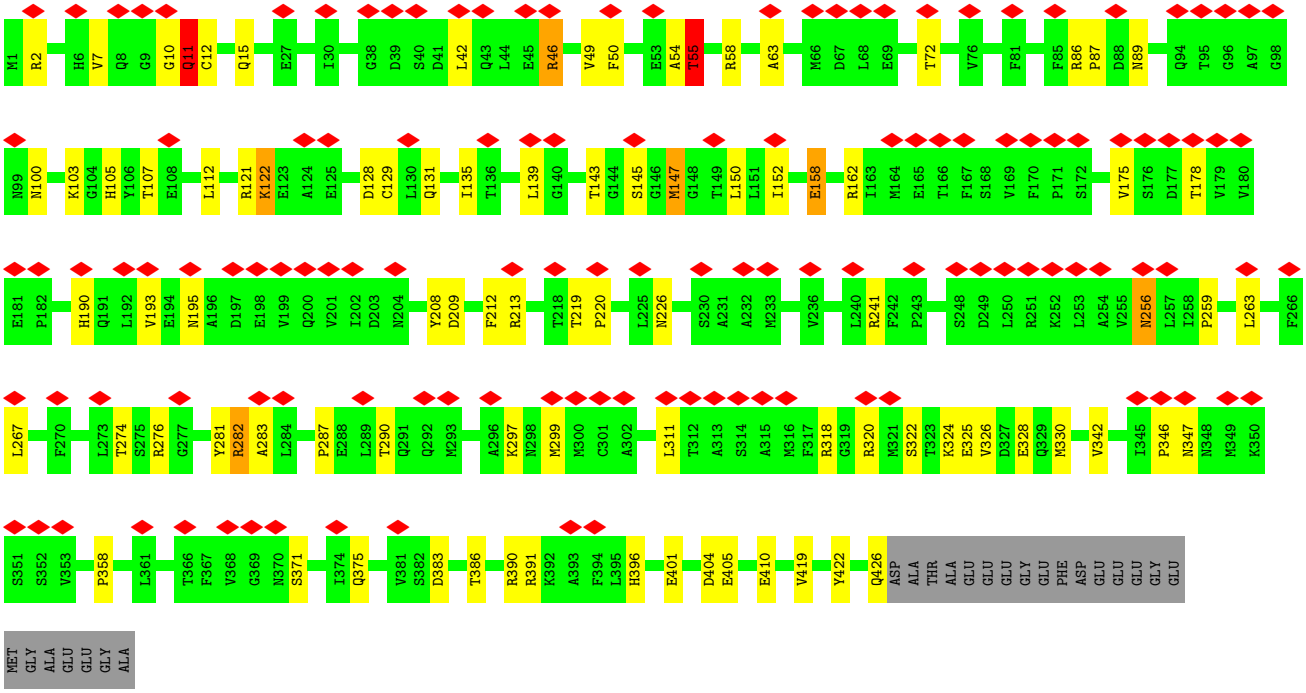
Chain B5:





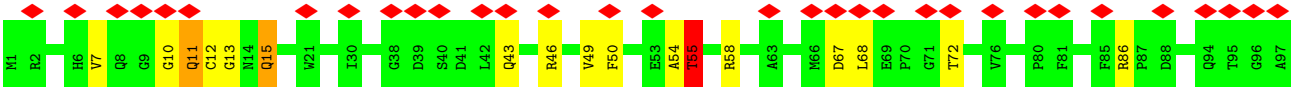
• Molecule 3: Tubulin beta chain

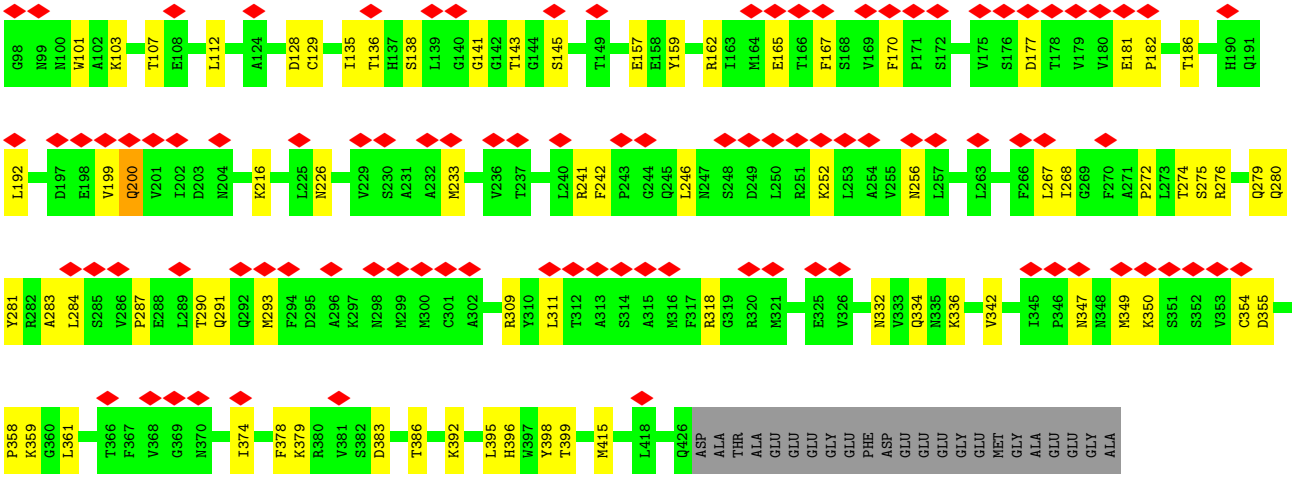
Chain B7:



• Molecule 3: Tubulin beta chain

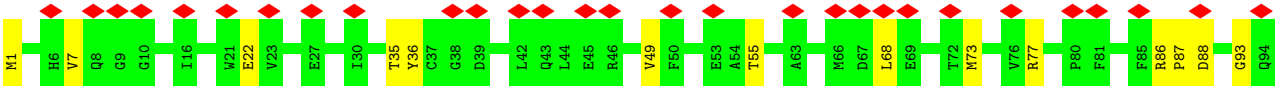
Chain B9:





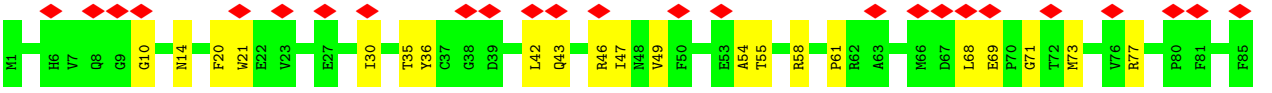
• Molecule 3: Tubulin beta chain

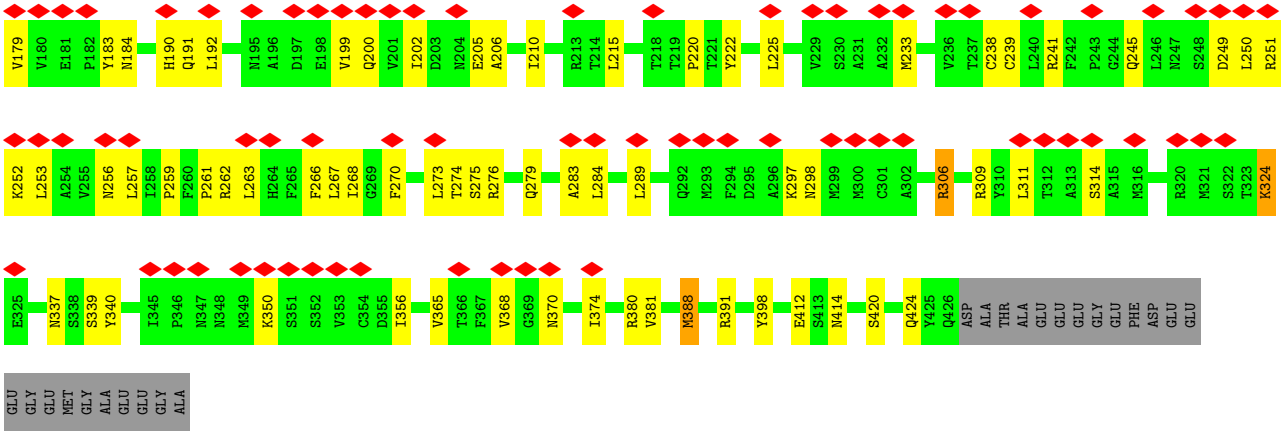
Chain C1:



• Molecule 3: Tubulin beta chain

Chain C3:



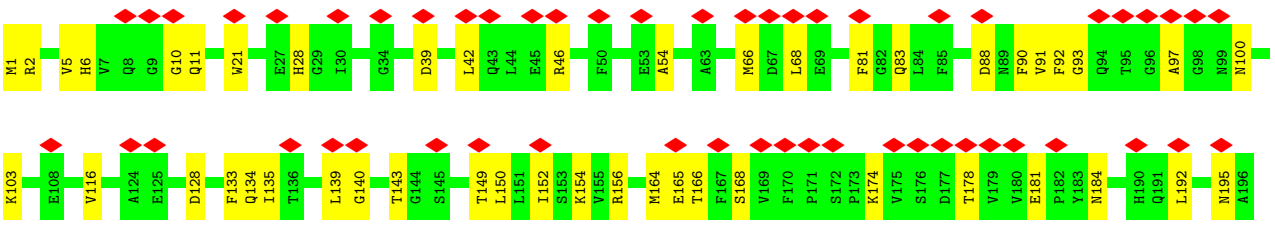


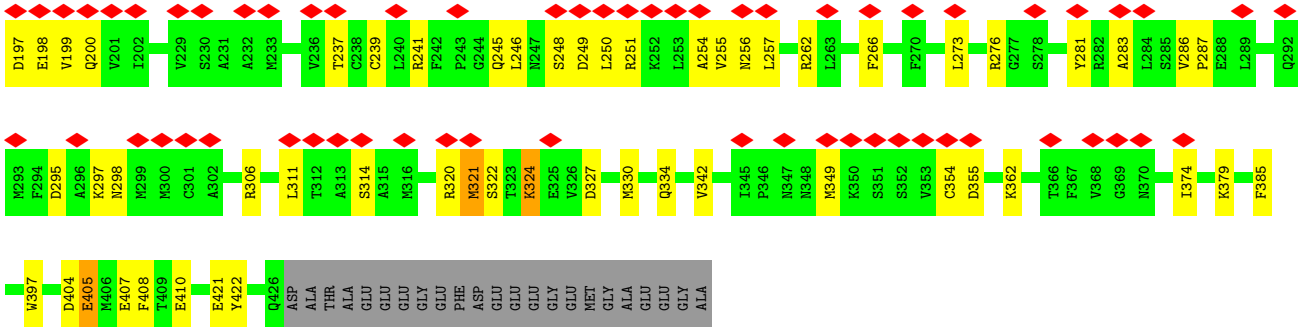
• Molecule 3: Tubulin beta chain

Chain C5:

• Molecule 3: Tubulin beta chain

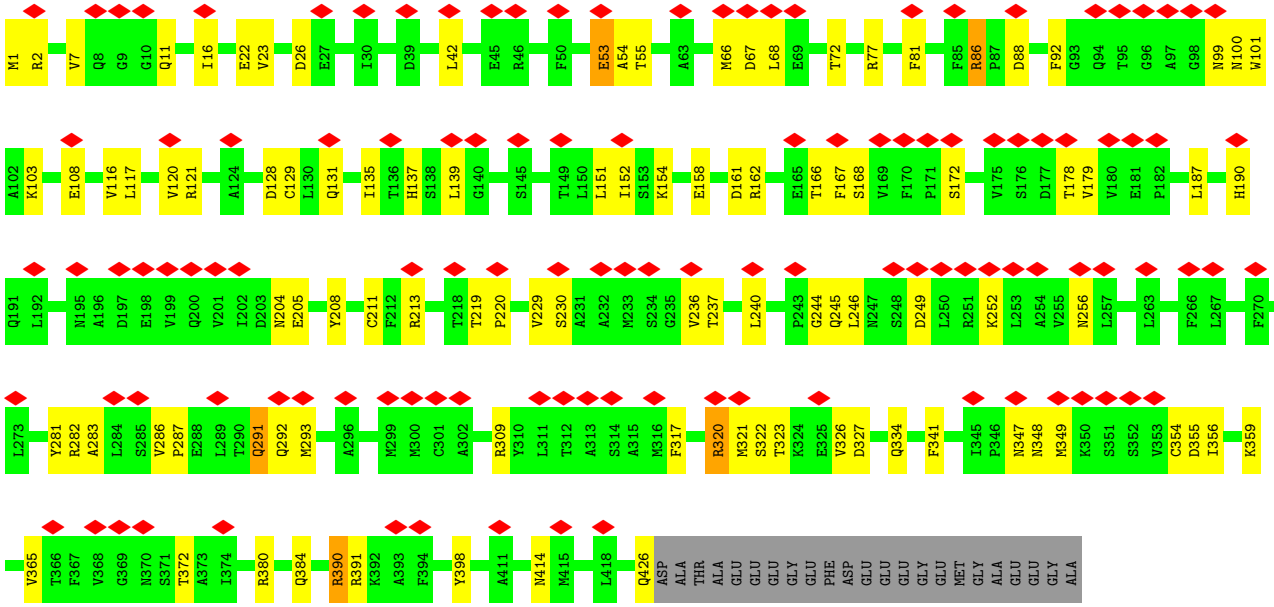
Chain C7:





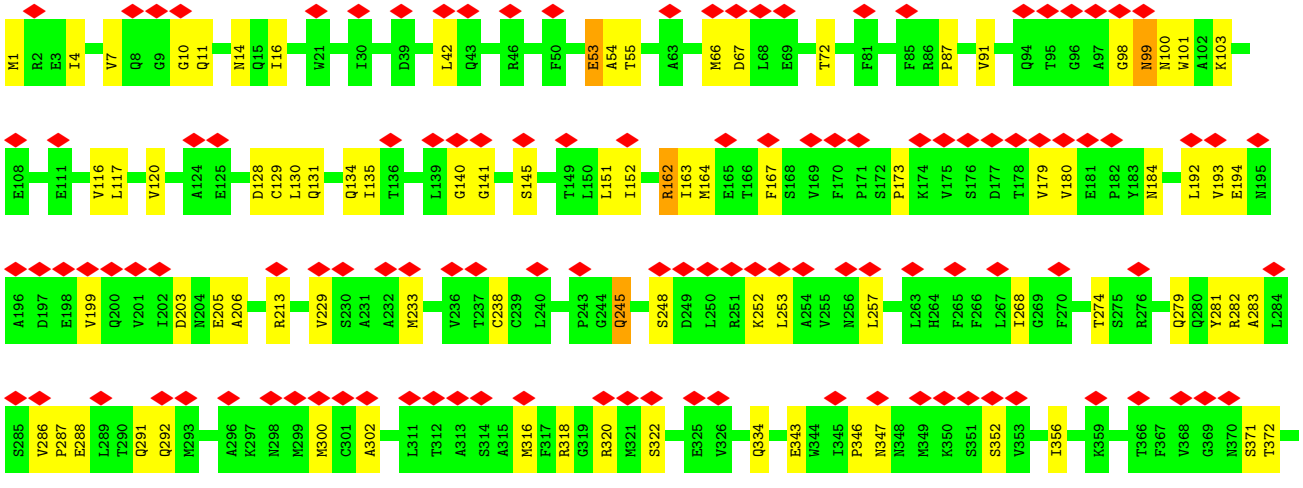
• Molecule 3: Tubulin beta chain

Chain C9:



• Molecule 3: Tubulin beta chain

Chain D1:

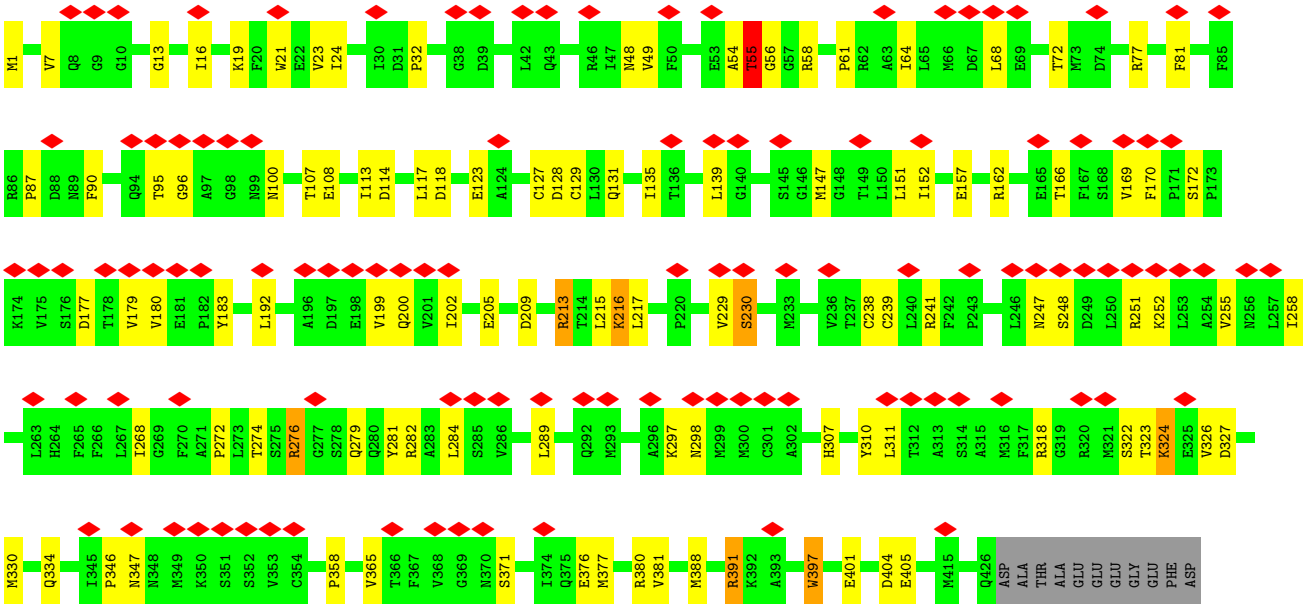


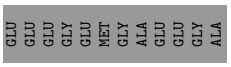
• Molecule 3: Tubulin beta chain

Chain D3:

• Molecule 3: Tubulin beta chain

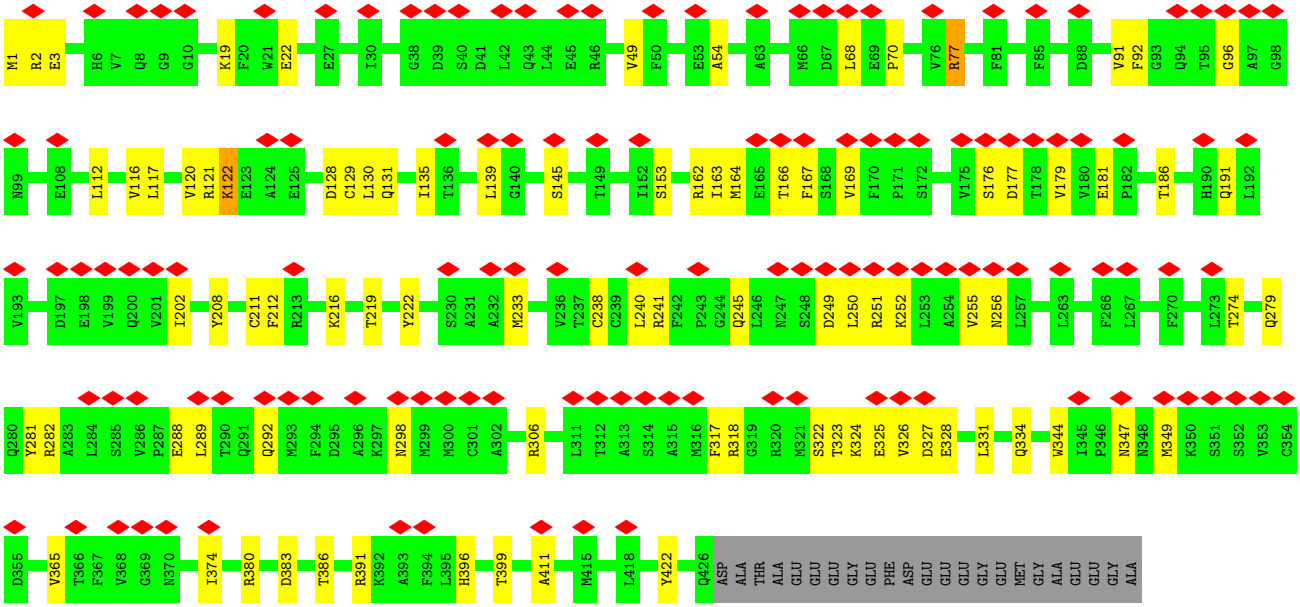
Chain D5:





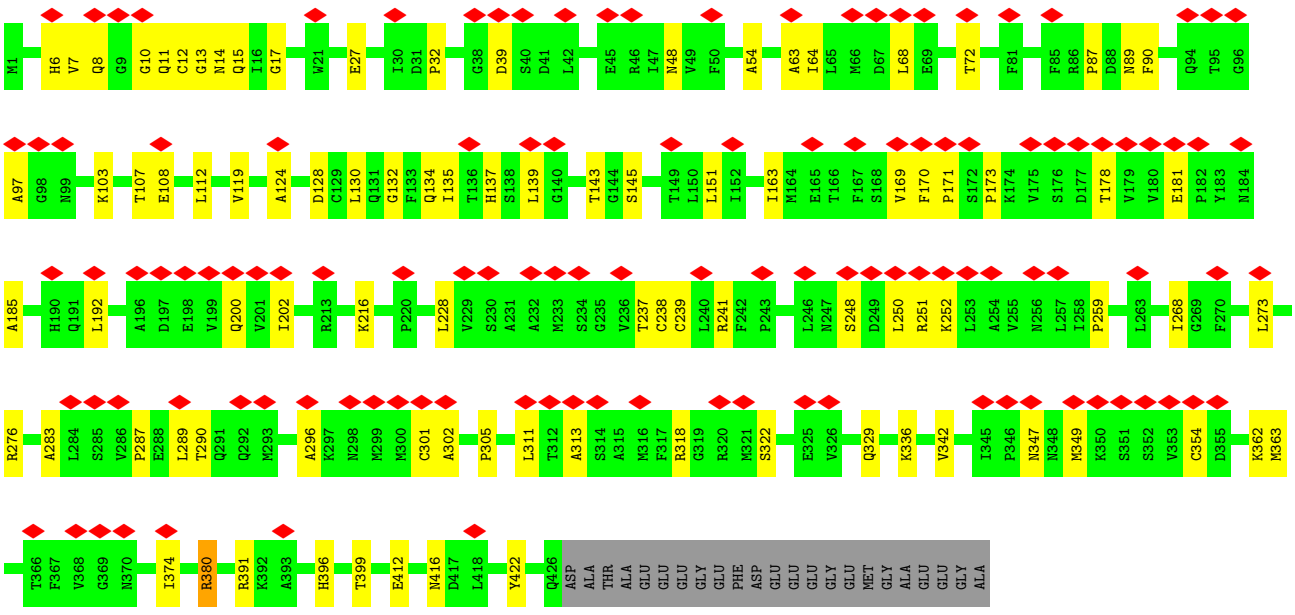
• Molecule 3: Tubulin beta chain

Chain D7:



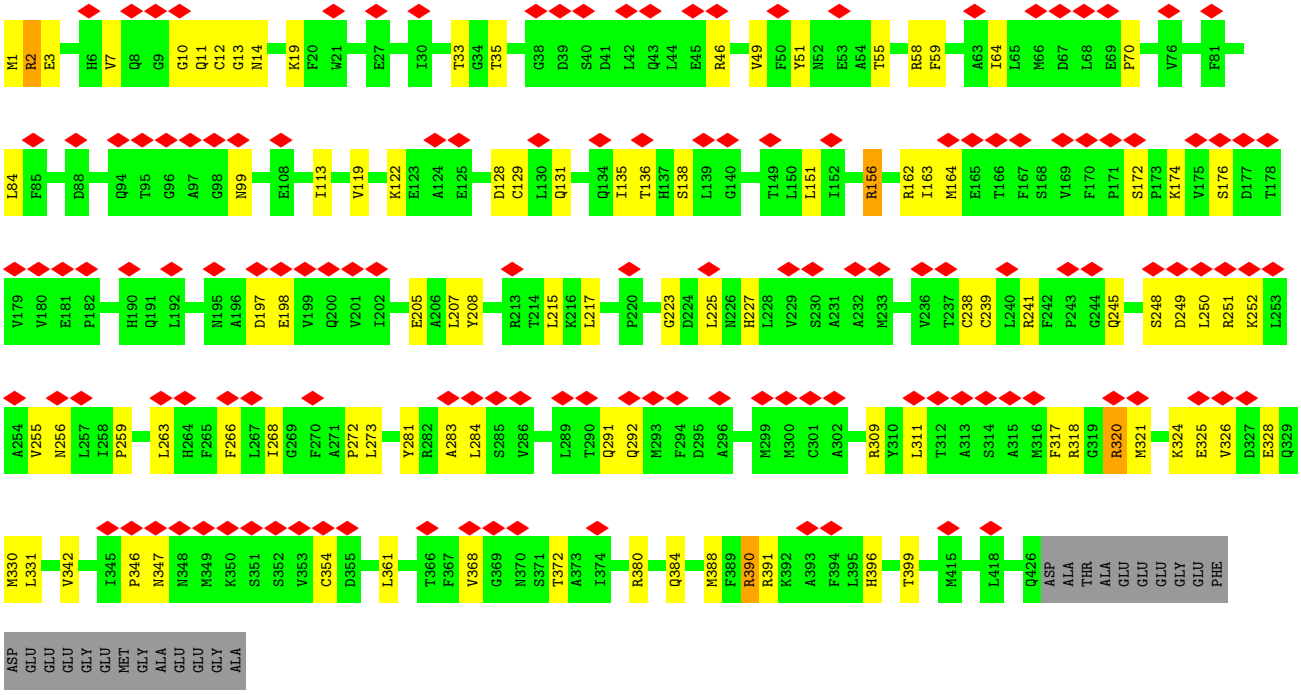
• Molecule 3: Tubulin beta chain

Chain D9:



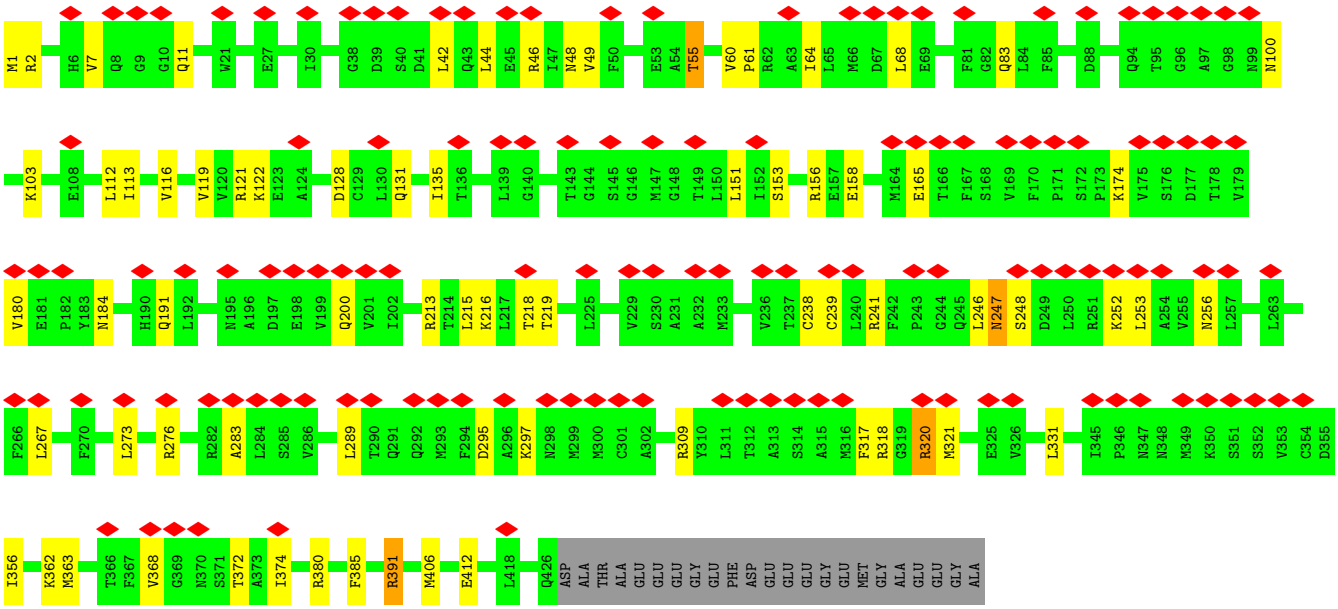
• Molecule 3: Tubulin beta chain

Chain E1:



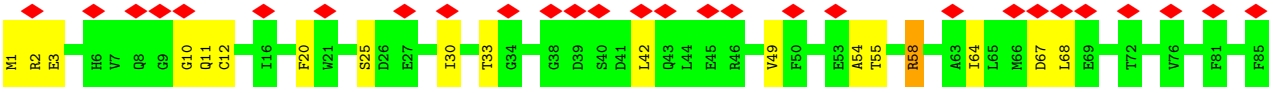
• Molecule 3: Tubulin beta chain

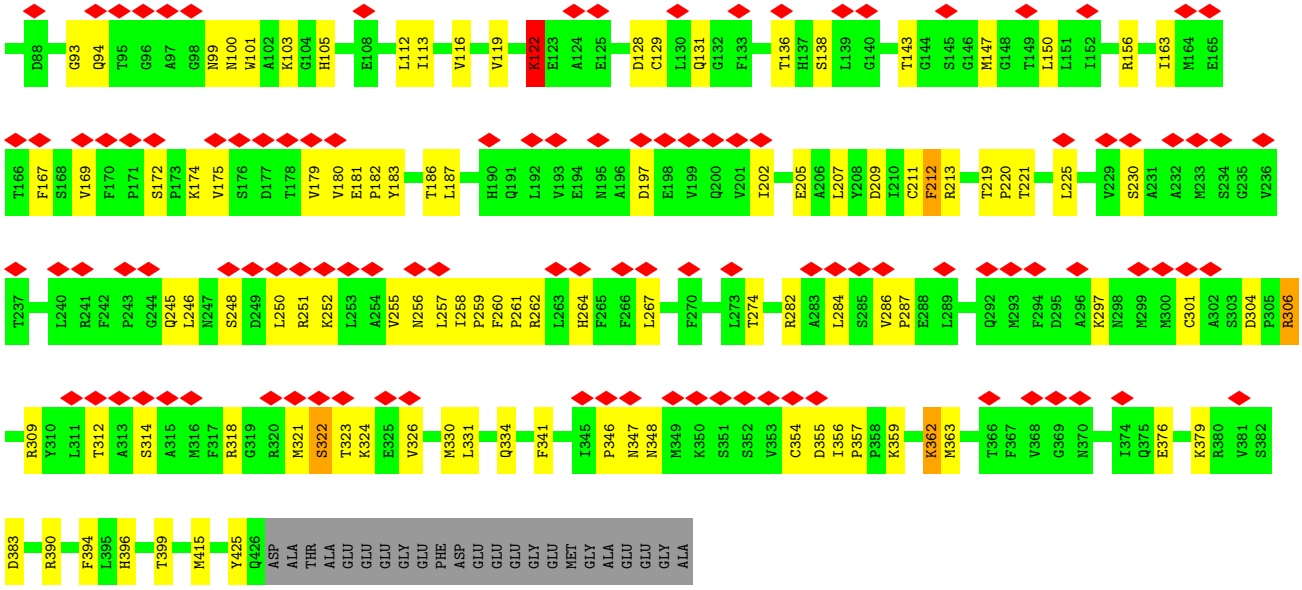
Chain E3:



• Molecule 3: Tubulin beta chain

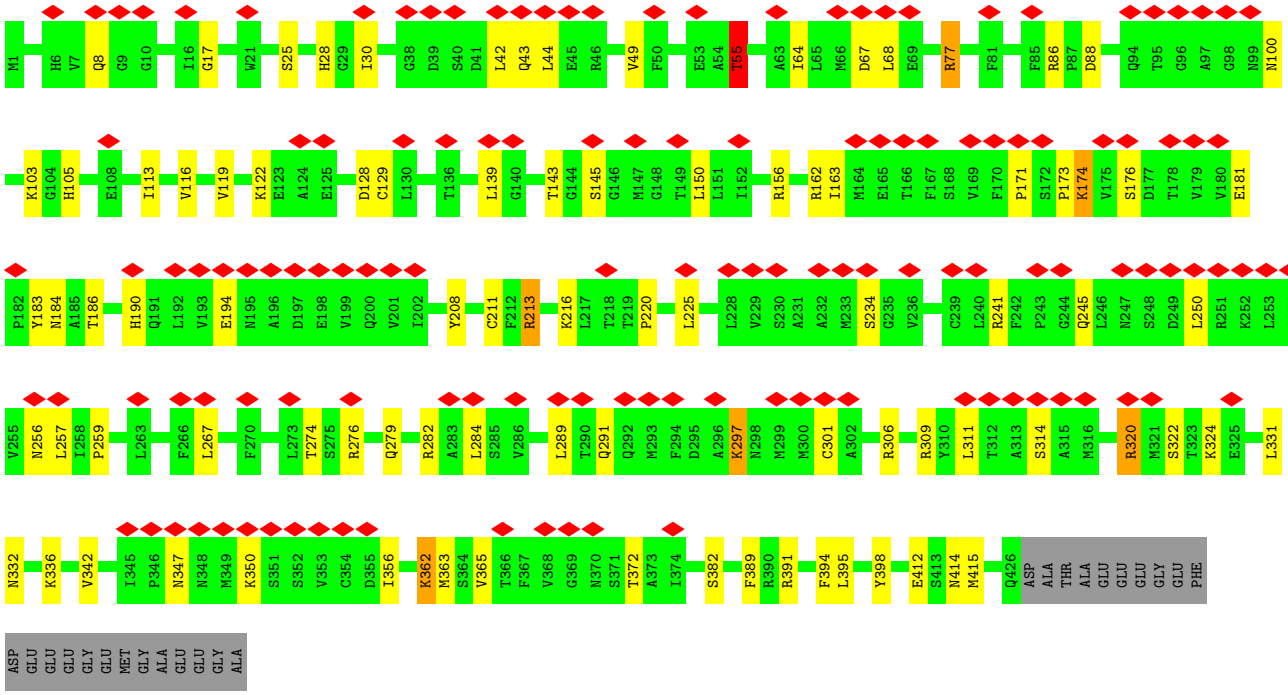
Chain E5:





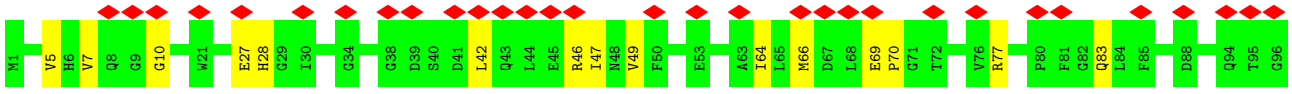
• Molecule 3: Tubulin beta chain

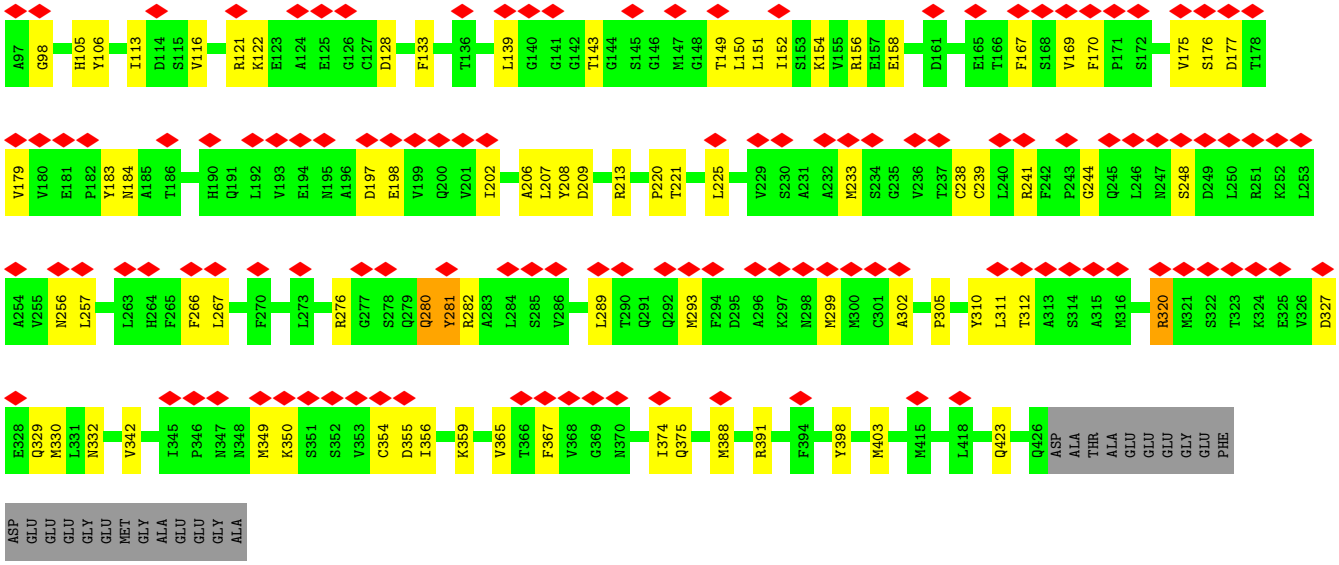
Chain E7:



• Molecule 3: Tubulin beta chain

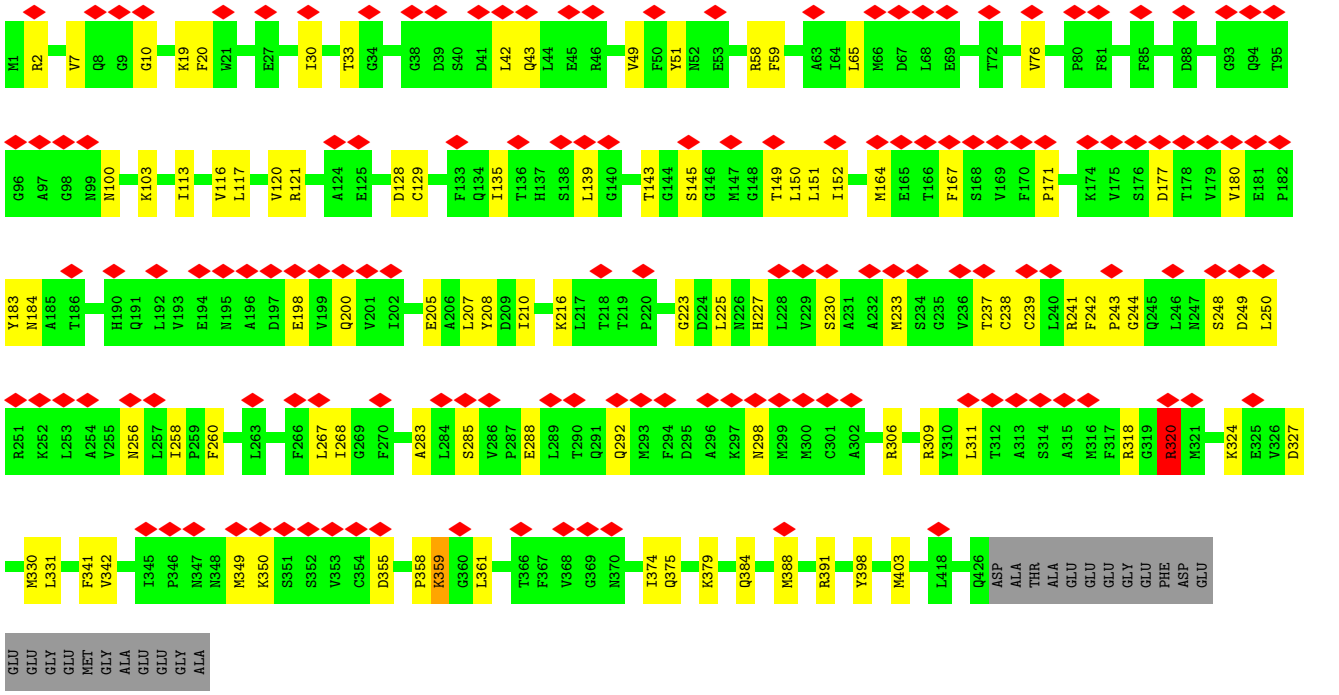
Chain E9:





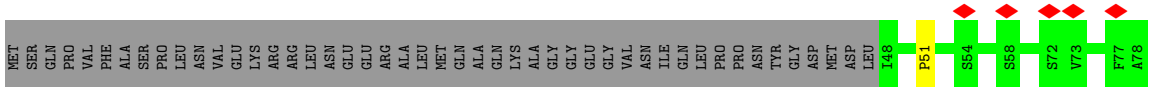
• Molecule 3: Tubulin beta chain

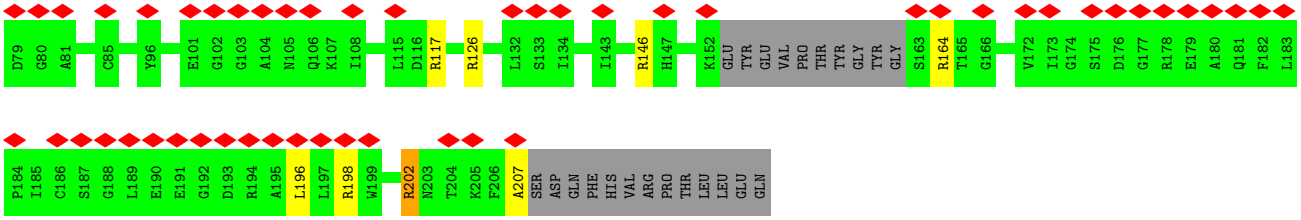
Chain F1:



• Molecule 4: PDI family protein

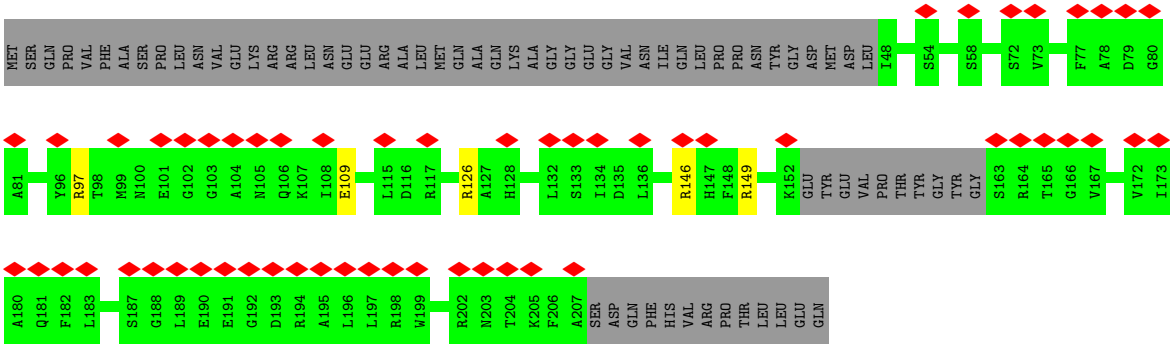
Chain a:





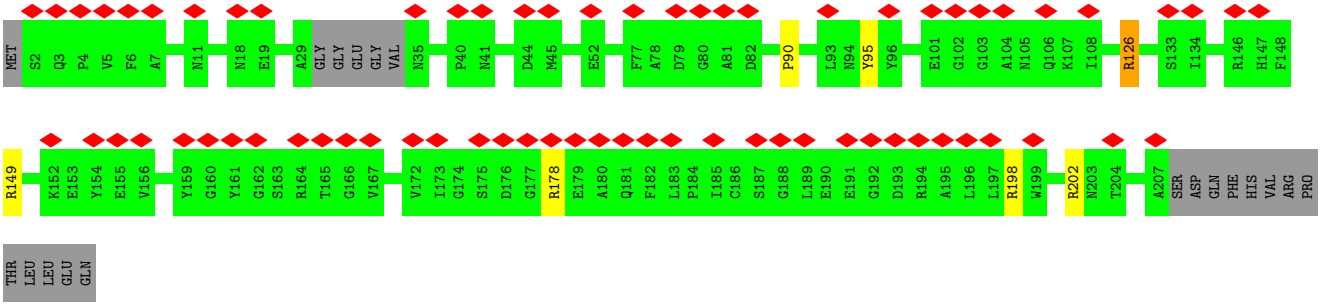
• Molecule 4: PDI family protein

Chain b:



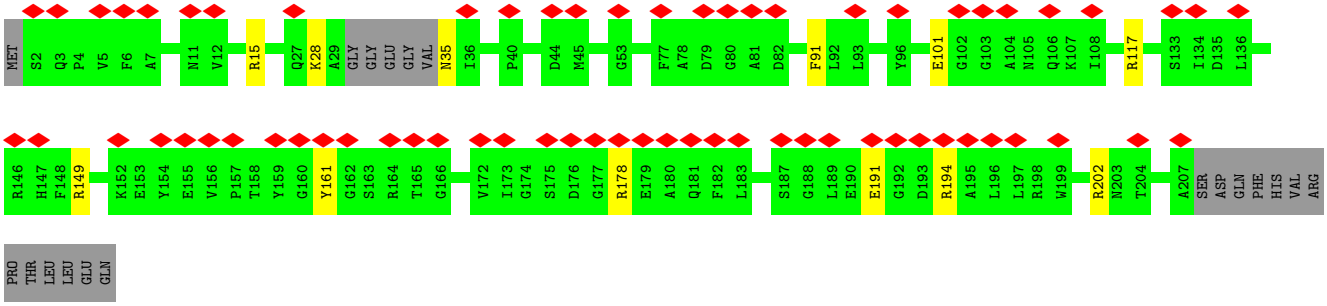
• Molecule 4: PDI family protein

Chain c:



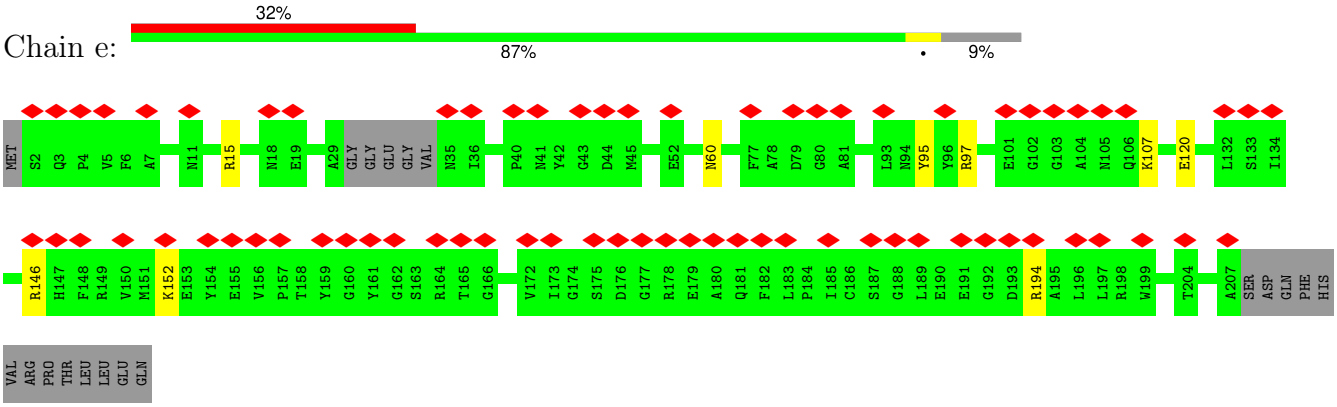
• Molecule 4: PDI family protein

Chain d:



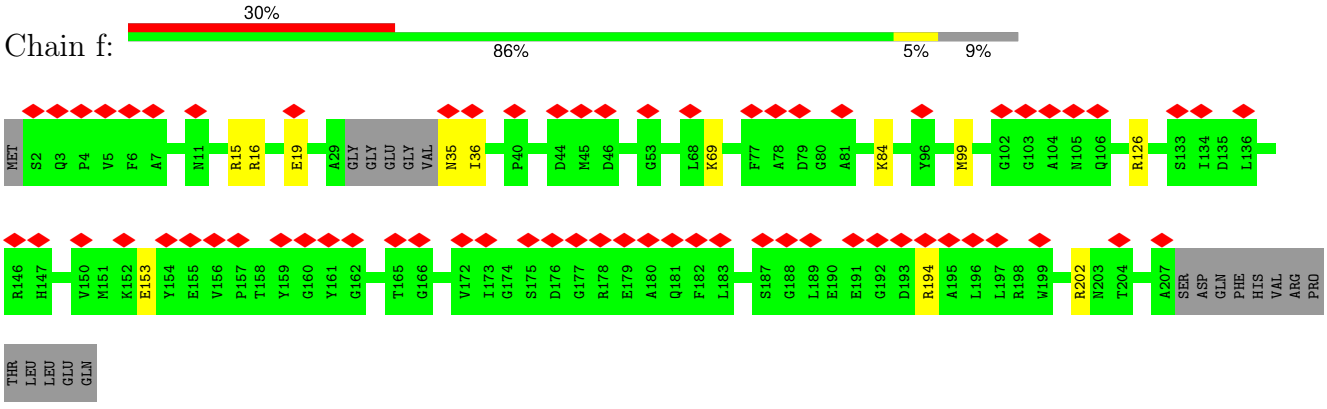
• Molecule 4: PDI family protein

Chain e:



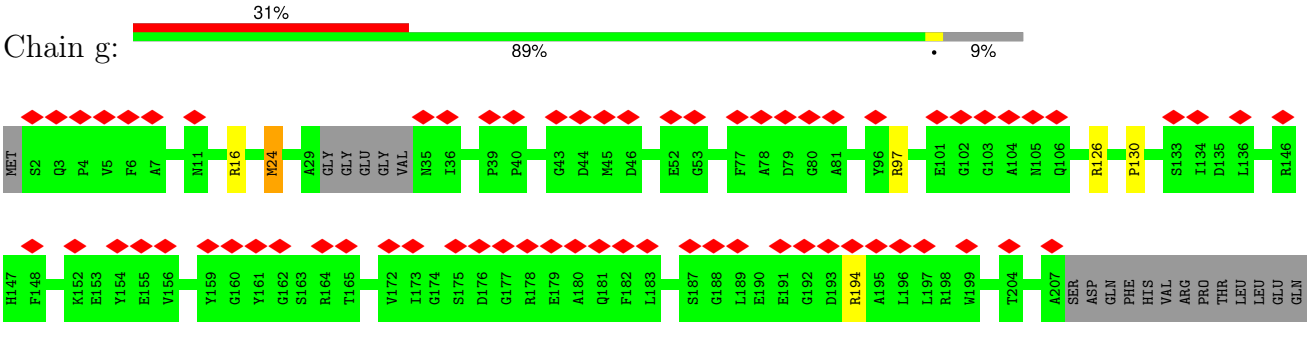
• Molecule 4: PDI family protein

Chain f:



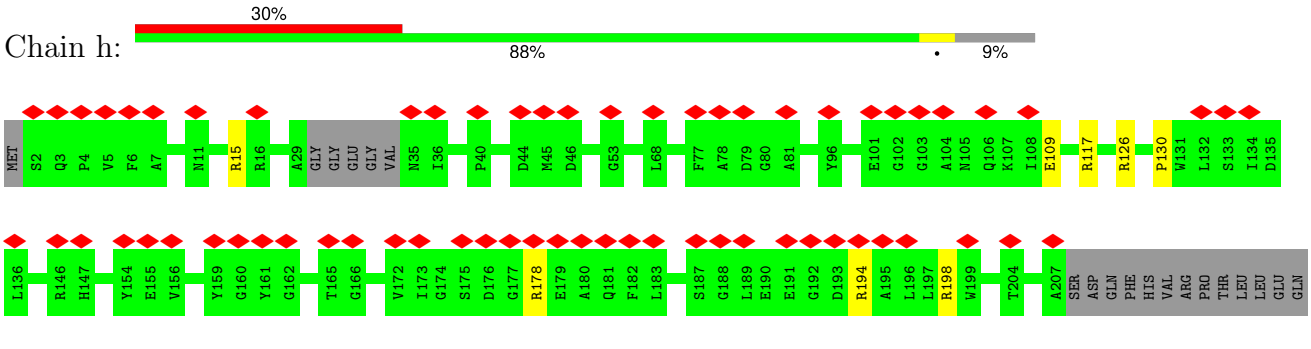
• Molecule 4: PDI family protein

Chain g:



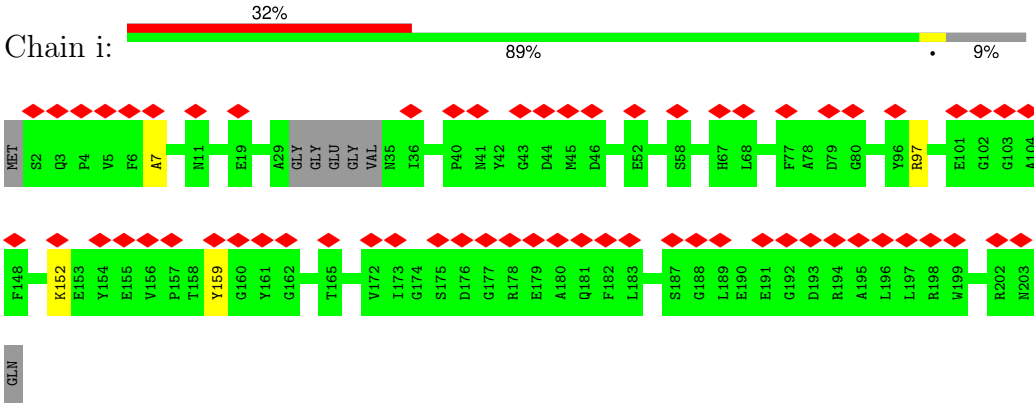
• Molecule 4: PDI family protein

Chain h:



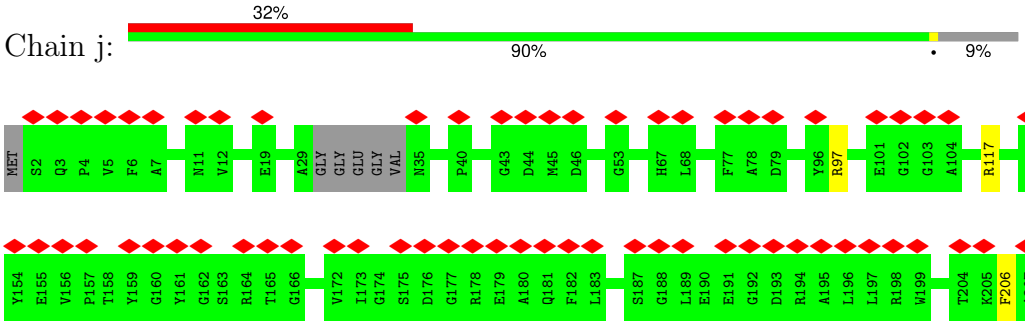
• Molecule 4: PDI family protein

Chain i:



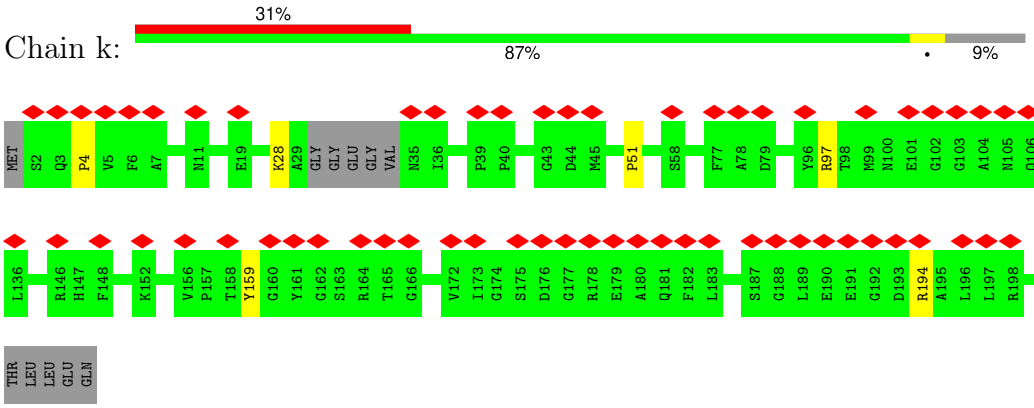
• Molecule 4: PDI family protein

Chain j:



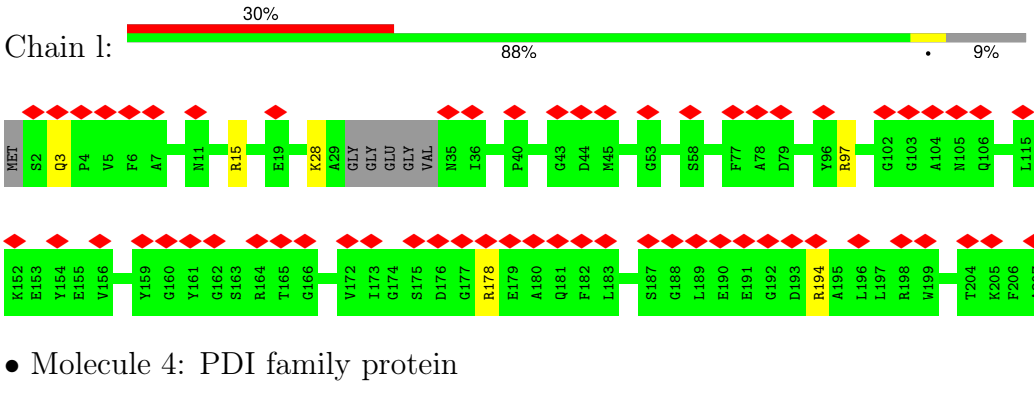
• Molecule 4: PDI family protein

Chain k:



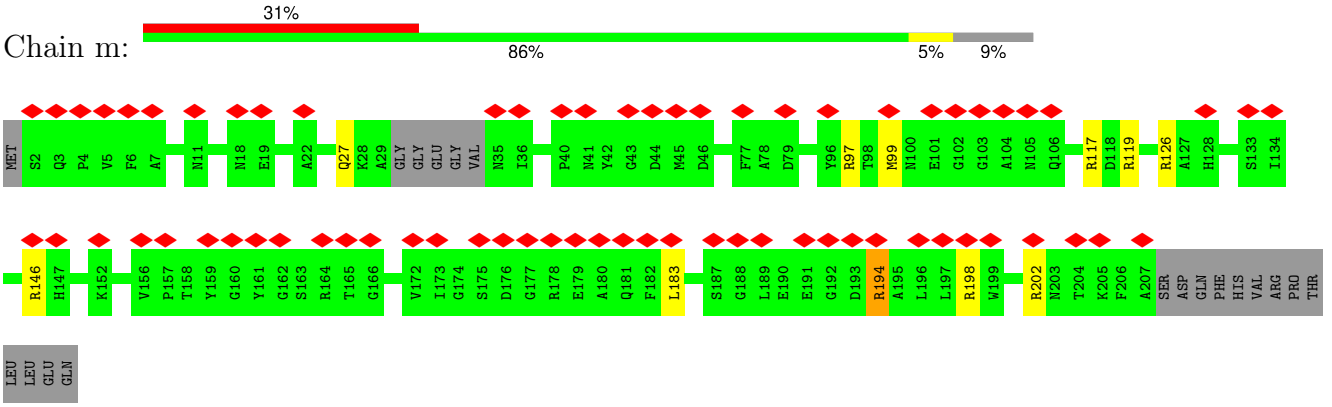
• Molecule 4: PDI family protein

Chain l:



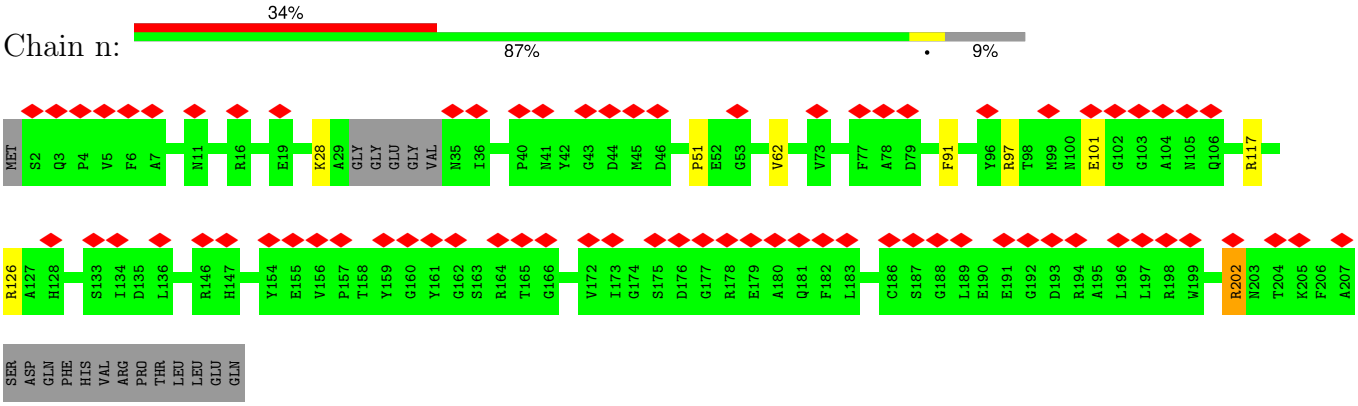
• Molecule 4: PDI family protein

Chain m:



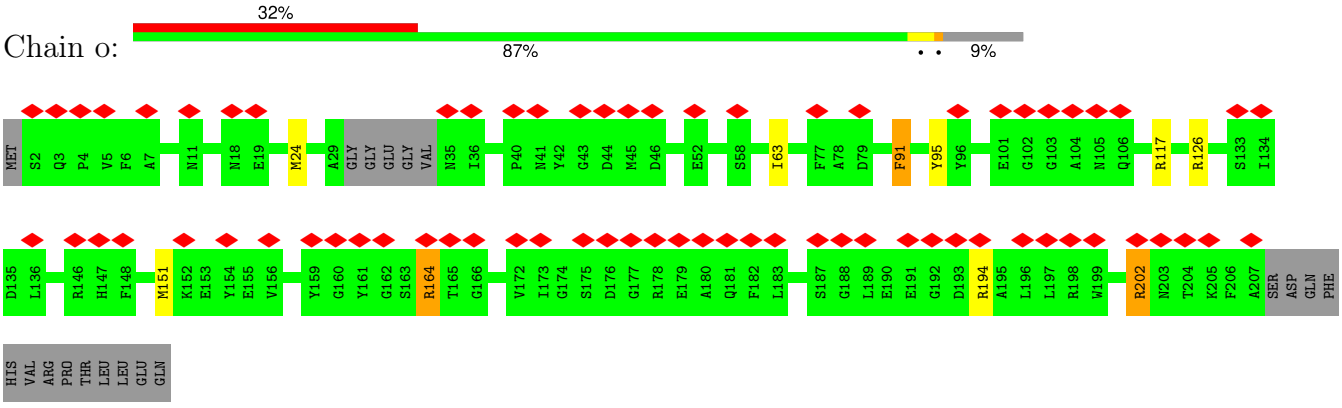
• Molecule 4: PDI family protein

Chain n:



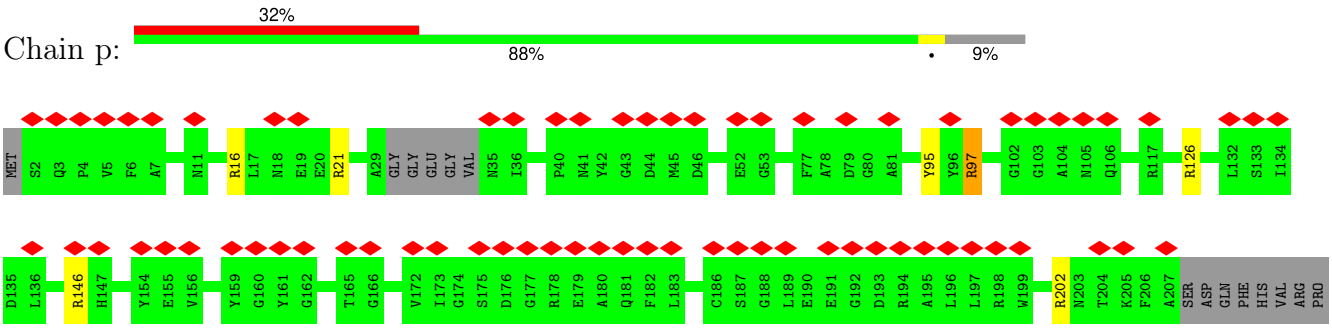
• Molecule 4: PDI family protein

Chain o:



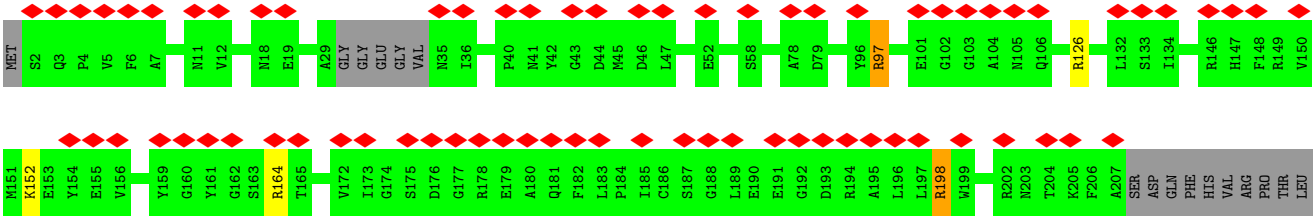
• Molecule 4: PDI family protein

Chain p:



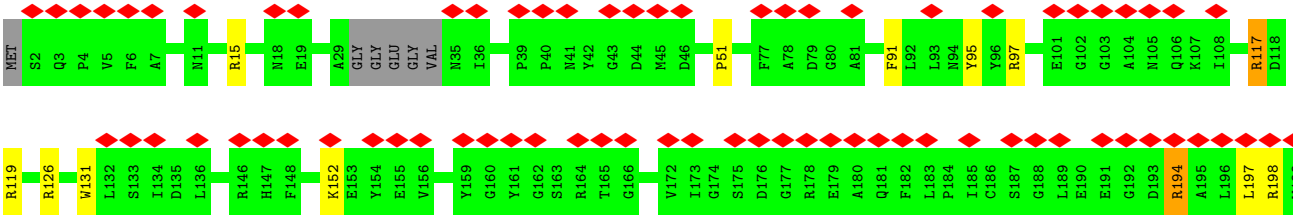
• Molecule 4: PDI family protein

Chain q:



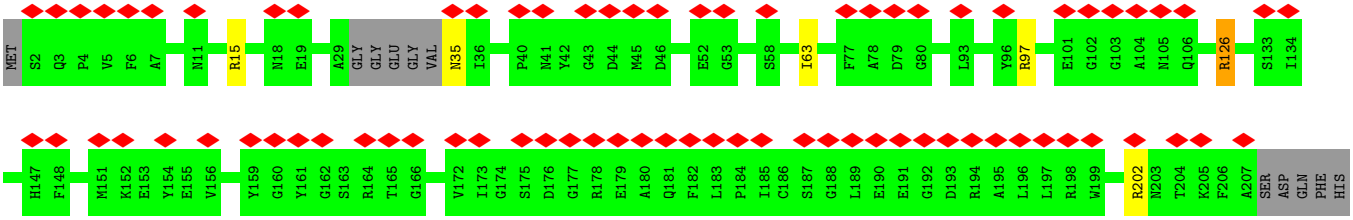
• Molecule 4: PDI family protein

Chain r:



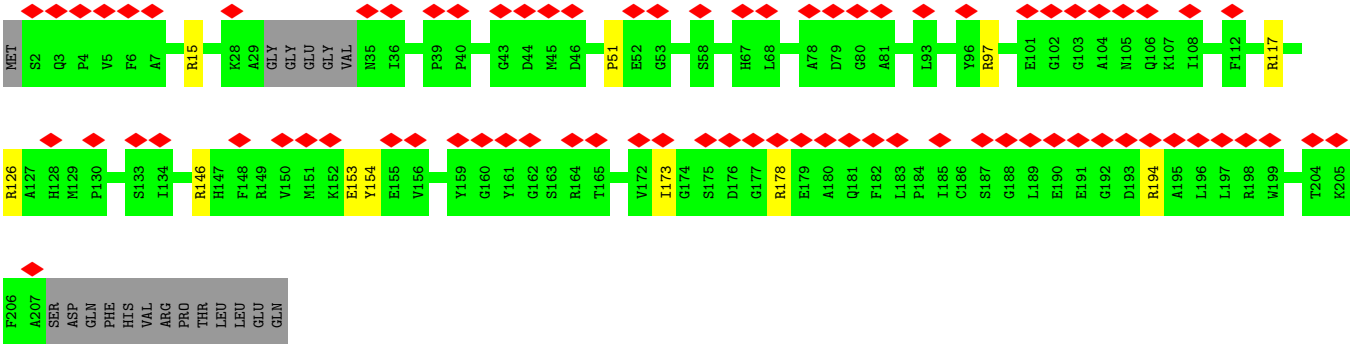
• Molecule 4: PDI family protein

Chain s:



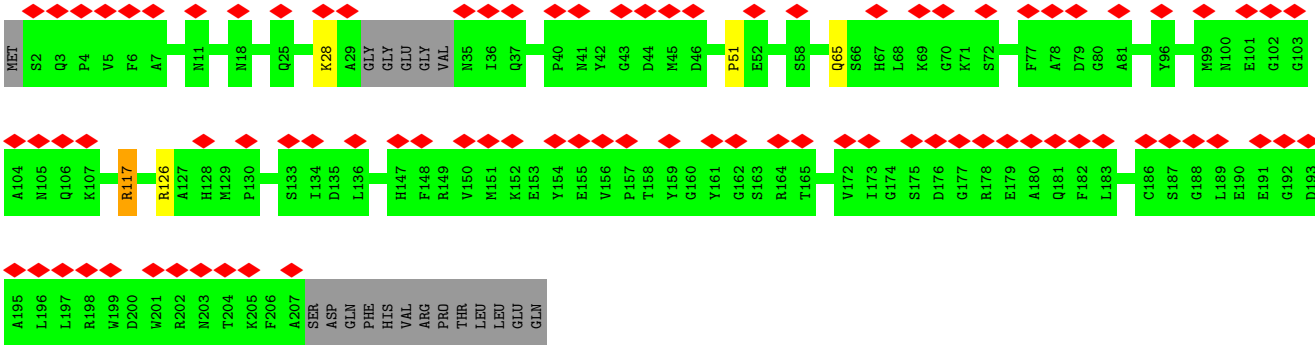
• Molecule 4: PDI family protein

Chain t:



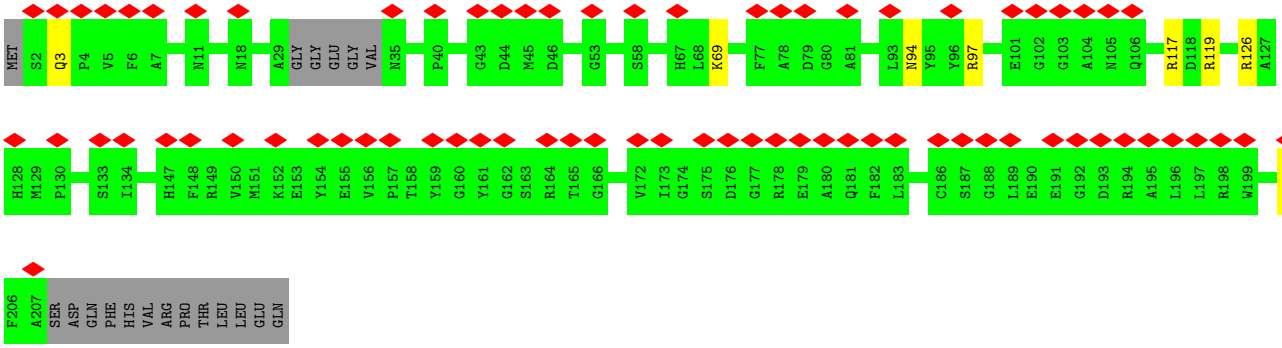
• Molecule 4: PDI family protein

Chain u:



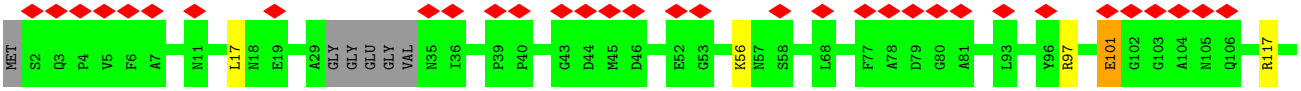
• Molecule 4: PDI family protein

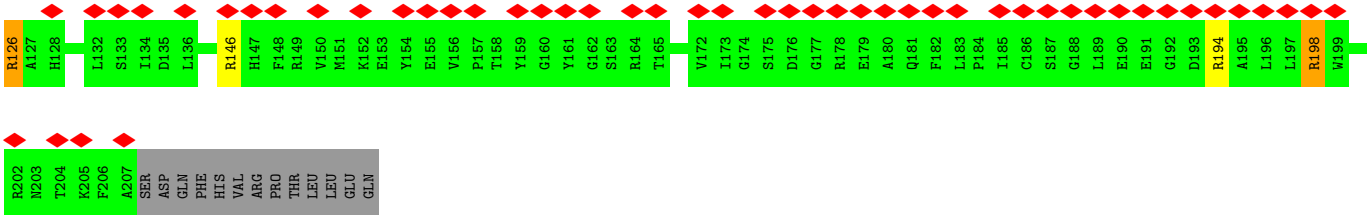
Chain v:



• Molecule 4: PDI family protein

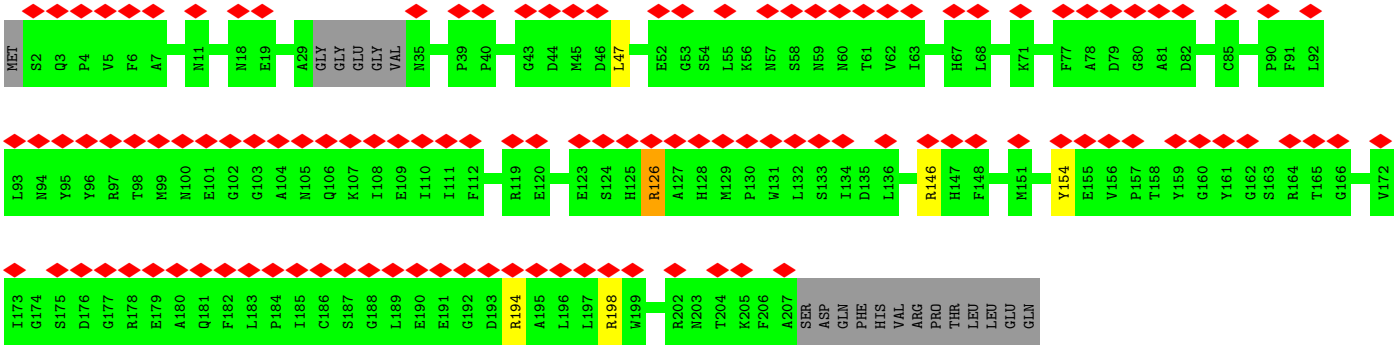
Chain x:





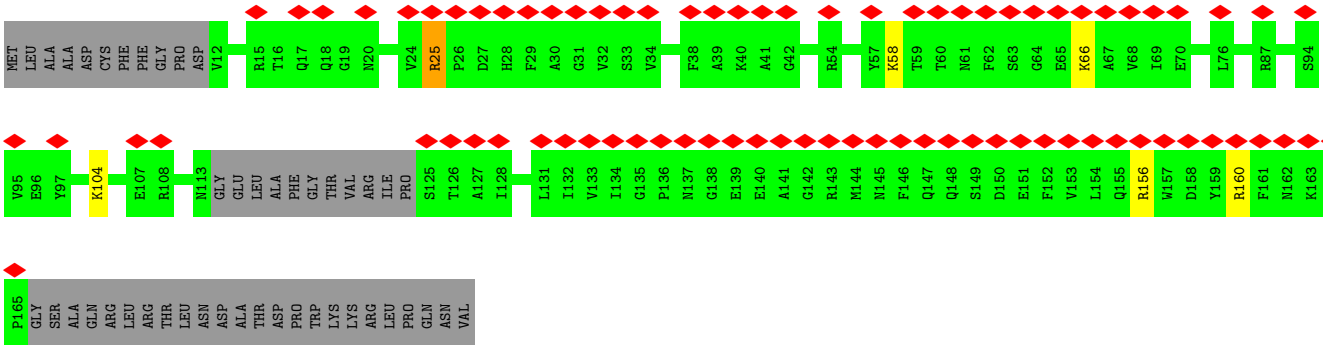
• Molecule 4: PDI family protein

Chain y:



• Molecule 5: PDI family protein

Chain w:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	HELICAL, twist=27.7°, rise=80 Å, axial sym=C13	Depositor
Number of subtomograms used	39122	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	132	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	16.064	Depositor
Minimum map value	-13.513	Depositor
Average map value	0.056	Depositor
Map value standard deviation	0.986	Depositor
Recommended contour level	2	Depositor
Map size (Å)	447.444, 447.444, 447.444	wwPDB
Map dimensions	216, 216, 216	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.0715, 2.0715, 2.0715	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	0	0.46	0/181	0.93	0/248
1	1	0.46	0/181	0.90	0/248
1	10	0.41	0/181	1.04	0/248
1	11	0.47	0/181	1.20	1/248 (0.4%)
1	12	0.46	0/181	1.03	0/248
1	13	0.46	0/181	1.10	0/248
1	14	0.39	0/181	0.83	1/248 (0.4%)
1	15	0.48	0/181	1.15	0/248
1	16	0.46	0/181	0.98	1/248 (0.4%)
1	17	0.82	2/181 (1.1%)	1.30	5/248 (2.0%)
1	18	0.46	0/181	0.80	0/248
1	19	0.57	0/181	1.06	0/248
1	2	0.46	0/181	1.11	0/248
1	20	0.49	0/181	0.84	0/248
1	21	0.48	0/181	0.99	0/248
1	22	0.69	0/166	1.34	3/227 (1.3%)
1	23	0.49	0/166	1.08	0/227
1	3	0.41	0/181	0.93	0/248
1	4	0.42	0/181	1.04	1/248 (0.4%)
1	5	0.43	0/181	1.10	2/248 (0.8%)
1	6	0.39	0/181	1.03	0/248
1	7	0.36	0/181	0.80	0/248
1	8	0.44	0/181	1.01	0/248
1	9	0.46	0/181	1.04	2/248 (0.8%)
2	A0	0.50	1/3398 (0.0%)	0.95	9/4606 (0.2%)
2	A2	0.47	2/3398 (0.1%)	0.91	6/4606 (0.1%)
2	A4	0.64	5/3398 (0.1%)	1.00	7/4606 (0.2%)
2	A6	0.47	1/3398 (0.0%)	0.92	8/4606 (0.2%)
2	A8	0.58	2/3398 (0.1%)	1.00	6/4606 (0.1%)
2	B0	0.48	2/3398 (0.1%)	0.93	11/4606 (0.2%)
2	B2	0.50	0/3398	0.95	9/4606 (0.2%)
2	B4	0.45	2/3398 (0.1%)	0.87	5/4606 (0.1%)
2	B6	0.43	0/3398	0.84	3/4606 (0.1%)
2	B8	0.43	0/3398	0.85	7/4606 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
2	C0	0.48	3/3398 (0.1%)	0.85	5/4606 (0.1%)
2	C2	0.48	2/3398 (0.1%)	0.84	3/4606 (0.1%)
2	C4	0.62	2/3398 (0.1%)	1.10	10/4606 (0.2%)
2	C6	0.48	1/3398 (0.0%)	0.94	9/4606 (0.2%)
2	C8	0.46	0/3398	0.88	9/4606 (0.2%)
2	D0	0.47	1/3398 (0.0%)	0.95	9/4606 (0.2%)
2	D2	0.43	0/3398	0.84	8/4606 (0.2%)
2	D4	0.49	1/3398 (0.0%)	0.90	7/4606 (0.2%)
2	D6	0.42	0/3398	0.83	8/4606 (0.2%)
2	D8	0.46	0/3398	0.89	5/4606 (0.1%)
2	E0	0.38	0/3398	0.74	3/4606 (0.1%)
2	E2	0.45	1/3398 (0.0%)	0.83	1/4606 (0.0%)
2	E4	0.38	0/3398	0.78	4/4606 (0.1%)
2	E6	0.42	0/3398	0.81	1/4606 (0.0%)
2	E8	0.34	0/3398	0.68	0/4606
2	F0	0.49	1/3398 (0.0%)	0.87	5/4606 (0.1%)
3	A1	0.48	1/3404 (0.0%)	0.90	3/4606 (0.1%)
3	A3	0.39	0/3404	0.77	1/4606 (0.0%)
3	A5	0.49	0/3404	0.94	6/4606 (0.1%)
3	A7	0.44	1/3404 (0.0%)	0.85	2/4606 (0.0%)
3	A9	0.47	0/3404	0.90	5/4606 (0.1%)
3	B1	0.47	0/3404	0.87	2/4606 (0.0%)
3	B3	0.46	0/3404	0.88	7/4606 (0.2%)
3	B5	0.47	1/3404 (0.0%)	0.89	4/4606 (0.1%)
3	B7	0.46	1/3404 (0.0%)	0.88	7/4606 (0.2%)
3	B9	0.43	0/3404	0.83	5/4606 (0.1%)
3	C1	0.48	2/3404 (0.1%)	0.88	3/4606 (0.1%)
3	C3	0.46	1/3404 (0.0%)	0.85	4/4606 (0.1%)
3	C5	0.49	1/3404 (0.0%)	0.88	6/4606 (0.1%)
3	C7	0.46	0/3404	0.90	6/4606 (0.1%)
3	C9	0.48	1/3404 (0.0%)	0.94	14/4606 (0.3%)
3	D1	0.51	1/3404 (0.0%)	0.94	8/4606 (0.2%)
3	D3	0.47	2/3404 (0.1%)	0.87	4/4606 (0.1%)
3	D5	0.56	1/3404 (0.0%)	1.04	16/4606 (0.3%)
3	D7	0.46	1/3404 (0.0%)	0.84	5/4606 (0.1%)
3	D9	0.48	0/3404	0.93	8/4606 (0.2%)
3	E1	0.42	0/3404	0.82	5/4606 (0.1%)
3	E3	0.51	4/3404 (0.1%)	0.90	8/4606 (0.2%)
3	E5	0.45	1/3404 (0.0%)	0.81	3/4606 (0.1%)
3	E7	0.48	1/3404 (0.0%)	0.89	6/4606 (0.1%)
3	E9	0.44	0/3404	0.88	7/4606 (0.2%)
3	F1	0.47	1/3404 (0.0%)	0.96	7/4606 (0.2%)
4	a	0.58	1/1225 (0.1%)	1.05	4/1654 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
4	b	0.56	2/1225 (0.2%)	1.00	7/1654 (0.4%)
4	c	0.70	2/1645 (0.1%)	1.28	10/2225 (0.4%)
4	d	0.54	0/1645	1.08	9/2225 (0.4%)
4	e	0.51	0/1645	1.00	3/2225 (0.1%)
4	f	0.59	4/1645 (0.2%)	0.99	8/2225 (0.4%)
4	g	0.49	0/1645	1.00	4/2225 (0.2%)
4	h	0.48	1/1645 (0.1%)	0.92	2/2225 (0.1%)
4	i	0.47	0/1645	0.92	2/2225 (0.1%)
4	j	0.46	0/1645	0.90	1/2225 (0.0%)
4	k	0.50	1/1645 (0.1%)	0.98	5/2225 (0.2%)
4	l	0.45	0/1645	0.92	4/2225 (0.2%)
4	m	0.60	3/1645 (0.2%)	1.04	12/2225 (0.5%)
4	n	0.53	0/1645	1.03	5/2225 (0.2%)
4	o	0.48	0/1645	1.01	5/2225 (0.2%)
4	p	0.54	0/1645	1.10	8/2225 (0.4%)
4	q	0.56	2/1645 (0.1%)	0.98	3/2225 (0.1%)
4	r	0.55	0/1645	1.09	10/2225 (0.4%)
4	s	0.43	0/1645	0.91	2/2225 (0.1%)
4	t	0.49	0/1645	1.04	7/2225 (0.3%)
4	u	0.47	0/1645	0.86	3/2225 (0.1%)
4	v	0.46	0/1645	0.89	0/2225
4	x	0.43	0/1645	0.91	5/2225 (0.2%)
4	y	0.41	0/1645	0.89	3/2225 (0.1%)
5	w	0.43	0/1201	0.90	5/1623 (0.3%)
All	All	0.48	66/221007 (0.0%)	0.91	453/299303 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	12	0	1
1	19	0	1
1	2	0	1
1	20	0	2
1	21	0	1
1	23	0	1
1	7	0	1
1	8	0	1
2	A0	0	1
2	A2	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	A4	0	1
2	A8	0	1
2	B4	0	1
2	B6	0	2
2	C4	0	1
2	C8	0	1
2	D2	0	2
2	D8	0	1
2	E4	0	1
2	F0	0	1
3	B3	0	1
3	B9	0	1
3	E5	0	2
3	E9	0	1
4	o	0	1
4	s	0	1
All	All	0	31

All (66) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C4	2	ARG	NE-CZ	19.02	1.57	1.33
2	C4	2	ARG	CD-NE	16.25	1.74	1.46
2	A4	254	GLU	CD-OE2	16.25	1.43	1.25
4	c	178	ARG	NE-CZ	14.78	1.52	1.33
2	F0	284	GLU	CD-OE1	12.40	1.39	1.25
2	A4	254	GLU	CG-CD	12.01	1.70	1.51
2	A8	433	GLU	CD-OE2	-11.38	1.13	1.25
2	C2	221	ARG	NE-CZ	10.41	1.46	1.33
4	m	202	ARG	NE-CZ	9.82	1.45	1.33
2	C0	221	ARG	NE-CZ	9.77	1.45	1.33
3	E3	391	ARG	NE-CZ	9.76	1.45	1.33
3	C9	53	GLU	CD-OE1	-8.90	1.15	1.25
4	c	178	ARG	CD-NE	8.83	1.61	1.46
4	m	202	ARG	CD-NE	8.34	1.60	1.46
4	f	202	ARG	CD-NE	8.31	1.60	1.46
3	E3	391	ARG	CD-NE	8.29	1.60	1.46
2	C0	221	ARG	CZ-NH1	8.12	1.43	1.33
3	F1	391	ARG	NE-CZ	8.09	1.43	1.33
3	E5	376	GLU	CD-OE2	7.84	1.34	1.25
2	A0	155	GLU	CD-OE1	7.81	1.34	1.25
4	q	97	ARG	NE-CZ	7.74	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	a	207	ALA	C-O	7.59	1.37	1.23
3	A1	69	GLU	CD-OE1	-7.41	1.17	1.25
3	C3	412	GLU	CD-OE2	7.39	1.33	1.25
2	C2	71	GLU	CD-OE1	-7.38	1.17	1.25
2	A6	163	LYS	CE-NZ	7.22	1.67	1.49
3	D1	53	GLU	CD-OE1	-7.19	1.17	1.25
4	q	97	ARG	CD-NE	7.17	1.58	1.46
3	D5	230	SER	CB-OG	7.12	1.51	1.42
4	f	202	ARG	NE-CZ	7.12	1.42	1.33
3	C1	22	GLU	CD-OE2	6.50	1.32	1.25
2	A4	2	ARG	CZ-NH2	6.46	1.41	1.33
4	m	202	ARG	CZ-NH2	6.41	1.41	1.33
2	A4	22	GLU	CD-OE2	6.35	1.32	1.25
3	C5	158	GLU	CD-OE1	-6.31	1.18	1.25
2	A2	55	GLU	CD-OE1	6.30	1.32	1.25
3	D3	123	GLU	CD-OE2	6.24	1.32	1.25
3	E7	194	GLU	CD-OE2	-6.19	1.18	1.25
2	B4	55	GLU	CD-OE1	6.14	1.32	1.25
2	C0	221	ARG	CD-NE	6.12	1.56	1.46
1	17	248	ARG	CD-NE	6.02	1.56	1.46
4	f	153	GLU	CD-OE2	5.95	1.32	1.25
3	C1	276	ARG	NE-CZ	5.80	1.40	1.33
3	D7	22	GLU	CD-OE1	5.69	1.31	1.25
1	17	248	ARG	NE-CZ	5.65	1.40	1.33
4	h	109	GLU	CD-OE2	5.60	1.31	1.25
2	D4	207	GLU	CD-OE1	5.52	1.31	1.25
2	D0	155	GLU	CD-OE1	5.44	1.31	1.25
3	B5	336	LYS	CE-NZ	5.44	1.62	1.49
3	E3	391	ARG	CG-CD	5.44	1.65	1.51
4	b	109	GLU	CD-OE2	5.38	1.31	1.25
3	B7	158	GLU	CD-OE2	-5.37	1.19	1.25
4	f	19	GLU	CD-OE2	-5.36	1.19	1.25
2	B0	55	GLU	CD-OE2	5.35	1.31	1.25
2	B4	55	GLU	CD-OE2	5.32	1.31	1.25
3	D3	53	GLU	CD-OE1	-5.27	1.19	1.25
3	E3	391	ARG	CZ-NH2	5.26	1.39	1.33
2	C6	207	GLU	CD-OE1	5.24	1.31	1.25
4	b	178	ARG	CD-NE	5.22	1.55	1.46
2	E2	207	GLU	CD-OE1	5.20	1.31	1.25
2	B0	22	GLU	CD-OE1	5.18	1.31	1.25
3	A7	384	GLN	CD-NE2	5.16	1.45	1.32
2	A2	96	LYS	CE-NZ	5.14	1.61	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	k	202	ARG	NE-CZ	5.13	1.39	1.33
2	A8	207	GLU	CD-OE1	5.05	1.31	1.25
2	A4	3	GLU	CD-OE2	-5.03	1.20	1.25

All (453) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C4	2	ARG	NE-CZ-NH1	37.15	138.88	120.30
4	c	178	ARG	NE-CZ-NH1	21.23	130.91	120.30
2	C4	2	ARG	CD-NE-CZ	20.60	152.44	123.60
3	F1	391	ARG	NE-CZ-NH1	19.42	130.01	120.30
4	c	178	ARG	CD-NE-CZ	18.04	148.85	123.60
4	m	202	ARG	NE-CZ-NH2	16.14	128.37	120.30
2	C4	2	ARG	CG-CD-NE	14.18	141.57	111.80
3	E3	391	ARG	NE-CZ-NH2	13.55	127.08	120.30
2	B2	156	ARG	NE-CZ-NH2	13.51	127.05	120.30
2	C4	2	ARG	NH1-CZ-NH2	-13.22	104.86	119.40
3	E7	77	ARG	NE-CZ-NH1	-12.52	114.04	120.30
3	E3	391	ARG	CG-CD-NE	12.48	138.00	111.80
2	D0	156	ARG	NE-CZ-NH2	12.44	126.52	120.30
4	n	202	ARG	CB-CG-CD	11.33	141.06	111.60
4	f	202	ARG	NE-CZ-NH2	11.27	125.94	120.30
2	C4	2	ARG	NE-CZ-NH2	-11.19	114.71	120.30
4	r	117	ARG	CG-CD-NE	10.82	134.51	111.80
3	D1	213	ARG	CG-CD-NE	-10.79	89.14	111.80
4	o	202	ARG	CB-CG-CD	10.76	139.57	111.60
4	h	198	ARG	CG-CD-NE	10.71	134.30	111.80
4	q	97	ARG	NE-CZ-NH2	10.56	125.58	120.30
3	A7	282	ARG	NE-CZ-NH2	10.53	125.57	120.30
4	o	202	ARG	CG-CD-NE	10.52	133.90	111.80
3	E9	320	ARG	NE-CZ-NH1	-10.45	115.08	120.30
2	A6	229	ARG	NE-CZ-NH2	-10.42	115.09	120.30
2	A0	264	ARG	NE-CZ-NH1	10.21	125.41	120.30
4	a	202	ARG	CG-CD-NE	10.07	132.95	111.80
1	22	248	ARG	NE-CZ-NH2	9.78	125.19	120.30
1	17	248	ARG	NE-CZ-NH2	9.75	125.17	120.30
4	t	146	ARG	NE-CZ-NH1	9.71	125.15	120.30
3	D1	162	ARG	NE-CZ-NH1	-9.70	115.45	120.30
2	A0	264	ARG	NE-CZ-NH2	-9.50	115.55	120.30
3	D9	380	ARG	NE-CZ-NH1	-9.47	115.56	120.30
4	d	194	ARG	NE-CZ-NH1	9.36	124.98	120.30
4	b	97	ARG	NE-CZ-NH1	9.30	124.95	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A2	214	ARG	NE-CZ-NH2	9.29	124.95	120.30
3	D9	380	ARG	NE-CZ-NH2	9.28	124.94	120.30
2	A6	214	ARG	CG-CD-NE	9.22	131.16	111.80
2	C8	2	ARG	NE-CZ-NH1	9.05	124.82	120.30
4	e	15	ARG	NE-CZ-NH2	8.97	124.79	120.30
2	D0	156	ARG	NE-CZ-NH1	-8.90	115.85	120.30
2	C8	2	ARG	NE-CZ-NH2	-8.80	115.90	120.30
2	D6	264	ARG	NE-CZ-NH1	-8.79	115.90	120.30
3	D5	391	ARG	CA-CB-CG	8.73	132.60	113.40
1	16	248	ARG	CG-CD-NE	-8.68	93.57	111.80
2	C6	282	TYR	CB-CG-CD2	-8.61	115.83	121.00
2	A6	214	ARG	NE-CZ-NH1	8.61	124.60	120.30
4	f	202	ARG	CD-NE-CZ	8.60	135.63	123.60
4	x	97	ARG	CB-CG-CD	8.59	133.94	111.60
2	A4	214	ARG	NE-CZ-NH1	-8.55	116.02	120.30
2	A6	229	ARG	NE-CZ-NH1	8.55	124.58	120.30
2	C4	84	ARG	NE-CZ-NH1	8.53	124.57	120.30
2	D4	214	ARG	NE-CZ-NH2	-8.38	116.11	120.30
3	F1	391	ARG	CD-NE-CZ	8.35	135.29	123.60
3	C5	291	GLN	CB-CG-CD	8.35	133.31	111.60
2	D0	221	ARG	CG-CD-NE	8.33	129.29	111.80
3	D1	388	MET	CB-CG-SD	8.31	137.32	112.40
2	A2	221	ARG	CG-CD-NE	8.29	129.22	111.80
3	C9	390	ARG	CG-CD-NE	8.29	129.20	111.80
3	D5	77	ARG	CG-CD-NE	8.29	129.20	111.80
2	F0	308	ARG	NE-CZ-NH1	8.26	124.43	120.30
3	F1	391	ARG	NE-CZ-NH2	-8.26	116.17	120.30
3	D5	391	ARG	NE-CZ-NH2	8.19	124.39	120.30
4	c	178	ARG	NH1-CZ-NH2	-8.18	110.41	119.40
3	D1	291	GLN	CB-CA-C	-8.17	94.06	110.40
4	c	95	TYR	CB-CG-CD2	-8.14	116.11	121.00
4	c	126	ARG	NE-CZ-NH1	-8.11	116.25	120.30
2	D2	85	HIS	CA-CB-CG	8.03	127.25	113.60
3	B3	213	ARG	CG-CD-NE	8.03	128.65	111.80
4	k	159	TYR	CB-CG-CD1	-8.02	116.19	121.00
3	D9	276	ARG	NE-CZ-NH2	7.96	124.28	120.30
2	B8	221	ARG	NE-CZ-NH2	7.94	124.27	120.30
4	y	146	ARG	NE-CZ-NH1	7.94	124.27	120.30
4	d	117	ARG	CB-CG-CD	7.89	132.12	111.60
4	t	146	ARG	NE-CZ-NH2	-7.89	116.36	120.30
3	E3	391	ARG	CD-NE-CZ	7.86	134.60	123.60
3	C1	320	ARG	CG-CD-NE	7.78	128.13	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	p	95	TYR	CB-CG-CD2	-7.75	116.35	121.00
4	d	194	ARG	CG-CD-NE	7.74	128.06	111.80
3	D5	276	ARG	CB-CG-CD	7.73	131.70	111.60
2	A8	85	HIS	CA-CB-CG	7.71	126.72	113.60
2	A0	262	TYR	CB-CG-CD2	-7.71	116.38	121.00
2	F0	308	ARG	NE-CZ-NH2	-7.70	116.45	120.30
3	E1	2	ARG	NE-CZ-NH2	-7.68	116.46	120.30
2	A0	84	ARG	NE-CZ-NH2	-7.63	116.48	120.30
2	B8	156	ARG	CG-CD-NE	-7.59	95.87	111.80
4	f	15	ARG	NE-CZ-NH2	-7.57	116.52	120.30
2	A8	214	ARG	NE-CZ-NH2	-7.51	116.55	120.30
3	C1	262	ARG	NE-CZ-NH1	7.51	124.05	120.30
4	o	194	ARG	CG-CD-NE	-7.50	96.05	111.80
3	C9	384	GLN	CB-CG-CD	7.47	131.03	111.60
3	E1	390	ARG	CB-CG-CD	7.45	130.98	111.60
2	D8	156	ARG	NE-CZ-NH2	7.45	124.02	120.30
3	D5	391	ARG	CG-CD-NE	7.44	127.42	111.80
2	B2	83	TYR	CB-CG-CD2	-7.44	116.54	121.00
4	i	7	ALA	N-CA-CB	7.43	120.50	110.10
2	C0	221	ARG	CG-CD-NE	7.43	127.40	111.80
3	C7	81	PHE	CB-CG-CD1	7.41	125.99	120.80
4	f	126	ARG	NE-CZ-NH2	-7.40	116.60	120.30
3	D5	213	ARG	NE-CZ-NH2	-7.40	116.60	120.30
2	B2	156	ARG	NE-CZ-NH1	-7.39	116.60	120.30
2	A6	214	ARG	CD-NE-CZ	7.38	133.94	123.60
4	m	202	ARG	CD-NE-CZ	7.31	133.83	123.60
2	A4	85	HIS	CA-CB-CG	7.30	126.01	113.60
2	B4	221	ARG	CG-CD-NE	7.27	127.07	111.80
4	j	117	ARG	CG-CD-NE	7.24	127.00	111.80
4	m	198	ARG	NE-CZ-NH1	7.24	123.92	120.30
4	r	194	ARG	CG-CD-NE	7.24	127.00	111.80
3	C3	388	MET	CB-CG-SD	7.23	134.09	112.40
2	D2	163	LYS	N-CA-CB	-7.22	97.61	110.60
3	D5	276	ARG	NE-CZ-NH2	-7.21	116.69	120.30
2	A2	214	ARG	NE-CZ-NH1	-7.19	116.70	120.30
2	E4	79	ARG	NE-CZ-NH1	-7.19	116.70	120.30
1	4	248	ARG	CG-CD-NE	7.18	126.88	111.80
4	r	95	TYR	CB-CG-CD2	-7.18	116.69	121.00
4	b	146	ARG	CG-CD-NE	7.17	126.85	111.80
2	D6	2	ARG	CG-CD-NE	-7.16	96.77	111.80
3	D9	380	ARG	CD-NE-CZ	7.14	133.60	123.60
2	A8	285	GLN	CB-CG-CD	7.14	130.16	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E9	77	ARG	NE-CZ-NH1	7.14	123.87	120.30
3	C9	213	ARG	NE-CZ-NH1	7.14	123.87	120.30
3	C3	391	ARG	CB-CG-CD	-7.12	93.10	111.60
2	D2	339	ARG	NE-CZ-NH2	-7.10	116.75	120.30
2	B8	156	ARG	NE-CZ-NH2	-7.10	116.75	120.30
2	D0	214	ARG	NE-CZ-NH1	7.08	123.84	120.30
3	B7	11	GLN	CB-CG-CD	7.08	130.02	111.60
3	D3	213	ARG	NE-CZ-NH1	7.07	123.84	120.30
2	A8	214	ARG	CG-CD-NE	7.05	126.61	111.80
1	5	248	ARG	CG-CD-NE	7.01	126.53	111.80
4	x	146	ARG	NE-CZ-NH1	7.01	123.81	120.30
2	C2	221	ARG	CG-CD-NE	7.00	126.51	111.80
3	A5	251	ARG	NE-CZ-NH1	6.99	123.80	120.30
4	m	202	ARG	NE-CZ-NH1	-6.96	116.82	120.30
2	D2	163	LYS	CB-CG-CD	-6.96	93.52	111.60
5	w	156	ARG	CG-CD-NE	6.96	126.41	111.80
4	q	97	ARG	CD-NE-CZ	6.95	133.33	123.60
2	C0	221	ARG	NE-CZ-NH2	6.94	123.77	120.30
4	m	202	ARG	CG-CD-NE	6.93	126.35	111.80
2	A8	285	GLN	N-CA-CB	6.92	123.05	110.60
4	a	198	ARG	CB-CG-CD	6.91	129.58	111.60
2	D0	221	ARG	NE-CZ-NH1	-6.85	116.87	120.30
4	r	15	ARG	NE-CZ-NH2	6.82	123.71	120.30
4	p	16	ARG	CG-CD-NE	6.81	126.09	111.80
3	B9	309	ARG	CG-CD-NE	-6.79	97.53	111.80
3	D7	77	ARG	NE-CZ-NH2	-6.77	116.91	120.30
4	d	149	ARG	NE-CZ-NH1	6.77	123.69	120.30
2	B0	85	HIS	CB-CA-C	-6.77	96.86	110.40
3	F1	320	ARG	CG-CD-NE	6.74	125.95	111.80
2	A0	2	ARG	CG-CD-NE	6.72	125.91	111.80
4	n	202	ARG	CG-CD-NE	6.72	125.91	111.80
4	b	97	ARG	NE-CZ-NH2	-6.71	116.95	120.30
2	B2	84	ARG	NE-CZ-NH2	-6.70	116.95	120.30
5	w	156	ARG	CB-CG-CD	-6.70	94.17	111.60
3	C7	320	ARG	CG-CD-NE	6.67	125.82	111.80
2	D4	96	LYS	CB-CG-CD	6.67	128.94	111.60
2	B2	84	ARG	NE-CZ-NH1	6.66	123.63	120.30
1	11	246	CYS	CA-CB-SG	6.66	125.99	114.00
3	B9	11	GLN	CB-CG-CD	6.64	128.88	111.60
2	D4	390	ARG	NE-CZ-NH2	-6.64	116.98	120.30
4	p	95	TYR	CB-CA-C	6.64	123.69	110.40
4	b	149	ARG	NE-CZ-NH1	6.60	123.60	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E3	320	ARG	CG-CD-NE	6.60	125.66	111.80
4	l	178	ARG	CG-CD-NE	6.59	125.65	111.80
4	r	117	ARG	CD-NE-CZ	6.58	132.81	123.60
4	m	194	ARG	CG-CD-NE	6.57	125.60	111.80
2	B8	221	ARG	NE-CZ-NH1	-6.57	117.02	120.30
1	17	248	ARG	CG-CD-NE	6.57	125.59	111.80
2	A6	96	LYS	CB-CG-CD	6.56	128.67	111.60
4	r	97	ARG	CG-CD-NE	6.56	125.58	111.80
2	B6	339	ARG	CG-CD-NE	6.55	125.56	111.80
4	f	202	ARG	NE-CZ-NH1	-6.52	117.04	120.30
1	17	248	ARG	CB-CG-CD	6.52	128.56	111.60
2	E4	79	ARG	NE-CZ-NH2	6.52	123.56	120.30
2	D2	162	GLY	C-N-CA	6.51	137.97	121.70
2	D6	264	ARG	NE-CZ-NH2	6.50	123.55	120.30
3	C9	380	ARG	NE-CZ-NH2	-6.47	117.06	120.30
3	C9	291	GLN	CB-CG-CD	6.45	128.36	111.60
2	C4	343	PHE	CB-CG-CD1	-6.42	116.30	120.80
4	r	198	ARG	CG-CD-NE	6.42	125.29	111.80
2	E2	156	ARG	CB-CG-CD	6.38	128.19	111.60
3	B3	391	ARG	CB-CG-CD	6.38	128.19	111.60
3	C9	391	ARG	CG-CD-NE	6.38	125.19	111.80
3	B1	280	GLN	CB-CG-CD	6.37	128.17	111.60
2	B0	64	ARG	NE-CZ-NH1	-6.37	117.12	120.30
2	C0	221	ARG	CD-NE-CZ	6.33	132.46	123.60
2	D8	373	ARG	NE-CZ-NH2	-6.33	117.14	120.30
4	o	95	TYR	CB-CG-CD2	-6.33	117.20	121.00
3	B3	46	ARG	NE-CZ-NH1	-6.32	117.14	120.30
3	C5	174	LYS	CB-CG-CD	6.32	128.04	111.60
3	D5	177	ASP	CB-CA-C	6.32	123.05	110.40
1	9	248	ARG	CD-NE-CZ	6.31	132.43	123.60
2	C6	320	ARG	NE-CZ-NH2	-6.31	117.15	120.30
4	u	117	ARG	CG-CD-NE	6.30	125.03	111.80
3	A5	318	ARG	NE-CZ-NH1	6.29	123.45	120.30
2	B8	121	ARG	NE-CZ-NH1	6.28	123.44	120.30
3	E1	320	ARG	CG-CD-NE	6.23	124.88	111.80
4	p	97	ARG	CB-CG-CD	6.23	127.79	111.60
3	D1	291	GLN	CA-CB-CG	6.22	127.08	113.40
2	D8	80	THR	CA-CB-CG2	6.20	121.07	112.40
2	B0	390	ARG	CG-CD-NE	6.19	124.81	111.80
4	b	178	ARG	CD-NE-CZ	6.18	132.25	123.60
4	t	178	ARG	CG-CD-NE	6.17	124.76	111.80
2	F0	369	ALA	CB-CA-C	-6.17	100.85	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E4	399	TYR	CB-CG-CD1	-6.16	117.31	121.00
4	c	149	ARG	NE-CZ-NH1	6.15	123.38	120.30
4	e	95	TYR	CB-CA-C	6.15	122.69	110.40
3	C5	77	ARG	CG-CD-NE	6.15	124.71	111.80
2	A2	402	ARG	NE-CZ-NH2	6.14	123.37	120.30
2	E0	156	ARG	CB-CG-CD	6.13	127.54	111.60
3	A3	391	ARG	CB-CG-CD	6.12	127.52	111.60
3	B5	159	TYR	CB-CG-CD2	-6.12	117.33	121.00
2	C8	85	HIS	CA-CB-CG	6.12	124.00	113.60
4	i	106	GLN	CB-CA-C	-6.10	98.19	110.40
2	D0	85	HIS	CA-CB-CG	6.10	123.97	113.60
3	C5	15	GLN	CB-CG-CD	6.09	127.44	111.60
2	C6	312	TYR	CB-CG-CD1	6.06	124.63	121.00
2	D4	373	ARG	CG-CD-NE	6.05	124.51	111.80
4	f	84	LYS	CB-CG-CD	6.05	127.34	111.60
3	C7	397	TRP	CB-CG-CD1	6.05	134.87	127.00
4	d	15	ARG	NE-CZ-NH2	6.05	123.33	120.30
3	D5	147	MET	CG-SD-CE	6.05	109.88	100.20
3	D5	380	ARG	NE-CZ-NH2	6.04	123.32	120.30
4	p	21	ARG	NE-CZ-NH1	-6.03	117.29	120.30
3	B7	122	LYS	CB-CG-CD	6.02	127.26	111.60
3	E7	394	PHE	CB-CA-C	6.02	122.44	110.40
4	b	97	ARG	CG-CD-NE	6.02	124.44	111.80
4	k	202	ARG	NE-CZ-NH2	6.01	123.31	120.30
2	A0	96	LYS	CB-CG-CD	6.01	127.22	111.60
4	r	119	ARG	CG-CD-NE	6.01	124.42	111.80
2	D8	214	ARG	CB-CG-CD	-6.00	96.01	111.60
2	C8	33	ASP	CB-CA-C	6.00	122.39	110.40
4	n	91	PHE	CB-CG-CD2	-5.99	116.61	120.80
3	E7	394	PHE	CB-CG-CD1	5.99	125.00	120.80
2	A2	79	ARG	NE-CZ-NH1	-5.99	117.31	120.30
3	E1	320	ARG	CB-CG-CD	5.97	127.12	111.60
3	E9	276	ARG	CG-CD-NE	5.96	124.31	111.80
2	D6	156	ARG	CG-CD-NE	-5.95	99.30	111.80
3	D1	391	ARG	CB-CG-CD	5.95	127.07	111.60
4	p	146	ARG	NE-CZ-NH1	5.95	123.27	120.30
3	C9	213	ARG	CG-CD-NE	5.94	124.28	111.80
4	m	146	ARG	CG-CD-NE	5.93	124.26	111.80
2	C4	401	LYS	CB-CA-C	5.92	122.25	110.40
3	D9	276	ARG	CD-NE-CZ	5.92	131.90	123.60
5	w	25	ARG	CB-CG-CD	5.92	127.00	111.60
2	D4	79	ARG	NE-CZ-NH2	-5.89	117.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D2	339	ARG	N-CA-CB	5.88	121.19	110.60
4	e	15	ARG	NE-CZ-NH1	-5.88	117.36	120.30
4	l	97	ARG	CB-CG-CD	5.88	126.88	111.60
3	D9	391	ARG	CG-CD-NE	5.87	124.13	111.80
3	A1	318	ARG	NE-CZ-NH1	5.87	123.23	120.30
4	g	24	MET	CA-CB-CG	-5.86	103.34	113.30
4	m	27	GLN	CB-CG-CD	5.85	126.81	111.60
4	x	198	ARG	NE-CZ-NH1	5.85	123.23	120.30
2	A8	214	ARG	NE-CZ-NH1	5.84	123.22	120.30
3	C9	245	GLN	CB-CG-CD	5.84	126.78	111.60
4	g	16	ARG	CG-CD-NE	5.84	124.06	111.80
2	B2	322	ASP	CB-CG-OD2	-5.83	113.05	118.30
4	x	101	GLU	CB-CG-CD	-5.83	98.46	114.20
3	C9	391	ARG	CB-CG-CD	5.83	126.76	111.60
3	D7	212	PHE	CB-CG-CD1	-5.83	116.72	120.80
3	A1	77	ARG	NE-CZ-NH1	5.82	123.21	120.30
3	A5	125	GLU	CB-CG-CD	5.82	129.90	114.20
2	D6	221	ARG	CG-CD-NE	5.82	124.01	111.80
2	D4	96	LYS	N-CA-CB	5.81	121.06	110.60
3	B3	227	HIS	CA-CB-CG	5.81	123.48	113.60
3	D5	77	ARG	NE-CZ-NH1	5.80	123.20	120.30
3	E3	380	ARG	CB-CG-CD	5.78	126.63	111.60
3	D5	56	GLY	C-N-CA	5.78	134.44	122.30
3	B7	46	ARG	NE-CZ-NH2	-5.75	117.42	120.30
4	o	164	ARG	NE-CZ-NH2	-5.74	117.43	120.30
4	y	146	ARG	NE-CZ-NH2	-5.74	117.43	120.30
3	E9	280	GLN	CB-CA-C	5.74	121.87	110.40
1	22	248	ARG	CB-CG-CD	5.73	126.51	111.60
2	A4	286	LEU	N-CA-CB	-5.73	98.93	110.40
3	E9	77	ARG	NE-CZ-NH2	-5.73	117.43	120.30
2	C2	2	ARG	NE-CZ-NH1	5.73	123.17	120.30
2	C4	84	ARG	NE-CZ-NH2	-5.72	117.44	120.30
3	C9	320	ARG	NE-CZ-NH1	5.72	123.16	120.30
3	A7	282	ARG	CD-NE-CZ	5.72	131.60	123.60
4	n	202	ARG	NE-CZ-NH2	5.70	123.15	120.30
3	C9	291	GLN	CB-CA-C	5.70	121.79	110.40
4	a	146	ARG	NE-CZ-NH1	5.69	123.14	120.30
2	C2	432	TYR	CB-CG-CD1	-5.69	117.59	121.00
3	B9	15	GLN	CB-CG-CD	5.68	126.37	111.60
2	B0	83	TYR	CB-CG-CD1	5.67	124.40	121.00
3	A1	309	ARG	CG-CD-NE	-5.66	99.91	111.80
2	B0	336	LYS	CB-CG-CD	5.66	126.31	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	d	91	PHE	CB-CG-CD1	-5.65	116.84	120.80
3	C9	86	ARG	CG-CD-NE	-5.64	99.95	111.80
3	B7	320	ARG	CB-CG-CD	5.64	126.25	111.60
2	A6	390	ARG	CG-CD-NE	5.63	123.63	111.80
4	a	164	ARG	CG-CD-NE	5.62	123.60	111.80
3	B1	129	CYS	CB-CA-C	5.61	121.62	110.40
1	17	248	ARG	CD-NE-CZ	5.61	131.45	123.60
3	A9	390	ARG	CG-CD-NE	5.61	123.57	111.80
4	x	126	ARG	NE-CZ-NH1	-5.60	117.50	120.30
2	E4	221	ARG	CG-CD-NE	5.58	123.53	111.80
2	B2	311	LYS	CB-CG-CD	5.58	126.11	111.60
3	D7	391	ARG	CG-CD-NE	-5.58	100.08	111.80
4	q	198	ARG	CG-CD-NE	5.58	123.51	111.80
3	E3	156	ARG	NE-CZ-NH2	-5.57	117.52	120.30
3	D3	222	TYR	CB-CG-CD2	5.57	124.34	121.00
2	D2	343	PHE	CB-CG-CD2	-5.56	116.91	120.80
4	m	183	LEU	CB-CG-CD1	5.56	120.45	111.00
4	b	97	ARG	CB-CG-CD	5.55	126.04	111.60
2	B0	221	ARG	CG-CD-NE	-5.55	100.15	111.80
3	B5	162	ARG	NE-CZ-NH2	-5.55	117.53	120.30
4	u	117	ARG	NE-CZ-NH2	5.54	123.07	120.30
3	B3	77	ARG	NE-CZ-NH1	5.53	123.07	120.30
3	E3	320	ARG	CB-CA-C	5.52	121.43	110.40
4	k	97	ARG	CB-CG-CD	5.51	125.93	111.60
2	A2	214	ARG	CG-CD-NE	-5.51	100.22	111.80
2	A4	221	ARG	NE-CZ-NH1	5.50	123.05	120.30
3	B5	162	ARG	NE-CZ-NH1	5.50	123.05	120.30
1	5	248	ARG	CB-CG-CD	5.50	125.89	111.60
3	D5	388	MET	CG-SD-CE	-5.49	91.42	100.20
4	c	198	ARG	CB-CG-CD	5.48	125.86	111.60
4	s	15	ARG	NE-CZ-NH2	5.47	123.04	120.30
4	t	15	ARG	NE-CZ-NH2	5.47	123.04	120.30
3	C7	397	TRP	CB-CG-CD2	-5.47	119.49	126.60
3	A9	390	ARG	NE-CZ-NH2	-5.45	117.57	120.30
5	w	25	ARG	NE-CZ-NH1	5.45	123.03	120.30
3	B9	159	TYR	CB-CG-CD2	-5.45	117.73	121.00
2	D0	36	MET	CB-CG-SD	5.44	128.72	112.40
4	u	65	GLN	CB-CA-C	-5.44	99.52	110.40
2	F0	285	GLN	CB-CA-C	5.44	121.28	110.40
3	D5	213	ARG	CG-CD-NE	5.43	123.21	111.80
3	D5	72	THR	CA-CB-CG2	5.42	119.99	112.40
2	C8	390	ARG	CG-CD-NE	5.42	123.19	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A5	227	HIS	CA-CB-CG	5.42	122.81	113.60
3	D7	380	ARG	CB-CG-CD	5.41	125.67	111.60
5	w	104	LYS	CB-CG-CD	5.41	125.67	111.60
3	B3	122	LYS	CB-CG-CD	5.40	125.65	111.60
3	D1	380	ARG	NE-CZ-NH1	-5.40	117.60	120.30
2	E0	206	ASN	CB-CA-C	5.40	121.21	110.40
2	F0	227	LEU	CB-CG-CD1	5.40	120.19	111.00
3	A9	213	ARG	NE-CZ-NH1	-5.39	117.61	120.30
2	B8	123	ARG	CB-CG-CD	5.39	125.60	111.60
2	A0	121	ARG	CG-CD-NE	5.37	123.08	111.80
2	C0	221	ARG	NE-CZ-NH1	-5.36	117.62	120.30
1	17	248	ARG	NE-CZ-NH1	-5.35	117.62	120.30
3	A9	174	LYS	CG-CD-CE	5.35	127.95	111.90
2	C6	112	LYS	CB-CG-CD	5.35	125.50	111.60
3	C7	397	TRP	CD1-CG-CD2	-5.35	102.02	106.30
2	E6	77	GLU	CB-CA-C	5.34	121.09	110.40
4	p	95	TYR	N-CA-CB	-5.33	101.00	110.60
4	m	194	ARG	CD-NE-CZ	5.33	131.06	123.60
4	g	97	ARG	CG-CD-NE	-5.33	100.61	111.80
3	C7	251	ARG	NE-CZ-NH2	-5.33	117.64	120.30
1	14	248	ARG	CG-CD-NE	5.33	122.98	111.80
3	E5	58	ARG	NE-CZ-NH2	-5.33	117.64	120.30
4	t	117	ARG	CG-CD-NE	5.31	122.95	111.80
2	B0	312	TYR	CB-CG-CD2	-5.30	117.82	121.00
3	D1	213	ARG	NE-CZ-NH2	5.30	122.95	120.30
4	f	99	MET	CB-CG-SD	-5.29	96.52	112.40
4	n	97	ARG	CG-CD-NE	5.29	122.90	111.80
2	B0	214	ARG	CG-CD-NE	-5.29	100.70	111.80
4	y	126	ARG	NE-CZ-NH1	-5.29	117.66	120.30
2	D0	84	ARG	CG-CD-NE	5.28	122.89	111.80
2	B4	243	ARG	NE-CZ-NH1	-5.28	117.66	120.30
3	D3	213	ARG	NE-CZ-NH2	-5.28	117.66	120.30
2	A4	254	GLU	OE1-CD-OE2	-5.27	116.97	123.30
3	A5	276	ARG	CB-CG-CD	5.27	125.31	111.60
3	A9	251	ARG	CG-CD-NE	5.27	122.87	111.80
3	C3	251	ARG	CG-CD-NE	-5.27	100.73	111.80
2	D8	373	ARG	NE-CZ-NH1	5.27	122.94	120.30
4	t	97	ARG	CG-CD-NE	-5.27	100.73	111.80
2	B6	49	PHE	N-CA-CB	5.27	120.08	110.60
2	D2	370	LYS	CB-CG-CD	5.27	125.30	111.60
3	E7	291	GLN	CB-CG-CD	5.26	125.28	111.60
2	A6	156	ARG	CB-CG-CD	5.25	125.26	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	f	16	ARG	CG-CD-NE	5.25	122.82	111.80
4	p	146	ARG	CD-NE-CZ	5.25	130.94	123.60
2	D4	85	HIS	CA-CB-CG	5.24	122.51	113.60
2	C6	372	MET	CB-CG-SD	5.23	128.10	112.40
4	d	178	ARG	NE-CZ-NH1	5.23	122.92	120.30
4	g	24	MET	CG-SD-CE	5.23	108.57	100.20
3	D9	276	ARG	CB-CG-CD	5.22	125.18	111.60
3	F1	318	ARG	NE-CZ-NH1	5.22	122.91	120.30
3	E3	276	ARG	CB-CG-CD	5.22	125.17	111.60
4	k	159	TYR	CB-CG-CD2	5.22	124.13	121.00
2	B4	2	ARG	NE-CZ-NH2	-5.21	117.69	120.30
2	C0	405	VAL	CA-CB-CG2	-5.21	103.08	110.90
4	d	161	TYR	CB-CG-CD1	5.21	124.13	121.00
2	C6	36	MET	CA-CB-CG	5.21	122.16	113.30
3	E7	183	TYR	CZ-CE2-CD2	-5.21	115.11	119.80
4	c	90	PRO	N-CD-CG	-5.20	95.40	103.20
4	c	95	TYR	CB-CG-CD1	5.20	124.12	121.00
3	B3	46	ARG	CD-NE-CZ	5.19	130.87	123.60
3	C1	318	ARG	NE-CZ-NH1	5.19	122.89	120.30
4	s	126	ARG	NE-CZ-NH1	5.18	122.89	120.30
2	B6	161	TYR	CB-CG-CD2	-5.18	117.89	121.00
3	B9	86	ARG	CG-CD-NE	5.18	122.67	111.80
3	C9	162	ARG	NE-CZ-NH1	-5.18	117.71	120.30
3	E5	122	LYS	CB-CG-CD	5.17	125.05	111.60
4	r	197	LEU	CB-CG-CD2	5.17	119.79	111.00
2	D0	214	ARG	NE-CZ-NH2	-5.17	117.72	120.30
1	22	248	ARG	NE-CZ-NH1	-5.16	117.72	120.30
3	E5	262	ARG	NE-CZ-NH1	5.16	122.88	120.30
3	C3	306	ARG	NE-CZ-NH2	-5.15	117.72	120.30
3	B7	422	TYR	CB-CG-CD1	5.15	124.09	121.00
2	C6	30	ILE	C-N-CA	5.14	134.55	121.70
2	C8	84	ARG	NE-CZ-NH1	5.14	122.87	120.30
2	D6	123	ARG	CG-CD-NE	5.14	122.59	111.80
2	B2	214	ARG	NE-CZ-NH1	5.14	122.87	120.30
4	t	153	GLU	CB-CG-CD	5.14	128.07	114.20
2	A4	121	ARG	NE-CZ-NH2	-5.13	117.74	120.30
3	C5	11	GLN	N-CA-CB	-5.13	101.37	110.60
3	D7	77	ARG	CD-NE-CZ	5.11	130.75	123.60
3	F1	164	MET	CG-SD-CE	5.11	108.38	100.20
3	E1	156	ARG	NE-CZ-NH1	-5.11	117.75	120.30
3	E7	394	PHE	CA-CB-CG	-5.11	101.65	113.90
4	c	198	ARG	CB-CA-C	5.11	120.61	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B0	327	ASP	CB-CG-OD1	-5.10	113.71	118.30
2	B4	214	ARG	NE-CZ-NH1	5.09	122.85	120.30
2	C6	343	PHE	CB-CG-CD2	-5.09	117.23	120.80
2	C8	84	ARG	CG-CD-NE	5.09	122.50	111.80
2	A0	156	ARG	CG-CD-NE	-5.09	101.10	111.80
2	A4	262	TYR	CB-CG-CD2	-5.09	117.94	121.00
2	B8	214	ARG	CD-NE-CZ	5.09	130.73	123.60
2	C8	420	GLU	CB-CG-CD	5.09	127.94	114.20
2	B0	79	ARG	NE-CZ-NH1	5.08	122.84	120.30
2	B4	214	ARG	NE-CZ-NH2	-5.08	117.76	120.30
3	F1	391	ARG	NH1-CZ-NH2	-5.08	113.81	119.40
2	B2	58	ALA	CB-CA-C	5.08	117.72	110.10
4	m	202	ARG	CB-CG-CD	5.08	124.81	111.60
2	B0	312	TYR	CB-CG-CD1	5.08	124.05	121.00
4	l	15	ARG	NE-CZ-NH2	5.08	122.84	120.30
2	C6	156	ARG	CG-CD-NE	-5.08	101.13	111.80
4	l	146	ARG	NE-CZ-NH1	5.07	122.83	120.30
3	B5	318	ARG	NE-CZ-NH2	5.06	122.83	120.30
3	C9	390	ARG	NE-CZ-NH2	5.06	122.83	120.30
4	m	119	ARG	NE-CZ-NH1	5.06	122.83	120.30
3	D3	366	THR	CA-CB-CG2	5.04	119.46	112.40
4	d	117	ARG	CD-NE-CZ	5.04	130.66	123.60
3	B7	426	GLN	CB-CA-C	5.04	120.48	110.40
3	B7	410	GLU	CB-CA-C	-5.04	100.32	110.40
2	C4	84	ARG	CD-NE-CZ	5.04	130.66	123.60
2	A0	262	TYR	CB-CG-CD1	5.03	124.02	121.00
3	E9	282	ARG	NE-CZ-NH2	5.03	122.82	120.30
4	k	202	ARG	CD-NE-CZ	5.03	130.64	123.60
2	D6	393	HIS	CB-CA-C	5.03	120.46	110.40
2	C8	393	HIS	CA-CB-CG	5.03	122.14	113.60
3	E9	281	TYR	CD1-CE1-CZ	5.02	124.32	119.80
4	h	178	ARG	CG-CD-NE	5.02	122.34	111.80
2	D6	2	ARG	NE-CZ-NH1	-5.02	117.79	120.30
1	9	248	ARG	NE-CZ-NH1	5.02	122.81	120.30
3	D5	19	LYS	CB-CA-C	-5.02	100.37	110.40
2	E0	96	LYS	CG-CD-CE	5.02	126.95	111.90
3	C5	251	ARG	CG-CD-NE	5.01	122.33	111.80
3	D9	251	ARG	CB-CG-CD	5.01	124.63	111.60
3	A5	209	ASP	CB-CG-OD2	5.00	122.80	118.30
4	r	91	PHE	CB-CA-C	-5.00	100.39	110.40

There are no chirality outliers.

All (31) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	12	255	PRO	Peptide
1	19	257	PRO	Peptide
1	2	239	LEU	Peptide
1	20	238	THR	Peptide
1	20	239	LEU	Peptide
1	21	239	LEU	Peptide
1	23	255	PRO	Peptide
1	7	237	PRO	Peptide
1	8	240	PRO	Peptide
2	A0	163	LYS	Peptide
2	A2	284	GLU	Peptide
2	A2	401	LYS	Peptide
2	A4	401	LYS	Peptide
2	A8	284	GLU	Peptide
3	B3	43	GLN	Peptide
2	B4	284	GLU	Peptide
2	B6	284	GLU	Peptide
2	B6	338	LYS	Peptide
3	B9	200	GLN	Peptide
2	C4	401	LYS	Peptide
2	C8	284	GLU	Peptide
2	D2	163	LYS	Peptide
2	D2	284	GLU	Peptide
2	D8	163	LYS	Peptide
2	E4	163	LYS	Peptide
3	E5	321	MET	Peptide
3	E5	322	SER	Peptide
3	E9	354	CYS	Peptide
2	F0	162	GLY	Peptide
4	o	91	PHE	Sidechain
4	s	35	ASN	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	0	174	0	171	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	174	0	171	6	0
1	10	174	0	171	14	0
1	11	174	0	171	6	0
1	12	174	0	171	4	0
1	13	174	0	171	7	0
1	14	174	0	171	0	0
1	15	174	0	171	9	0
1	16	174	0	171	9	0
1	17	174	0	171	4	0
1	18	174	0	171	29	0
1	19	174	0	171	28	0
1	2	174	0	171	7	0
1	20	174	0	171	8	0
1	21	174	0	171	23	0
1	22	160	0	156	8	0
1	23	160	0	156	10	0
1	3	174	0	171	5	0
1	4	174	0	171	7	0
1	5	174	0	171	3	0
1	6	174	0	171	13	0
1	7	174	0	171	7	0
1	8	174	0	171	10	0
1	9	174	0	171	6	0
2	A0	3325	0	3252	76	0
2	A2	3325	0	3252	87	0
2	A4	3325	0	3252	56	0
2	A6	3325	0	3252	79	0
2	A8	3325	0	3252	76	0
2	B0	3325	0	3252	91	0
2	B2	3325	0	3252	52	0
2	B4	3325	0	3252	80	0
2	B6	3325	0	3252	65	0
2	B8	3325	0	3252	72	0
2	C0	3325	0	3252	69	0
2	C2	3325	0	3252	66	0
2	C4	3325	0	3252	82	0
2	C6	3325	0	3252	99	0
2	C8	3325	0	3252	56	0
2	D0	3325	0	3252	71	0
2	D2	3325	0	3252	60	0
2	D4	3325	0	3252	91	0
2	D6	3325	0	3252	55	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D8	3325	0	3252	61	0
2	E0	3325	0	3252	92	0
2	E2	3325	0	3252	62	0
2	E4	3325	0	3252	147	0
2	E6	3325	0	3252	93	0
2	E8	3325	0	3252	70	0
2	F0	3325	0	3252	104	0
3	A1	3331	0	3207	84	0
3	A3	3331	0	3209	66	0
3	A5	3331	0	3207	66	0
3	A7	3331	0	3207	55	0
3	A9	3331	0	3207	75	0
3	B1	3331	0	3209	89	0
3	B3	3331	0	3207	56	0
3	B5	3331	0	3207	71	0
3	B7	3331	0	3209	73	0
3	B9	3331	0	3209	56	0
3	C1	3331	0	3209	83	0
3	C3	3331	0	3209	76	0
3	C5	3331	0	3209	75	0
3	C7	3331	0	3209	64	0
3	C9	3331	0	3209	82	0
3	D1	3331	0	3209	67	0
3	D3	3331	0	3207	90	0
3	D5	3331	0	3207	81	0
3	D7	3331	0	3207	72	0
3	D9	3331	0	3207	65	0
3	E1	3331	0	3207	93	0
3	E3	3331	0	3209	51	0
3	E5	3331	0	3207	154	0
3	E7	3331	0	3207	70	0
3	E9	3331	0	3207	64	0
3	F1	3331	0	3207	67	0
4	a	1198	0	1194	0	0
4	b	1198	0	1194	0	0
4	c	1608	0	1590	0	0
4	d	1608	0	1590	0	0
4	e	1608	0	1590	0	0
4	f	1608	0	1590	0	0
4	g	1608	0	1590	0	0
4	h	1608	0	1590	0	0
4	i	1608	0	1590	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	j	1608	0	1590	0	0
4	k	1608	0	1590	0	0
4	l	1608	0	1590	0	0
4	m	1608	0	1590	0	0
4	n	1608	0	1590	0	0
4	o	1608	0	1590	0	0
4	p	1608	0	1590	0	0
4	q	1608	0	1590	0	0
4	r	1608	0	1590	0	0
4	s	1608	0	1590	0	0
4	t	1608	0	1590	0	0
4	u	1608	0	1590	0	0
4	v	1608	0	1590	0	0
4	x	1608	0	1590	0	0
4	y	1608	0	1590	0	0
5	w	1172	0	1171	0	0
All	All	216148	0	210569	3331	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 10.

All (3331) 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)
2:C4:2:ARG:NE	2:C4:2:ARG:CD	1.74	1.46
1:13:247:TYR:OH	2:D4:81:GLY:HA3	1.22	1.27
3:A1:219:THR:CG2	2:A2:324:VAL:HG21	1.69	1.21
1:15:247:TYR:OH	2:D8:81:GLY:CA	1.88	1.20
1:15:247:TYR:OH	2:D8:81:GLY:HA3	1.09	1.19
2:E4:403:ALA:HA	3:E5:260:PHE:CE1	1.77	1.19
2:E4:222:PRO:HG2	3:E5:324:LYS:HB2	1.21	1.18
2:E4:222:PRO:HG2	3:E5:324:LYS:CB	1.72	1.17
2:E4:100:ALA:CB	3:E5:251:ARG:HG2	1.75	1.16
2:B0:222:PRO:HD2	3:B1:324:LYS:HB3	1.28	1.16
2:B0:73:THR:HB	3:B1:2:ARG:NH2	1.58	1.15
2:B0:221:ARG:HB2	3:B1:322:SER:CB	1.79	1.12
1:19:243:ALA:HB3	3:E7:356:ILE:HD12	1.32	1.11
3:A1:219:THR:HG23	2:A2:324:VAL:CG2	1.79	1.10
1:13:247:TYR:OH	2:D4:81:GLY:CA	1.98	1.10
2:C4:404:PHE:HE1	3:C5:255:VAL:O	1.32	1.08
2:A2:214:ARG:HD2	3:A3:324:LYS:NZ	1.66	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:19:243:ALA:HB1	3:E7:356:ILE:HD13	1.37	1.06
3:E9:69:GLU:OE1	2:F0:2:ARG:NH1	1.87	1.06
2:E0:176:GLN:HB3	3:E1:331:LEU:HD13	1.35	1.06
2:B0:394:LYS:HD3	3:B1:346:PRO:HG3	1.34	1.05
2:E0:223:THR:OG1	3:E1:245:GLN:NE2	1.89	1.05
2:B0:221:ARG:HB2	3:B1:322:SER:OG	1.57	1.05
1:0:247:TYR:OH	2:A4:81:GLY:HA2	1.55	1.04
2:B0:222:PRO:HD2	3:B1:324:LYS:CB	1.87	1.04
3:C5:219:THR:HB	2:C6:324:VAL:HG11	1.39	1.04
1:21:257:PRO:HD2	2:F0:29:GLY:HA2	1.38	1.03
2:C6:407:TRP:CZ3	3:C7:255:VAL:HA	1.93	1.03
2:B0:223:THR:HB	3:B1:245:GLN:OE1	1.58	1.03
1:4:247:TYR:CZ	2:B2:81:GLY:HA3	1.93	1.02
1:21:256:LEU:HD13	2:F0:29:GLY:O	1.60	1.02
1:23:257:PRO:HG3	2:C4:26:LEU:HD12	1.42	1.01
1:0:247:TYR:OH	2:A4:81:GLY:CA	2.08	1.01
1:18:241:PHE:HE1	3:E5:356:ILE:HG23	1.26	1.00
3:B7:281:TYR:HE2	3:C1:87:PRO:HD3	1.26	1.00
2:E4:181:VAL:CG1	3:E5:256:ASN:O	2.10	0.99
3:E5:175:VAL:HG11	2:E6:332:VAL:HG13	1.38	0.99
2:E4:222:PRO:CG	3:E5:324:LYS:CB	2.41	0.99
1:4:247:TYR:CE1	2:B2:81:GLY:HA3	1.96	0.99
2:A2:221:ARG:HB2	3:A3:322:SER:OG	1.60	0.99
2:E0:176:GLN:HB3	3:E1:331:LEU:CD1	1.93	0.99
2:D4:214:ARG:HB2	3:D5:324:LYS:NZ	1.77	0.98
2:A2:214:ARG:HD2	3:A3:324:LYS:HZ2	1.28	0.98
3:B5:283:ALA:HA	3:B9:55:THR:HB	1.46	0.98
2:C2:73:THR:OG1	3:C3:46:ARG:NH1	1.97	0.98
2:C4:404:PHE:CE1	3:C5:255:VAL:O	2.15	0.97
2:B0:73:THR:CB	3:B1:2:ARG:NH2	2.27	0.97
2:E4:403:ALA:HA	3:E5:260:PHE:HE1	1.12	0.97
3:C3:283:ALA:HB2	3:C7:54:ALA:HA	1.47	0.97
2:E4:101:ASN:HB2	3:E5:255:VAL:HG11	1.43	0.96
3:C9:283:ALA:HB2	3:D3:54:ALA:HA	1.48	0.96
2:C6:168:ASN:HD21	2:C6:194:LEU:HD11	1.30	0.96
2:D0:283:HIS:CD2	2:D4:60:LYS:NZ	2.34	0.96
2:D0:283:HIS:CD2	2:D4:60:LYS:HZ1	1.82	0.96
1:19:243:ALA:CB	3:E7:356:ILE:CD1	2.44	0.95
3:B5:282:ARG:O	3:B9:55:THR:HG22	1.66	0.95
2:D4:96:LYS:HD2	3:D5:1:MET:HA	1.49	0.95
3:C9:11:GLN:HE22	2:D0:248:LEU:HD12	1.30	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F1:267:LEU:HD21	3:F1:374:ILE:HD11	1.48	0.95
1:19:243:ALA:HB3	3:E7:356:ILE:CD1	1.97	0.93
2:E4:222:PRO:CG	3:E5:324:LYS:HB3	1.98	0.93
3:B7:281:TYR:CE2	3:C1:87:PRO:HD3	2.02	0.93
2:E2:283:HIS:CD2	2:E6:60:LYS:HZ1	1.86	0.93
2:C6:407:TRP:HZ3	3:C7:255:VAL:HA	1.26	0.93
2:A6:222:PRO:HD2	3:A7:324:LYS:HB2	1.48	0.92
3:C9:11:GLN:HE22	2:D0:248:LEU:CD1	1.82	0.92
2:D6:176:GLN:O	3:D7:347:ASN:ND2	2.03	0.92
1:19:243:ALA:CB	3:E7:356:ILE:HD13	1.99	0.92
1:18:241:PHE:HE1	3:E5:356:ILE:CG2	1.83	0.92
3:A9:200:GLN:HB3	3:A9:268:ILE:HD11	1.51	0.92
1:4:247:TYR:OH	2:B2:81:GLY:HA3	1.68	0.92
3:E5:274:THR:HG21	3:E5:282:ARG:HD2	1.52	0.91
2:B2:119:LEU:HD13	2:B2:156:ARG:HD2	1.53	0.91
1:19:257:PRO:HD2	2:E6:26:LEU:O	1.70	0.91
1:18:248:ARG:HH12	3:E5:42:LEU:HD21	1.37	0.90
2:E4:214:ARG:HG3	3:E5:324:LYS:HZ2	1.33	0.90
2:E4:403:ALA:CA	3:E5:260:PHE:HE1	1.83	0.90
1:21:256:LEU:HD11	2:F0:31:GLN:CG	2.02	0.90
3:A7:282:ARG:O	3:B1:55:THR:HG21	1.70	0.90
1:15:247:TYR:HH	2:D8:81:GLY:CA	1.76	0.89
1:18:241:PHE:CE1	3:E5:356:ILE:HG23	2.06	0.89
2:A8:262:TYR:HB3	2:A8:263:PRO:HD2	1.55	0.89
2:D4:214:ARG:HB2	3:D5:324:LYS:HZ3	1.35	0.89
1:23:244:GLN:O	3:C5:320:ARG:NH2	2.06	0.89
1:16:246:CYS:SG	3:E1:320:ARG:NH2	2.45	0.89
2:D0:283:HIS:HD2	2:D4:60:LYS:NZ	1.69	0.88
2:E2:283:HIS:CD2	2:E6:60:LYS:NZ	2.41	0.88
3:D3:179:VAL:CG1	2:D4:258:ASN:HA	2.03	0.88
1:10:257:PRO:HD3	2:C8:26:LEU:HD22	1.55	0.88
2:B4:285:GLN:HB3	2:B8:57:GLY:H	1.35	0.88
2:C0:176:GLN:O	3:C1:347:ASN:ND2	2.06	0.88
2:E4:221:ARG:CZ	3:E5:322:SER:OG	2.22	0.88
2:D6:181:VAL:H	3:D7:256:ASN:ND2	1.70	0.87
2:E4:223:THR:OG1	3:E5:245:GLN:NE2	2.09	0.86
2:E0:283:HIS:ND1	2:E4:60:LYS:HE2	1.90	0.86
3:D5:135:ILE:HG13	3:D5:152:ILE:HD11	1.58	0.86
1:21:254:LYS:HD2	2:F0:364:PRO:HD2	1.56	0.86
2:E0:292:THR:HG21	2:E0:331:ALA:HB1	1.55	0.86
2:E4:181:VAL:HG12	3:E5:256:ASN:O	1.73	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B7:274:THR:HG21	3:B7:282:ARG:HD2	1.58	0.86
2:E4:403:ALA:CA	3:E5:260:PHE:CE1	2.58	0.86
1:21:256:LEU:HD11	2:F0:31:GLN:HG3	1.56	0.86
2:E0:223:THR:HG1	3:E1:245:GLN:NE2	1.68	0.86
3:C1:281:TYR:O	3:C5:54:ALA:HB1	1.76	0.85
2:F0:66:VAL:HG12	2:F0:91:GLN:HB2	1.56	0.85
2:B4:283:HIS:O	2:B8:56:THR:CB	2.23	0.85
2:C0:176:GLN:HB3	3:C1:331:LEU:HD21	1.59	0.85
3:C7:68:LEU:HD13	3:C7:93:GLY:HA3	1.57	0.85
1:20:256:LEU:HD11	2:E8:31:GLN:HG3	1.57	0.85
1:23:257:PRO:CG	2:C4:26:LEU:HD12	2.05	0.85
3:A5:219:THR:HB	2:A6:324:VAL:HG21	1.56	0.85
2:A2:406:HIS:CD2	3:A3:261:PRO:HD3	2.12	0.85
3:C9:220:PRO:HG2	2:D0:326:LYS:HE3	1.57	0.85
1:4:247:TYR:CE1	2:B2:81:GLY:CA	2.61	0.84
2:D4:221:ARG:HG2	3:D5:322:SER:HB2	1.59	0.84
1:10:254:LYS:NZ	2:C8:22:GLU:HG2	1.92	0.84
2:E4:100:ALA:HB2	3:E5:251:ARG:HG2	1.57	0.84
1:18:241:PHE:CE1	3:E5:356:ILE:CG2	2.61	0.84
1:18:250:GLU:OE1	2:E4:229:ARG:NH2	2.11	0.83
2:A2:214:ARG:CD	3:A3:324:LYS:NZ	2.40	0.83
2:A4:178:SER:H	3:A5:347:ASN:HD22	1.26	0.83
2:E4:222:PRO:HG2	3:E5:324:LYS:HB3	1.56	0.83
1:1:245:SER:OG	3:A7:42:LEU:HD11	1.77	0.83
2:C0:223:THR:OG1	3:C1:245:GLN:OE1	1.96	0.83
1:10:238:THR:HG21	3:C9:26:ASP:OD1	1.79	0.83
2:C6:221:ARG:HB3	3:C7:322:SER:CB	2.09	0.83
3:D7:176:SER:HB2	2:D8:349:THR:OG1	1.77	0.83
1:19:256:LEU:HD22	2:E6:30:ILE:O	1.78	0.83
2:E4:214:ARG:HG3	3:E5:324:LYS:NZ	1.94	0.83
3:B5:99:ASN:HD22	3:B5:178:THR:HG23	1.43	0.82
1:15:257:PRO:HG2	2:D8:29:GLY:HA2	1.62	0.82
3:A1:70:PRO:HD2	2:A2:2:ARG:HH21	1.44	0.82
1:19:241:PHE:HB2	3:E7:43:GLN:HE22	1.41	0.82
3:A7:282:ARG:O	3:B1:55:THR:CG2	2.28	0.82
2:E0:394:LYS:HG2	3:E1:346:PRO:HG3	1.61	0.82
2:D6:12:ALA:HB3	2:D6:140:ALA:HB2	1.61	0.82
2:E4:222:PRO:CG	3:E5:324:LYS:HB2	2.05	0.82
2:E4:100:ALA:HB1	3:E5:251:ARG:HG2	1.60	0.82
1:11:245:SER:OG	3:D1:42:LEU:HD22	1.80	0.81
3:C9:11:GLN:NE2	2:D0:248:LEU:HD12	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E4:285:GLN:HG3	2:E8:57:GLY:HA3	1.62	0.81
2:A2:285:GLN:OE1	2:A6:57:GLY:O	1.99	0.81
2:B0:73:THR:CB	3:B1:2:ARG:HH22	1.93	0.81
2:B4:11:GLN:HE22	3:B5:246:LEU:HD12	1.45	0.81
2:D0:285:GLN:HB3	2:D4:57:GLY:H	1.45	0.81
3:D7:281:TYR:HE1	3:E1:58:ARG:NH2	1.77	0.81
2:A2:282:TYR:O	2:A6:60:LYS:NZ	2.13	0.81
2:E8:177:VAL:HG11	3:E9:327:ASP:OD2	1.79	0.81
1:18:244:GLN:O	3:E5:355:ASP:OD2	1.99	0.81
2:A4:178:SER:H	3:A5:347:ASN:ND2	1.77	0.81
2:D4:283:HIS:CD2	2:D8:60:LYS:HE2	2.16	0.80
2:E6:223:THR:OG1	3:E7:245:GLN:NE2	2.13	0.80
2:E4:151:CYS:SG	2:E4:193:SER:OG	2.38	0.80
3:A5:132:GLY:HA3	3:A5:163:ILE:HG22	1.63	0.80
2:B4:285:GLN:HB3	2:B8:57:GLY:N	1.97	0.80
1:6:257:PRO:HG2	2:B6:26:LEU:HG	1.64	0.80
3:A1:219:THR:HG23	2:A2:324:VAL:HG21	0.84	0.80
2:C4:12:ALA:HB3	2:C4:140:ALA:HB2	1.62	0.80
3:D5:7:VAL:HG11	3:D5:151:LEU:HD21	1.63	0.80
1:1:247:TYR:OH	2:A6:82:THR:N	2.12	0.80
3:B1:282:ARG:O	3:B5:55:THR:HG22	1.81	0.80
2:E4:222:PRO:CD	3:E5:324:LYS:HB3	2.11	0.80
1:22:246:CYS:HB3	3:C7:355:ASP:OD2	1.82	0.79
2:B4:178:SER:OG	3:B5:347:ASN:ND2	2.14	0.79
3:C3:259:PRO:HG2	3:C3:311:LEU:HD21	1.64	0.79
2:E4:223:THR:HG23	2:E4:225:THR:HG22	1.62	0.79
3:B1:49:VAL:HG21	3:B1:241:ARG:HG2	1.64	0.79
2:E0:229:ARG:HH11	2:E0:229:ARG:HG3	1.47	0.79
3:C9:208:TYR:HA	2:D0:326:LYS:HE2	1.65	0.79
1:10:254:LYS:HZ3	2:C8:22:GLU:HG2	1.45	0.79
3:B7:281:TYR:HE2	3:C1:87:PRO:CD	1.95	0.79
1:8:257:PRO:HB2	2:C0:29:GLY:HA2	1.63	0.79
2:C8:12:ALA:HB3	2:C8:140:ALA:HB2	1.61	0.79
3:E5:219:THR:HB	2:E6:324:VAL:HG11	1.64	0.79
3:A9:100:ASN:HB2	3:A9:103:LYS:HG2	1.66	0.78
3:A3:267:LEU:HD21	3:A3:371:SER:HB3	1.64	0.78
3:D3:175:VAL:HG23	2:D4:329:ASN:OD1	1.84	0.78
2:E4:178:SER:HB3	3:E5:347:ASN:HB2	1.65	0.78
2:B0:224:TYR:HE2	3:B1:246:LEU:HD13	1.48	0.78
2:D0:283:HIS:HD2	2:D4:60:LYS:HZ1	1.21	0.78
3:A1:10:GLY:HA2	3:A1:143:THR:HG23	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A6:222:PRO:HD2	3:A7:324:LYS:CB	2.14	0.78
2:D0:142:GLY:HA3	2:D0:183:GLU:HG2	1.66	0.78
2:E4:101:ASN:HB2	3:E5:255:VAL:CG1	2.13	0.78
3:A3:135:ILE:HG21	3:A3:152:ILE:HD11	1.64	0.77
3:D3:291:GLN:HB3	3:D7:122:LYS:NZ	2.00	0.77
3:C9:211:CYS:HB2	2:D0:326:LYS:NZ	1.99	0.77
2:D4:407:TRP:HH2	3:D5:258:ILE:HB	1.49	0.77
3:B7:281:TYR:CE2	3:C1:87:PRO:CD	2.67	0.77
3:D1:283:ALA:HB2	3:D5:54:ALA:HA	1.66	0.77
3:D3:202:ILE:HD11	3:D3:268:ILE:HD12	1.68	0.77
3:A9:11:GLN:HB2	3:A9:72:THR:HG21	1.65	0.76
3:C5:391:ARG:O	2:C6:262:TYR:OH	2.03	0.76
2:B2:119:LEU:CD1	2:B2:156:ARG:HD2	2.15	0.76
3:C7:281:TYR:CD2	3:D1:87:PRO:HD3	2.19	0.76
2:E2:11:GLN:HE22	3:E3:246:LEU:HD12	1.51	0.76
2:A2:214:ARG:CD	3:A3:324:LYS:HZ2	1.97	0.76
2:A4:285:GLN:HB2	2:A8:57:GLY:CA	2.15	0.76
2:E2:283:HIS:HD2	2:E6:60:LYS:NZ	1.83	0.76
2:A6:222:PRO:CD	3:A7:324:LYS:HB2	2.14	0.76
1:6:256:LEU:CD2	2:B6:31:GLN:HG2	2.15	0.76
2:E4:222:PRO:HD2	3:E5:324:LYS:HB3	1.66	0.76
3:A1:70:PRO:HD2	2:A2:2:ARG:NH2	2.01	0.76
2:A2:221:ARG:HB2	3:A3:322:SER:HG	1.51	0.76
1:21:254:LYS:HD2	2:F0:364:PRO:CD	2.16	0.75
3:B1:207:LEU:HB3	3:B1:225:LEU:HD22	1.69	0.75
2:E0:73:THR:CB	3:E1:46:ARG:HH22	1.99	0.75
2:B6:73:THR:HG22	3:B7:46:ARG:CZ	2.17	0.75
2:C4:241:SER:HB2	2:C4:249:ASN:HB2	1.68	0.75
2:C6:6:SER:HA	2:C6:136:LEU:HB2	1.68	0.75
3:D3:179:VAL:HG12	2:D4:258:ASN:HA	1.67	0.75
2:F0:407:TRP:CZ2	3:F1:258:ILE:HD11	2.22	0.75
2:D2:12:ALA:HB3	2:D2:140:ALA:HB2	1.68	0.75
1:9:254:LYS:HB3	1:9:255:PRO:HD2	1.66	0.75
3:F1:113:ILE:HG13	3:F1:150:LEU:HD22	1.68	0.75
3:D1:274:THR:HG21	3:D1:282:ARG:HD2	1.68	0.75
3:E9:208:TYR:CD1	2:F0:326:LYS:HB3	2.22	0.75
1:4:247:TYR:HE1	2:B2:81:GLY:CA	1.98	0.74
3:C7:2:ARG:NH1	3:C7:249:ASP:OD2	2.20	0.74
2:E6:285:GLN:HG2	2:F0:57:GLY:H	1.52	0.74
1:6:256:LEU:HD21	2:B6:31:GLN:HG2	1.68	0.74
2:C0:403:ALA:HA	3:C1:260:PHE:HE1	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C3:30:ILE:HD11	3:C3:47:ILE:HD11	1.70	0.74
2:C6:221:ARG:HB3	3:C7:322:SER:HB2	1.69	0.74
3:B3:336:LYS:HE2	3:B3:336:LYS:HA	1.68	0.74
3:B5:281:TYR:O	3:B9:54:ALA:HB1	1.87	0.74
2:B2:241:SER:HB2	2:B2:249:ASN:HB2	1.69	0.74
2:F0:407:TRP:HZ2	3:F1:258:ILE:HD11	1.53	0.74
1:16:256:LEU:CD1	2:E0:29:GLY:HA2	2.18	0.74
2:A6:339:ARG:HG2	2:A6:339:ARG:HH11	1.52	0.74
1:18:251:TYR:OH	2:E4:19:ALA:CA	2.37	0.73
3:C9:211:CYS:HB2	2:D0:326:LYS:HZ3	1.52	0.73
1:21:257:PRO:HG2	2:F0:26:LEU:O	1.87	0.73
2:C4:209:ILE:HG23	2:C4:227:LEU:HD22	1.69	0.73
2:D2:283:HIS:CD2	2:D6:60:LYS:HE2	2.23	0.73
2:E0:96:LYS:HZ2	3:E1:1:MET:HA	1.53	0.73
2:B4:96:LYS:HZ2	3:B5:1:MET:HA	1.54	0.73
2:D2:180:ALA:HB1	3:D3:256:ASN:HD21	1.52	0.73
3:A7:207:LEU:HB3	3:A7:225:LEU:HD12	1.71	0.73
2:B0:174:SER:OG	2:B0:177:VAL:O	2.05	0.73
2:E4:285:GLN:HG3	2:E8:57:GLY:CA	2.18	0.73
2:C0:210:TYR:HB3	3:C1:324:LYS:CE	2.18	0.73
2:E4:96:LYS:HD2	3:E5:1:MET:HA	1.71	0.73
3:C1:113:ILE:HG21	3:C1:154:LYS:HD2	1.71	0.73
3:C1:166:THR:HB	3:C1:199:VAL:HG12	1.71	0.72
3:D3:179:VAL:HG11	2:D4:258:ASN:HA	1.70	0.72
2:B6:238:LEU:HD11	2:B6:378:ILE:HD11	1.70	0.72
3:D3:291:GLN:HB3	3:D7:122:LYS:HZ1	1.54	0.72
1:1:245:SER:OG	3:A7:42:LEU:CD1	2.37	0.72
2:E6:133:GLN:HG3	2:E6:252:VAL:HG22	1.72	0.72
2:A0:115:VAL:HG21	2:A0:152:LEU:HD22	1.69	0.72
2:D2:222:PRO:HD2	3:D3:324:LYS:HB2	1.71	0.72
2:B0:221:ARG:CB	3:B1:322:SER:OG	2.37	0.72
2:B4:269:LEU:HD21	2:B4:384:ILE:HD11	1.71	0.72
2:F0:70:LEU:HD12	2:F0:99:ALA:HB2	1.72	0.72
3:A9:192:LEU:HD21	3:A9:199:VAL:HG21	1.72	0.72
2:B0:397:LEU:HD21	3:B1:344:TRP:HB2	1.72	0.72
3:D7:208:TYR:O	2:D8:326:LYS:NZ	2.23	0.72
2:E0:176:GLN:OE1	3:E1:331:LEU:HD11	1.89	0.72
3:E7:213:ARG:HH22	3:E7:297:LYS:HB2	1.55	0.72
3:C3:267:LEU:HD11	3:C3:374:ILE:HD13	1.69	0.72
2:F0:223:THR:HG23	2:F0:225:THR:HG22	1.71	0.72
1:15:247:TYR:HH	2:D8:81:GLY:HA3	0.80	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D2:230:LEU:HD21	2:D2:368:LEU:HD11	1.70	0.72
1:9:251:TYR:OH	2:C2:225:THR:OG1	2.07	0.71
2:B0:100:ALA:O	3:B1:255:VAL:HG21	1.90	0.71
3:B3:219:THR:HB	2:B4:324:VAL:HG21	1.71	0.71
3:D7:281:TYR:CE1	3:E1:58:ARG:CZ	2.73	0.71
2:E4:176:GLN:HB2	3:E5:331:LEU:HD13	1.72	0.71
2:E8:80:THR:HA	2:E8:84:ARG:HE	1.56	0.71
3:D3:175:VAL:CG2	2:D4:329:ASN:OD1	2.39	0.71
2:E2:96:LYS:HZ3	3:E3:128:ASP:HB2	1.55	0.71
3:C3:166:THR:HB	3:C3:199:VAL:HG22	1.70	0.71
3:B3:91:VAL:HG21	3:B3:116:VAL:HG22	1.73	0.71
2:C2:406:HIS:CD2	3:C3:261:PRO:HD3	2.25	0.71
3:A5:113:ILE:CG2	3:A5:154:LYS:HE2	2.21	0.71
2:C8:217:LEU:HB3	2:C8:219:ILE:HG13	1.71	0.71
3:E1:176:SER:HB3	2:E2:351:PHE:HB2	1.73	0.71
3:E7:163:ILE:HD13	3:E7:250:LEU:HB3	1.73	0.71
1:21:254:LYS:HD2	2:F0:364:PRO:CG	2.21	0.70
3:B3:200:GLN:HB3	3:B3:268:ILE:HD11	1.72	0.70
2:E6:181:VAL:HG13	3:E7:350:LYS:NZ	2.06	0.70
2:D0:230:LEU:HD23	2:D0:368:LEU:HD21	1.72	0.70
3:C9:208:TYR:CD1	2:D0:326:LYS:HD3	2.25	0.70
3:D5:202:ILE:HD11	3:D5:268:ILE:HD12	1.71	0.70
3:A1:379:LYS:HB2	3:A1:379:LYS:NZ	2.05	0.70
3:B3:49:VAL:HG21	3:B3:241:ARG:HG2	1.73	0.70
2:A6:283:HIS:HD2	2:B0:60:LYS:HE2	1.57	0.70
2:E4:210:TYR:CD1	3:E5:324:LYS:HB2	2.27	0.70
2:A0:229:ARG:HD3	2:A0:363:VAL:HG21	1.74	0.70
3:F1:10:GLY:HA2	3:F1:143:THR:HG23	1.73	0.70
1:13:247:TYR:CE1	2:D4:77:GLU:HB3	2.27	0.70
3:E5:179:VAL:HG22	2:E6:350:GLY:HA2	1.72	0.70
2:D4:214:ARG:CB	3:D5:324:LYS:HZ3	2.05	0.70
1:16:247:TYR:CE2	2:E0:81:GLY:HA3	2.27	0.69
2:B8:250:VAL:HG23	2:B8:254:GLU:HG2	1.74	0.69
2:B8:269:LEU:HD12	2:B8:303:ALA:HB3	1.74	0.69
3:D9:283:ALA:HA	3:E3:55:THR:HB	1.74	0.69
2:B0:404:PHE:CE1	3:B1:259:PRO:HA	2.26	0.69
2:D6:285:GLN:HB2	2:E0:56:THR:HA	1.75	0.69
2:C4:151:CYS:SG	2:C4:193:SER:OG	2.50	0.69
2:E0:223:THR:HG23	2:E0:225:THR:HG22	1.74	0.69
3:D5:127:CYS:SG	3:D5:128:ASP:N	2.65	0.69
3:D7:281:TYR:CE1	3:E1:58:ARG:NH2	2.60	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B3:375:GLN:NE2	3:B3:423:GLN:OE1	2.26	0.69
3:D7:68:LEU:HB3	3:D7:96:GLY:HA2	1.74	0.69
3:E7:274:THR:HG21	3:E7:282:ARG:HD2	1.73	0.69
3:B1:163:ILE:HD13	3:B1:250:LEU:HB3	1.75	0.69
3:B1:311:LEU:HD12	3:B1:342:VAL:HG11	1.73	0.69
2:E0:298:PRO:HG3	2:E0:308:ARG:HH22	1.58	0.69
2:D8:178:SER:H	3:D9:347:ASN:ND2	1.90	0.69
1:16:256:LEU:HD11	2:E0:29:GLY:HA2	1.75	0.69
2:A8:136:LEU:HD13	2:A8:235:ILE:HD11	1.73	0.69
3:D1:390:ARG:HG2	3:D1:390:ARG:HH21	1.55	0.69
2:B6:73:THR:HG22	3:B7:46:ARG:NH1	2.08	0.69
2:C0:10:GLY:HA2	2:C0:145:THR:HG23	1.74	0.69
2:E0:71:GLU:OE2	3:E1:2:ARG:NH1	2.25	0.69
1:19:256:LEU:HD13	2:E6:29:GLY:C	2.14	0.68
2:B0:222:PRO:HD2	3:B1:324:LYS:HB2	1.75	0.68
3:D3:248:SER:HA	3:D3:252:LYS:HD3	1.73	0.68
2:E4:71:GLU:HB2	3:E5:2:ARG:NH2	2.08	0.68
2:E4:285:GLN:HG3	2:E8:57:GLY:N	2.08	0.68
2:B0:214:ARG:HB2	3:B1:324:LYS:HE2	1.73	0.68
3:C5:1:MET:N	3:C5:128:ASP:OD2	2.25	0.68
2:D4:274:PRO:HG3	2:D4:286:LEU:HD23	1.76	0.68
3:E5:220:PRO:HG2	2:E6:326:LYS:HB2	1.75	0.68
2:E6:283:HIS:NE2	2:F0:85:HIS:HB3	2.08	0.68
2:E8:180:ALA:HB3	2:E8:183:GLU:HG2	1.75	0.68
2:B0:73:THR:HB	3:B1:2:ARG:HH22	1.54	0.68
3:B3:212:PHE:CZ	2:B4:326:LYS:HG2	2.29	0.68
2:B8:11:GLN:HE22	3:B9:246:LEU:HD12	1.58	0.68
3:C7:237:THR:HG22	3:C7:250:LEU:HD11	1.74	0.68
1:6:247:TYR:CE2	2:B6:81:GLY:HA3	2.28	0.68
3:A1:222:TYR:HB2	2:A2:325:PRO:HG2	1.74	0.68
2:C4:2:ARG:HB3	2:C4:133:GLN:HE21	1.58	0.68
2:E4:394:LYS:HG2	3:E5:346:PRO:HG3	1.75	0.68
3:E1:70:PRO:HD2	2:E2:2:ARG:NH2	2.08	0.68
1:18:251:TYR:OH	2:E4:19:ALA:HA	1.94	0.68
2:A0:142:GLY:O	2:A0:186:ASN:ND2	2.26	0.68
2:A6:7:ILE:HD11	2:A6:137:MET:HE1	1.76	0.68
2:C6:168:ASN:ND2	2:C6:194:LEU:HD11	2.04	0.68
2:E4:283:HIS:CD2	2:E8:85:HIS:HB3	2.28	0.68
3:F1:2:ARG:NH2	3:F1:249:ASP:OD2	2.26	0.68
3:A9:248:SER:HA	3:A9:252:LYS:HG2	1.76	0.68
2:E4:274:PRO:HD3	2:E4:291:ILE:HD11	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:23:257:PRO:CG	2:C4:26:LEU:CD1	2.71	0.68
3:C5:354:CYS:SG	3:C5:355:ASP:N	2.67	0.68
2:A8:22:GLU:OE2	2:A8:229:ARG:NH1	2.27	0.67
3:B7:391:ARG:O	2:B8:262:TYR:OH	2.11	0.67
2:C4:221:ARG:HB3	3:C5:322:SER:HB3	1.75	0.67
3:D9:169:VAL:HG12	3:D9:202:ILE:HB	1.76	0.67
2:B0:221:ARG:HB2	3:B1:322:SER:HB2	1.73	0.67
2:D2:222:PRO:HD2	3:D3:324:LYS:CB	2.23	0.67
3:D5:326:VAL:HG13	3:D5:330:MET:HE1	1.76	0.67
3:D7:70:PRO:HD2	2:D8:2:ARG:HH22	1.59	0.67
1:12:254:LYS:HD3	2:D2:364:PRO:HB2	1.76	0.67
3:A1:130:LEU:H	3:A1:162:ARG:HH12	1.43	0.67
2:A6:137:MET:HB3	2:A6:168:ASN:HA	1.76	0.67
2:E0:163:LYS:HE2	2:E0:163:LYS:HA	1.76	0.67
2:A2:222:PRO:HG2	3:A3:324:LYS:HB2	1.76	0.67
2:A8:106:GLY:HA3	2:A8:148:GLY:HA3	1.74	0.67
2:D0:174:SER:OG	2:D0:177:VAL:O	2.11	0.67
1:4:247:TYR:HE1	2:B2:81:GLY:HA2	1.59	0.67
2:A2:101:ASN:HB2	3:A3:255:VAL:HG11	1.75	0.67
2:B4:221:ARG:HH11	2:B4:221:ARG:HG3	1.60	0.67
3:D7:1:MET:N	3:D7:128:ASP:OD2	2.27	0.67
2:A0:312:TYR:HE1	2:A0:379:SER:HB3	1.59	0.67
3:A3:7:VAL:HB	3:A3:135:ILE:HG22	1.77	0.67
3:E9:267:LEU:HD21	3:E9:374:ILE:HD11	1.77	0.67
2:E4:222:PRO:O	3:E5:322:SER:HB2	1.95	0.67
3:B9:200:GLN:HB2	3:B9:268:ILE:HD11	1.77	0.67
2:E2:283:HIS:HD2	2:E6:60:LYS:HZ2	1.40	0.67
3:C9:354:CYS:SG	3:C9:355:ASP:N	2.68	0.67
2:D6:138:PHE:HZ	2:D6:235:ILE:HD12	1.59	0.67
1:21:256:LEU:CD1	2:F0:31:GLN:HG2	2.24	0.67
2:A6:403:ALA:HA	3:A7:260:PHE:CE1	2.30	0.67
2:A2:26:LEU:HD22	2:A2:364:PRO:HD3	1.77	0.66
2:C4:6:SER:HA	2:C4:136:LEU:HB2	1.77	0.66
3:C9:283:ALA:CB	3:D3:54:ALA:HA	2.24	0.66
2:D6:223:THR:OG1	3:D7:245:GLN:OE1	2.12	0.66
2:B0:221:ARG:O	3:B1:322:SER:HB2	1.96	0.66
3:B5:99:ASN:ND2	3:B5:178:THR:HG23	2.09	0.66
1:21:256:LEU:HD11	2:F0:31:GLN:HG2	1.75	0.66
2:C6:10:GLY:HA2	2:C6:145:THR:HG23	1.77	0.66
2:E6:258:ASN:HB3	2:E6:352:LYS:HE3	1.76	0.66
3:D5:172:SER:HB3	3:D5:205:GLU:HG2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:19:241:PHE:CE2	3:E7:42:LEU:HB2	2.31	0.66
1:22:251:TYR:OH	2:C6:225:THR:CB	2.43	0.66
3:B5:324:LYS:HA	3:B5:327:ASP:HB2	1.78	0.66
2:C0:210:TYR:HB3	3:C1:324:LYS:HE3	1.75	0.66
3:D1:98:GLY:H	3:D1:103:LYS:HD3	1.60	0.66
3:D9:311:LEU:HD12	3:D9:342:VAL:HG11	1.76	0.66
2:E4:176:GLN:CB	3:E5:331:LEU:HD13	2.26	0.66
2:E4:284:GLU:HG3	2:E8:88:HIS:CD2	2.30	0.66
2:E4:210:TYR:CE1	3:E5:324:LYS:HB2	2.31	0.66
2:A8:285:GLN:HG3	2:A8:286:LEU:H	1.61	0.66
2:D2:283:HIS:HD2	2:D6:60:LYS:HE2	1.61	0.66
2:E2:11:GLN:NE2	3:E3:246:LEU:HD12	2.11	0.66
3:A9:91:VAL:HG11	3:A9:116:VAL:HG22	1.79	0.65
2:D6:30:ILE:HG22	2:D6:36:MET:HB3	1.78	0.65
2:D0:229:ARG:HH11	2:D0:229:ARG:HG3	1.61	0.65
2:E4:107:HIS:HE2	2:E4:151:CYS:HG	1.40	0.65
1:2:241:PHE:CE2	3:A9:40:SER:OG	2.48	0.65
2:B8:195:LEU:HD21	2:B8:264:ARG:HE	1.61	0.65
2:D2:174:SER:HB3	2:D2:207:GLU:HG2	1.78	0.65
3:D7:219:THR:HB	2:D8:324:VAL:HG11	1.78	0.65
3:E1:248:SER:HA	3:E1:252:LYS:HG3	1.79	0.65
3:A1:117:LEU:HD13	3:A1:154:LYS:NZ	2.11	0.65
2:D4:283:HIS:CD2	2:D8:60:LYS:CE	2.79	0.65
3:E1:259:PRO:HD2	3:E1:263:LEU:HD11	1.78	0.65
3:A3:52:ASN:ND2	3:A3:123:GLU:OE2	2.30	0.65
2:B0:212:ILE:HG12	2:B0:275:ILE:HD11	1.78	0.65
2:B4:11:GLN:HE22	3:B5:246:LEU:CD1	2.10	0.65
2:D4:12:ALA:HB3	2:D4:140:ALA:HB2	1.78	0.65
2:D6:101:ASN:OD1	3:D7:252:LYS:HG2	1.96	0.65
2:A4:241:SER:HB2	2:A4:249:ASN:HB2	1.79	0.65
3:B3:179:VAL:HG11	2:B4:258:ASN:HA	1.77	0.65
3:C3:190:HIS:HB2	3:C3:414:ASN:HD21	1.62	0.65
3:A5:27:GLU:HA	3:A5:359:LYS:HD2	1.78	0.65
2:C6:135:PHE:HD2	2:C6:166:LYS:HG2	1.62	0.65
3:D1:91:VAL:HG11	3:D1:116:VAL:HG22	1.78	0.65
3:B5:64:ILE:HD11	3:B5:123:GLU:HG3	1.78	0.65
3:B7:212:PHE:HD1	2:B8:326:LYS:HD3	1.62	0.65
2:C2:202:VAL:HG22	2:C2:268:MET:HG3	1.78	0.65
3:C5:97:ALA:HB3	3:C5:143:THR:HB	1.79	0.65
2:D4:151:CYS:HG	2:D4:193:SER:HG	1.42	0.65
2:A2:176:GLN:O	3:A3:347:ASN:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:113:ILE:HG21	3:A5:154:LYS:HE2	1.77	0.64
3:C5:248:SER:HA	3:C5:252:LYS:HE3	1.79	0.64
2:C6:177:VAL:HG13	3:C7:327:ASP:OD2	1.97	0.64
3:C7:281:TYR:CE2	3:D1:87:PRO:HD3	2.31	0.64
2:D8:262:TYR:HB3	2:D8:263:PRO:HD2	1.79	0.64
2:A0:403:ALA:HA	3:A1:260:PHE:CE1	2.32	0.64
3:E9:256:ASN:HD21	3:E9:350:LYS:HG2	1.62	0.64
2:A4:110:ILE:O	2:A4:110:ILE:HG13	1.97	0.64
3:D9:163:ILE:HD13	3:D9:250:LEU:HB3	1.78	0.64
2:E0:71:GLU:OE1	3:E1:2:ARG:NH2	2.26	0.64
1:0:244:GLN:O	3:A5:320:ARG:CZ	2.44	0.64
2:E4:238:LEU:HD11	2:E4:378:ILE:HG13	1.80	0.64
2:F0:271:SER:HB2	2:F0:377:MET:HB3	1.80	0.64
1:10:248:ARG:HH21	3:C9:42:LEU:HD22	1.63	0.64
1:22:251:TYR:OH	2:C6:225:THR:HB	1.98	0.64
3:A7:27:GLU:OE2	3:A7:241:ARG:NH2	2.31	0.64
2:B4:96:LYS:NZ	3:B5:128:ASP:OD2	2.30	0.64
2:A0:264:ARG:HG3	2:A0:264:ARG:HH11	1.61	0.64
3:A9:44:LEU:O	3:A9:44:LEU:HD23	1.96	0.64
2:C2:285:GLN:HB2	2:C6:56:THR:HA	1.79	0.64
2:C8:319:TYR:HB3	2:C8:323:VAL:HG11	1.78	0.64
3:A5:287:PRO:HA	3:A5:329:GLN:HE22	1.62	0.64
2:B2:11:GLN:HE22	3:B3:246:LEU:CD1	2.11	0.64
3:C9:11:GLN:NE2	2:D0:248:LEU:CD1	2.56	0.64
2:D0:285:GLN:CB	2:D4:57:GLY:H	2.09	0.64
2:D0:292:THR:HG21	2:D0:331:ALA:HB1	1.80	0.64
2:E6:217:LEU:HD21	2:E6:367:ASP:HB3	1.78	0.64
3:E9:150:LEU:HD21	3:E9:154:LYS:HZ2	1.63	0.64
1:10:244:GLN:O	3:C9:320:ARG:NH1	2.30	0.64
3:B3:179:VAL:HG12	2:B4:258:ASN:OD1	1.98	0.64
3:B9:267:LEU:HD23	3:B9:374:ILE:HD11	1.80	0.64
1:8:257:PRO:HG3	2:C0:26:LEU:CD2	2.28	0.64
3:A5:221:THR:HG23	3:A5:223:GLY:H	1.63	0.64
3:A9:68:LEU:HB3	3:A9:96:GLY:HA2	1.80	0.64
3:B9:283:ALA:HA	3:C3:55:THR:OG1	1.98	0.64
2:D6:210:TYR:HE1	2:D6:227:LEU:HD11	1.63	0.64
2:E4:285:GLN:HG2	2:E8:60:LYS:HD3	1.78	0.64
3:E5:10:GLY:HA2	3:E5:143:THR:HG23	1.80	0.64
2:B0:2:ARG:HB2	2:B0:133:GLN:HE22	1.63	0.63
2:B2:179:THR:N	3:B3:347:ASN:HD21	1.95	0.63
2:C4:310:GLY:HA3	2:C4:383:ALA:HB2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C8:221:ARG:HB3	3:C9:322:SER:HB3	1.80	0.63
3:A1:396:HIS:NE2	2:A2:263:PRO:HD3	2.12	0.63
2:B2:174:SER:OG	2:B2:177:VAL:O	2.15	0.63
2:B8:241:SER:OG	2:B8:250:VAL:O	2.16	0.63
2:E2:259:LEU:HD21	2:E2:316:CYS:HB2	1.80	0.63
1:8:257:PRO:CB	2:C0:29:GLY:HA2	2.28	0.63
2:D0:394:LYS:HG2	3:D1:346:PRO:HG3	1.81	0.63
2:D2:98:ASP:O	2:D2:105:ARG:NH2	2.28	0.63
2:D8:238:LEU:HD11	2:D8:255:PHE:HE2	1.64	0.63
1:2:245:SER:HB2	3:A9:42:LEU:HD21	1.81	0.63
2:C6:339:ARG:O	2:C6:342:GLN:NE2	2.31	0.63
3:C7:165:GLU:OE2	3:C7:200:GLN:NE2	2.32	0.63
3:A5:318:ARG:HD3	3:A5:358:PRO:HD3	1.78	0.63
2:B6:50:ASN:O	2:B6:64:ARG:NH2	2.32	0.63
1:21:256:LEU:CD1	2:F0:31:GLN:CG	2.74	0.63
2:A2:195:LEU:HD21	2:A2:264:ARG:HE	1.63	0.63
3:A3:329:GLN:HA	3:A3:332:ASN:HB2	1.79	0.63
2:A6:80:THR:HA	2:A6:84:ARG:HH21	1.63	0.63
2:A8:179:THR:O	3:A9:350:LYS:HB2	1.98	0.63
2:C6:101:ASN:HA	2:C6:144:GLY:HA3	1.80	0.63
3:E5:175:VAL:CG1	2:E6:332:VAL:HG13	2.24	0.63
3:F1:244:GLY:HA2	3:F1:355:ASP:HB2	1.81	0.63
2:B4:174:SER:OG	2:B4:177:VAL:O	2.16	0.63
2:C6:244:PHE:HB2	2:C6:356:ASN:HD21	1.64	0.63
3:D9:200:GLN:HB3	3:D9:268:ILE:CD1	2.29	0.63
2:E4:181:VAL:HG11	3:E5:256:ASN:O	1.97	0.63
1:18:251:TYR:OH	2:E4:19:ALA:N	2.32	0.62
1:20:256:LEU:CD1	2:E8:31:GLN:HG3	2.29	0.62
3:D1:390:ARG:HG2	3:D1:390:ARG:NH2	2.11	0.62
2:C4:181:VAL:HG12	3:C5:256:ASN:HB2	1.80	0.62
2:C6:407:TRP:HZ3	3:C7:255:VAL:CA	2.06	0.62
3:D9:200:GLN:HG2	3:D9:268:ILE:HD11	1.81	0.62
2:E8:292:THR:HG21	2:E8:331:ALA:HB1	1.80	0.62
2:C0:403:ALA:HA	3:C1:260:PHE:CE1	2.34	0.62
2:B0:403:ALA:HA	3:B1:260:PHE:CZ	2.34	0.62
3:B3:11:GLN:HE22	2:B4:248:LEU:HD12	1.65	0.62
3:B9:332:ASN:OD1	3:B9:336:LYS:NZ	2.32	0.62
2:A2:221:ARG:O	3:A3:322:SER:HB2	2.00	0.62
2:B0:224:TYR:CE2	3:B1:246:LEU:HD13	2.31	0.62
3:C1:253:LEU:HD11	3:C1:368:VAL:HG21	1.82	0.62
2:D0:285:GLN:HB3	2:D4:57:GLY:N	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E9:10:GLY:HA2	3:E9:143:THR:HG23	1.80	0.62
1:18:241:PHE:CE1	3:E5:356:ILE:HG21	2.35	0.62
3:C9:1:MET:N	3:C9:128:ASP:OD2	2.30	0.62
2:E4:107:HIS:NE2	2:E4:151:CYS:SG	2.67	0.62
3:B1:238:CYS:SG	3:B1:241:ARG:NH2	2.73	0.62
2:A0:210:TYR:HE1	2:A0:227:LEU:HD21	1.64	0.62
2:B4:223:THR:HG23	2:B4:225:THR:HG22	1.81	0.62
2:C0:210:TYR:HB3	3:C1:324:LYS:HE2	1.82	0.62
3:C3:165:GLU:OE2	3:C3:200:GLN:NE2	2.33	0.62
2:D6:27:GLU:OE1	2:D6:243:ARG:NH1	2.33	0.62
2:E0:394:LYS:CG	3:E1:346:PRO:HG3	2.30	0.62
1:18:241:PHE:HE2	3:E5:42:LEU:HB2	1.63	0.62
3:B5:16:ILE:HD11	3:B5:229:VAL:HG11	1.82	0.62
2:B6:73:THR:HG22	3:B7:46:ARG:NE	2.15	0.62
2:C6:31:GLN:NE2	2:C6:33:ASP:OD2	2.33	0.62
3:E1:283:ALA:HA	3:E5:55:THR:OG1	1.99	0.62
3:A1:42:LEU:HD21	3:A1:243:PRO:HD2	1.80	0.61
2:A6:168:ASN:HD22	2:A6:194:LEU:HD11	1.65	0.61
3:C1:283:ALA:HB2	3:C5:54:ALA:HA	1.81	0.61
2:A4:191:THR:HA	2:A4:194:LEU:HG	1.82	0.61
3:A7:107:THR:OG1	3:A7:108:GLU:OE1	2.18	0.61
2:E0:101:ASN:HB2	3:E1:255:VAL:HG21	1.81	0.61
3:E5:172:SER:HB2	3:E5:205:GLU:HG2	1.81	0.61
2:E8:274:PRO:HB2	2:E8:276:ILE:HG12	1.82	0.61
1:13:247:TYR:HH	2:D4:81:GLY:HA3	1.61	0.61
3:C9:139:LEU:HD13	3:C9:168:SER:HB2	1.82	0.61
3:D3:49:VAL:HG21	3:D3:241:ARG:HG2	1.82	0.61
3:D7:169:VAL:HG12	3:D7:202:ILE:HB	1.82	0.61
1:6:247:TYR:HE2	2:B6:81:GLY:HA3	1.64	0.61
3:A3:6:HIS:NE2	3:A3:8:GLN:OE1	2.32	0.61
3:A7:132:GLY:HA3	3:A7:163:ILE:HG22	1.82	0.61
2:C0:274:PRO:HG3	2:C0:286:LEU:HD13	1.83	0.61
3:C7:281:TYR:HD2	3:D1:87:PRO:HD3	1.64	0.61
3:D3:107:THR:HG21	3:D3:401:GLU:HB2	1.83	0.61
2:E4:223:THR:HA	3:E5:323:THR:H	1.66	0.61
1:19:256:LEU:CD2	2:E6:30:ILE:O	2.47	0.61
3:A1:396:HIS:CD2	2:A2:263:PRO:HD3	2.34	0.61
2:A2:259:LEU:HD21	2:A2:316:CYS:HB2	1.83	0.61
3:B3:176:SER:OG	2:B4:349:THR:HG23	1.99	0.61
3:B9:318:ARG:HD2	3:B9:358:PRO:HD3	1.82	0.61
3:C7:135:ILE:HB	3:C7:166:THR:HG22	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D7:177:ASP:HA	2:D8:351:PHE:O	2.00	0.61
3:E1:198:GLU:HB2	3:E1:266:PHE:HE2	1.64	0.61
3:B7:7:VAL:HB	3:B7:135:ILE:HG12	1.83	0.61
2:C0:399:TYR:O	2:C0:402:ARG:NH2	2.34	0.61
1:19:243:ALA:HB1	3:E7:356:ILE:CD1	2.13	0.61
2:A2:214:ARG:CD	3:A3:324:LYS:HZ1	2.10	0.61
2:B6:258:ASN:HB3	2:B6:352:LYS:HG3	1.83	0.61
3:D7:274:THR:HG21	3:D7:282:ARG:HD2	1.81	0.61
1:0:247:TYR:OH	2:A4:81:GLY:HA3	1.97	0.61
2:C2:285:GLN:OE1	2:C6:57:GLY:HA2	1.99	0.61
3:C5:294:PHE:O	3:C5:306:ARG:NH2	2.29	0.61
2:D4:93:ILE:HG23	2:D4:117:LEU:HD23	1.83	0.61
3:E7:389:PHE:HE1	3:E7:395:LEU:HD11	1.66	0.61
1:18:248:ARG:NH1	3:E5:42:LEU:HD21	2.14	0.61
3:A3:308:GLY:HA3	3:A3:373:ALA:HB2	1.82	0.61
2:A6:283:HIS:CD2	2:B0:60:LYS:NZ	2.69	0.61
2:B0:241:SER:HB2	2:B0:249:ASN:HB2	1.83	0.61
2:B4:254:GLU:OE1	2:B4:352:LYS:NZ	2.34	0.61
2:C0:33:ASP:O	2:C0:60:LYS:NZ	2.34	0.61
3:C5:257:LEU:HD11	3:C5:314:SER:HB3	1.82	0.61
2:C8:50:ASN:O	2:C8:64:ARG:NH2	2.33	0.61
2:D0:394:LYS:HG2	3:D1:346:PRO:CG	2.30	0.61
2:E2:76:ASP:HA	2:E2:79:ARG:HD2	1.81	0.61
3:F1:311:LEU:HD12	3:F1:342:VAL:HG21	1.83	0.61
1:7:256:LEU:HD11	2:B8:31:GLN:HB3	1.83	0.61
1:9:245:SER:OG	1:9:248:ARG:HG3	2.01	0.60
3:A7:27:GLU:HA	3:A7:359:LYS:HD2	1.83	0.60
3:B5:396:HIS:HA	3:B5:399:THR:HG22	1.83	0.60
2:C2:51:THR:HG23	2:C2:52:PHE:HD1	1.66	0.60
3:C5:99:ASN:HA	3:C5:142:GLY:HA3	1.81	0.60
2:F0:403:ALA:HA	3:F1:260:PHE:CE1	2.35	0.60
3:A9:107:THR:OG1	3:A9:108:GLU:OE1	2.19	0.60
2:C6:101:ASN:HA	2:C6:144:GLY:CA	2.30	0.60
1:19:256:LEU:HD11	2:E6:31:GLN:HG3	1.82	0.60
1:7:256:LEU:HD21	2:B8:31:GLN:HA	1.83	0.60
3:A7:200:GLN:HB3	3:A7:268:ILE:HD11	1.83	0.60
2:B0:210:TYR:HB3	3:B1:324:LYS:NZ	2.16	0.60
3:B5:257:LEU:HD21	3:B5:314:SER:HB2	1.83	0.60
2:C4:387:VAL:HA	2:C4:390:ARG:HH21	1.65	0.60
2:C8:292:THR:HG21	2:C8:331:ALA:HB1	1.83	0.60
2:B0:178:SER:H	3:B1:347:ASN:ND2	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:15:257:PRO:CG	2:D8:26:LEU:O	2.49	0.60
3:C1:164:MET:HB2	3:C1:197:ASP:H	1.66	0.60
3:C7:1:MET:N	3:C7:128:ASP:OD2	2.34	0.60
2:E4:12:ALA:HB3	2:E4:140:ALA:HB2	1.83	0.60
2:A0:79:ARG:HG3	2:A0:92:LEU:HD22	1.83	0.60
3:A9:259:PRO:HG2	3:A9:311:LEU:HD21	1.83	0.60
3:B9:181:GLU:HB2	3:B9:182:PRO:HD3	1.83	0.60
3:C5:133:PHE:HB2	3:C5:164:MET:HB3	1.82	0.60
2:D0:221:ARG:HD2	3:D1:322:SER:HB3	1.83	0.60
2:C8:221:ARG:HB3	3:C9:322:SER:CB	2.32	0.60
1:21:254:LYS:HD2	2:F0:364:PRO:HG2	1.84	0.60
3:A7:33:THR:O	3:A7:58:ARG:NH2	2.34	0.60
2:B0:53:PHE:HB3	2:B0:61:HIS:HB3	1.83	0.60
3:B1:135:ILE:HB	3:B1:166:THR:HG22	1.83	0.60
3:C5:220:PRO:O	2:C6:325:PRO:HD2	2.01	0.60
2:E2:76:ASP:OD1	2:E2:79:ARG:NH2	2.33	0.60
3:A1:113:ILE:HG13	3:A1:117:LEU:HD12	1.84	0.60
3:A3:249:ASP:H	3:A3:252:LYS:HB2	1.65	0.60
3:A5:205:GLU:OE2	2:A6:329:ASN:ND2	2.33	0.60
2:A6:7:ILE:HD11	2:A6:137:MET:CE	2.32	0.60
2:B4:223:THR:OG1	3:B5:245:GLN:OE1	2.11	0.60
3:D5:215:LEU:O	3:D5:216:LYS:HB2	2.01	0.60
3:D7:49:VAL:HG21	3:D7:241:ARG:HG2	1.84	0.60
2:E4:210:TYR:CD1	3:E5:324:LYS:CG	2.84	0.60
2:E4:221:ARG:NH2	3:E5:322:SER:O	2.35	0.60
3:A1:412:GLU:OE2	3:A1:416:ASN:ND2	2.35	0.60
3:A9:396:HIS:HE1	2:B0:261:PRO:O	1.85	0.60
2:B6:53:PHE:HB3	2:B6:61:HIS:HB3	1.84	0.60
3:B7:55:THR:HG23	3:B7:55:THR:O	2.01	0.60
3:C9:2:ARG:HB3	3:C9:131:GLN:HB2	1.84	0.60
2:E6:181:VAL:HG13	3:E7:350:LYS:HZ1	1.66	0.60
3:E9:113:ILE:HA	3:E9:116:VAL:HG12	1.83	0.60
3:A3:7:VAL:HG11	3:A3:151:LEU:HD21	1.84	0.59
2:A6:119:LEU:HD13	2:A6:122:ILE:HD11	1.82	0.59
3:B5:334:GLN:HE21	3:B5:349:MET:HG2	1.66	0.59
3:D1:67:ASP:OD2	3:D1:72:THR:OG1	2.20	0.59
3:D5:129:CYS:SG	3:D5:162:ARG:NH2	2.74	0.59
2:E4:221:ARG:NE	3:E5:322:SER:OG	2.35	0.59
3:E7:100:ASN:HB3	3:E7:103:LYS:HG2	1.84	0.59
3:F1:117:LEU:HA	3:F1:120:VAL:HG12	1.83	0.59
3:A9:192:LEU:O	3:A9:192:LEU:HD23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B1:237:THR:HG22	3:B1:250:LEU:HD11	1.84	0.59
2:B2:53:PHE:HB3	2:B2:61:HIS:HB3	1.83	0.59
3:B5:12:CYS:HG	3:B5:138:SER:HG	1.47	0.59
2:B8:76:ASP:HA	2:B8:79:ARG:HD2	1.83	0.59
2:C6:210:TYR:HB3	3:C7:324:LYS:HD2	1.83	0.59
2:A0:132:LEU:HG	2:A0:164:LYS:HE2	1.84	0.59
3:C9:283:ALA:HB2	3:D3:54:ALA:CA	2.29	0.59
3:E1:317:PHE:HB3	3:E1:321:MET:SD	2.42	0.59
2:B0:73:THR:HB	3:B1:2:ARG:CZ	2.28	0.59
3:C5:117:LEU:HD11	3:C5:154:LYS:HB3	1.84	0.59
3:C7:354:CYS:SG	3:C7:355:ASP:N	2.76	0.59
3:C9:67:ASP:OD2	3:C9:72:THR:OG1	2.20	0.59
2:D2:223:THR:OG1	3:D3:245:GLN:OE1	2.15	0.59
2:D4:259:LEU:HD21	2:D4:316:CYS:HB2	1.85	0.59
3:D5:64:ILE:HD11	3:D5:123:GLU:HG3	1.84	0.59
3:D9:7:VAL:HG11	3:D9:151:LEU:CD2	2.32	0.59
2:A2:91:GLN:HA	2:A2:121:ARG:HH12	1.66	0.59
2:C6:204:LEU:HD13	2:C6:231:ILE:HD12	1.84	0.59
3:C9:219:THR:HB	2:D0:324:VAL:HG21	1.84	0.59
2:D0:309:HIS:NE2	2:D0:386:GLU:OE1	2.30	0.59
3:D3:238:CYS:SG	3:D3:318:ARG:NE	2.76	0.59
2:E4:394:LYS:NZ	3:E5:347:ASN:ND2	2.51	0.59
1:10:246:CYS:SG	3:C9:355:ASP:OD2	2.60	0.59
2:C2:399:TYR:O	2:C2:402:ARG:NH2	2.36	0.59
2:C2:404:PHE:CE1	3:C3:259:PRO:HA	2.37	0.59
3:C9:66:MET:HE1	3:C9:151:LEU:HD22	1.84	0.59
2:E2:96:LYS:HZ1	3:E3:1:MET:H2	1.48	0.59
2:E2:285:GLN:HB3	2:E6:57:GLY:N	2.17	0.59
3:E3:42:LEU:HD21	3:E3:356:ILE:HD11	1.84	0.59
3:F1:239:CYS:SG	3:F1:248:SER:N	2.70	0.59
3:A1:140:GLY:O	3:A1:184:ASN:ND2	2.33	0.59
3:B3:208:TYR:CE1	3:B3:225:LEU:HD11	2.37	0.59
2:D0:230:LEU:CD2	2:D0:368:LEU:HD21	2.31	0.59
3:D9:12:CYS:SG	3:D9:13:GLY:N	2.76	0.59
2:E4:229:ARG:HD2	2:E4:363:VAL:HG21	1.85	0.59
1:19:256:LEU:HD21	2:E6:31:GLN:HA	1.85	0.59
2:B6:396:ASP:OD2	2:B6:422:ARG:NH2	2.36	0.59
3:C7:178:THR:OG1	3:C7:181:GLU:OE2	2.21	0.59
3:E5:334:GLN:OE1	3:E5:348:ASN:ND2	2.35	0.59
2:E8:191:THR:HG23	2:E8:425:LEU:HD21	1.85	0.59
1:22:250:GLU:OE2	2:C6:225:THR:HG21	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:183:TYR:HB3	3:A5:398:TYR:HE2	1.68	0.59
2:A6:254:GLU:O	2:A6:258:ASN:ND2	2.36	0.59
3:C1:249:ASP:H	3:C1:252:LYS:HB2	1.68	0.59
3:D7:139:LEU:HA	3:D7:145:SER:HB2	1.85	0.59
2:E4:71:GLU:HB2	3:E5:2:ARG:HH21	1.67	0.59
2:E4:100:ALA:HB2	3:E5:251:ARG:CG	2.29	0.59
3:B5:282:ARG:O	3:B9:55:THR:CG2	2.48	0.59
3:C3:200:GLN:HB3	3:C3:266:PHE:HB2	1.85	0.59
3:C9:208:TYR:HD1	2:D0:326:LYS:HD3	1.66	0.59
2:D2:182:VAL:HG11	3:D3:255:VAL:HG12	1.83	0.59
3:E5:284:LEU:HD23	3:E5:362:LYS:HG2	1.84	0.59
3:E7:332:ASN:OD1	3:E7:336:LYS:NZ	2.34	0.59
3:E9:139:LEU:HD12	3:E9:170:PHE:HE1	1.68	0.59
2:A2:214:ARG:HD2	3:A3:324:LYS:CE	2.33	0.58
2:D2:292:THR:HG21	2:D2:331:ALA:HB1	1.84	0.58
2:D4:326:LYS:NZ	2:D4:327:ASP:OD1	2.32	0.58
3:D5:274:THR:OG1	3:D5:279:GLN:OE1	2.21	0.58
3:D9:97:ALA:HA	3:D9:103:LYS:HE2	1.85	0.58
3:A3:91:VAL:HG21	3:A3:116:VAL:HG12	1.86	0.58
3:A9:256:ASN:HB2	3:A9:350:LYS:HE3	1.84	0.58
3:B1:171:PRO:O	3:B1:380:ARG:NH1	2.34	0.58
3:C3:68:LEU:HD12	3:C3:143:THR:HG22	1.85	0.58
2:D2:30:ILE:HG22	2:D2:36:MET:HB3	1.84	0.58
3:E3:248:SER:HA	3:E3:252:LYS:HG2	1.85	0.58
3:E7:190:HIS:HB2	3:E7:414:ASN:HD22	1.68	0.58
2:E8:301:MET:HE3	2:E8:307:PRO:HG3	1.85	0.58
1:18:250:GLU:HG2	2:E4:225:THR:OG1	2.04	0.58
3:A5:313:ALA:HB3	3:A5:349:MET:HG2	1.84	0.58
3:B1:135:ILE:HG13	3:B1:152:ILE:HG12	1.85	0.58
3:B9:267:LEU:CD2	3:B9:374:ILE:HD11	2.33	0.58
2:C6:130:THR:HG22	2:C6:131:GLY:H	1.67	0.58
2:C8:181:VAL:HG11	3:C9:256:ASN:O	2.03	0.58
3:E9:208:TYR:CE1	2:F0:326:LYS:HB3	2.37	0.58
3:E9:305:PRO:HB2	3:E9:310:TYR:HE1	1.68	0.58
3:A5:180:VAL:O	3:A5:184:ASN:ND2	2.37	0.58
3:A9:208:TYR:HE1	3:A9:225:LEU:HD11	1.68	0.58
3:C3:306:ARG:HA	3:C3:340:TYR:HE1	1.69	0.58
2:E0:96:LYS:HZ2	3:E1:1:MET:CA	2.15	0.58
3:F1:7:VAL:HB	3:F1:135:ILE:HG12	1.85	0.58
3:B3:16:ILE:HD11	3:B3:229:VAL:HG11	1.86	0.58
3:B7:325:GLU:HA	3:B7:328:GLU:HG3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E0:71:GLU:OE2	3:E1:2:ARG:CZ	2.52	0.58
2:E0:229:ARG:HG3	2:E0:229:ARG:NH1	2.19	0.58
3:A1:289:LEU:HD21	3:A1:365:VAL:HG11	1.84	0.58
3:A3:186:THR:HG23	3:A3:415:MET:HG3	1.85	0.58
2:B0:404:PHE:CZ	3:B1:259:PRO:HA	2.38	0.58
2:D8:259:LEU:HD11	2:D8:316:CYS:HB2	1.85	0.58
3:E5:12:CYS:HB3	3:E5:138:SER:HB2	1.85	0.58
2:A2:174:SER:HB3	2:A2:177:VAL:O	2.04	0.58
2:A2:221:ARG:O	3:A3:322:SER:CB	2.52	0.58
3:A3:174:LYS:NZ	3:A3:205:GLU:OE1	2.37	0.58
3:A9:320:ARG:HG3	3:A9:320:ARG:HH11	1.69	0.58
2:B0:73:THR:CG2	3:B1:2:ARG:HH22	2.15	0.58
2:C6:121:ARG:HH12	2:C6:124:LYS:HE3	1.69	0.58
2:D0:189:LEU:HD11	2:D0:418:PHE:CD1	2.38	0.58
3:D5:107:THR:HG21	3:D5:401:GLU:HB2	1.84	0.58
2:F0:151:CYS:SG	2:F0:193:SER:OG	2.50	0.58
2:B4:96:LYS:NZ	3:B5:1:MET:HA	2.17	0.58
3:B7:15:GLN:O	3:B7:226:ASN:ND2	2.37	0.58
2:C6:223:THR:HG21	3:C7:245:GLN:HE22	1.69	0.58
3:C7:262:ARG:NH1	3:C7:421:GLU:OE2	2.36	0.58
3:C9:100:ASN:HB3	3:C9:103:LYS:HG2	1.85	0.58
2:D0:335:ILE:HG23	2:D0:341:ILE:HD13	1.85	0.58
2:D2:328:VAL:HG21	2:D2:355:ILE:HD11	1.84	0.58
2:D8:230:LEU:HD21	2:D8:368:LEU:HD11	1.86	0.58
2:E0:259:LEU:HD21	2:E0:316:CYS:HB2	1.84	0.58
3:E5:267:LEU:HD12	3:E5:301:CYS:HB3	1.86	0.58
2:E8:269:LEU:HD21	2:E8:384:ILE:HD11	1.85	0.58
2:E8:311:LYS:HE2	2:E8:344:VAL:HA	1.86	0.58
2:B0:177:VAL:HA	3:B1:347:ASN:HD22	1.68	0.58
2:C6:130:THR:HG22	2:C6:131:GLY:N	2.18	0.58
2:C6:136:LEU:HD22	2:C6:167:LEU:HD23	1.85	0.58
2:C6:236:SER:O	2:C6:243:ARG:NH2	2.36	0.58
3:E9:175:VAL:HG11	2:F0:329:ASN:ND2	2.19	0.58
2:A4:164:LYS:NZ	2:A4:165:SER:O	2.37	0.58
2:C2:250:VAL:HG23	2:C2:352:LYS:HZ3	1.69	0.58
3:C3:289:LEU:HD12	3:C3:365:VAL:HG12	1.85	0.58
3:C7:97:ALA:HB3	3:C7:143:THR:HG22	1.86	0.58
2:D6:210:TYR:CE1	2:D6:227:LEU:HD11	2.38	0.58
1:18:243:ALA:HB2	3:E5:357:PRO:HD2	1.86	0.57
2:B2:406:HIS:HA	2:B2:409:VAL:HG12	1.86	0.57
3:B5:281:TYR:HA	3:B9:58:ARG:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:221:THR:HG22	3:C1:223:GLY:H	1.69	0.57
3:C9:211:CYS:CB	2:D0:326:LYS:NZ	2.67	0.57
3:D5:7:VAL:HG11	3:D5:151:LEU:CD2	2.33	0.57
1:13:247:TYR:CD1	2:D4:77:GLU:HB3	2.39	0.57
2:A0:309:HIS:NE2	2:A0:386:GLU:OE2	2.35	0.57
3:A5:33:THR:O	3:A5:58:ARG:NH2	2.38	0.57
2:C2:168:ASN:HD22	2:C2:198:THR:HG21	1.68	0.57
2:C6:221:ARG:HB3	3:C7:322:SER:HB3	1.86	0.57
2:D8:178:SER:H	3:D9:347:ASN:HD22	1.51	0.57
2:E4:100:ALA:CB	3:E5:251:ARG:CG	2.67	0.57
2:E8:101:ASN:HB3	2:E8:182:VAL:HG21	1.85	0.57
2:A6:283:HIS:HD2	2:B0:60:LYS:CE	2.17	0.57
2:E0:163:LYS:HE2	2:E0:163:LYS:CA	2.34	0.57
3:E9:398:TYR:HB3	3:E9:403:MET:HG3	1.85	0.57
2:A0:88:HIS:HB3	2:A0:91:GLN:HB2	1.85	0.57
3:A1:212:PHE:CZ	2:A2:326:LYS:HB3	2.39	0.57
2:A6:174:SER:HB3	2:A6:207:GLU:HG2	1.86	0.57
2:B2:120:ASP:OD1	2:B2:123:ARG:NH2	2.37	0.57
3:B7:256:ASN:O	3:B7:256:ASN:ND2	2.37	0.57
2:C2:10:GLY:HA2	2:C2:145:THR:HG23	1.86	0.57
2:C4:70:LEU:HD13	2:C4:95:GLY:HA3	1.85	0.57
2:C4:269:LEU:HD11	2:C4:384:ILE:HD11	1.85	0.57
3:C5:107:THR:OG1	3:C5:401:GLU:OE2	2.22	0.57
3:C9:7:VAL:HB	3:C9:135:ILE:HG12	1.87	0.57
3:D1:386:THR:O	3:D1:390:ARG:HG3	2.04	0.57
3:D7:334:GLN:HE21	3:D7:349:MET:HG2	1.67	0.57
2:F0:363:VAL:HG23	2:F0:366:GLY:HA3	1.87	0.57
3:A1:52:ASN:ND2	3:A1:123:GLU:OE2	2.32	0.57
2:B8:175:PRO:HB3	2:B8:390:ARG:HH21	1.70	0.57
2:C2:255:PHE:HB3	2:C2:259:LEU:HD12	1.86	0.57
2:D6:12:ALA:CB	2:D6:140:ALA:HB2	2.33	0.57
2:D6:222:PRO:O	3:D7:324:LYS:NZ	2.37	0.57
3:F1:184:ASN:OD1	3:F1:398:TYR:OH	2.22	0.57
1:8:257:PRO:HG3	2:C0:26:LEU:HD22	1.85	0.57
2:A0:3:GLU:OE2	2:A0:64:ARG:NH1	2.38	0.57
2:A0:394:LYS:HG2	3:A1:346:PRO:HG3	1.86	0.57
3:A5:27:GLU:OE1	3:A5:241:ARG:NH2	2.38	0.57
2:B0:178:SER:H	3:B1:347:ASN:HD22	1.53	0.57
2:B2:11:GLN:HE22	3:B3:246:LEU:HD13	1.68	0.57
3:B3:179:VAL:CG1	2:B4:258:ASN:HA	2.34	0.57
2:B8:178:SER:HB3	3:B9:347:ASN:ND2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C4:271:SER:HB3	2:C4:377:MET:HB3	1.86	0.57
3:D3:397:TRP:NE1	2:D4:256:GLN:OE1	2.37	0.57
3:D5:23:VAL:HG11	3:D5:230:SER:HB2	1.86	0.57
2:A6:208:ALA:HB2	2:A6:304:LYS:HG2	1.85	0.57
2:B6:329:ASN:HA	2:B6:332:VAL:HG12	1.85	0.57
2:B8:11:GLN:NE2	3:B9:246:LEU:HD12	2.19	0.57
3:C9:244:GLY:HA2	3:C9:355:ASP:HB2	1.87	0.57
3:D3:68:LEU:HB3	3:D3:96:GLY:HA2	1.86	0.57
2:F0:96:LYS:NZ	3:F1:128:ASP:OD2	2.30	0.57
2:A2:282:TYR:CD2	2:A6:60:LYS:NZ	2.60	0.57
3:A3:207:LEU:HB3	3:A3:225:LEU:HD22	1.87	0.57
2:A6:339:ARG:HG2	2:A6:339:ARG:NH1	2.18	0.57
2:A8:138:PHE:HZ	2:A8:235:ILE:HD13	1.68	0.57
2:A8:241:SER:HB2	2:A8:249:ASN:HB2	1.86	0.57
3:C1:283:ALA:HA	3:C5:55:THR:OG1	2.05	0.57
2:D6:219:ILE:HG22	2:D6:222:PRO:HD3	1.87	0.57
2:D8:69:ASP:OD1	2:D8:70:LEU:N	2.37	0.57
3:D9:412:GLU:O	3:D9:416:ASN:ND2	2.38	0.57
2:E4:223:THR:HG1	3:E5:245:GLN:HE22	1.48	0.57
2:E4:338:LYS:HZ3	2:E4:340:THR:HG22	1.70	0.57
3:F1:49:VAL:HG11	3:F1:241:ARG:HG2	1.87	0.57
2:A6:241:SER:OG	2:A6:250:VAL:O	2.21	0.57
2:B4:223:THR:CG2	2:B4:225:THR:HG22	2.34	0.57
2:B4:234:VAL:HG21	2:B4:302:MET:HE1	1.86	0.57
2:C2:259:LEU:HD21	2:C2:316:CYS:HB2	1.86	0.57
3:C3:105:HIS:HE1	3:C3:191:GLN:HE22	1.51	0.57
3:C5:68:LEU:HD12	3:C5:97:ALA:HB2	1.86	0.57
3:D9:135:ILE:HG22	3:D9:137:HIS:HD2	1.70	0.57
3:F1:210:ILE:HD11	3:F1:298:ASN:HA	1.87	0.57
3:C5:69:GLU:HG2	2:C6:2:ARG:HH22	1.70	0.57
2:C6:97:GLU:OE2	2:C6:105:ARG:NH2	2.30	0.57
2:D4:105:ARG:HH12	3:D5:251:ARG:CD	2.18	0.57
2:D6:283:HIS:CD2	2:E0:60:LYS:NZ	2.73	0.57
2:D6:286:LEU:O	2:D6:373:ARG:NH1	2.32	0.57
2:E4:319:TYR:HB3	2:E4:323:VAL:HG21	1.87	0.57
3:E5:179:VAL:CG2	2:E6:350:GLY:HA2	2.35	0.57
1:17:246:CYS:HB2	3:E3:320:ARG:NH2	2.20	0.56
3:A7:253:LEU:HD21	3:A7:316:MET:SD	2.45	0.56
2:B0:221:ARG:C	3:B1:322:SER:HB2	2.26	0.56
2:B8:109:THR:HG22	2:B8:110:ILE:HG23	1.87	0.56
2:E4:272:TYR:HB3	2:E4:275:ILE:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E7:156:ARG:NH1	3:E7:162:ARG:O	2.37	0.56
3:F1:200:GLN:HG3	3:F1:268:ILE:HD11	1.87	0.56
3:F1:238:CYS:SG	3:F1:239:CYS:N	2.78	0.56
1:11:239:LEU:HG	1:11:240:PRO:HD2	1.86	0.56
1:21:244:GLN:O	3:F1:320:ARG:NH2	2.39	0.56
1:5:248:ARG:HH12	3:B5:42:LEU:HD21	1.70	0.56
2:A0:403:ALA:HA	3:A1:260:PHE:CZ	2.40	0.56
3:A3:7:VAL:HG11	3:A3:151:LEU:CD2	2.35	0.56
3:B3:10:GLY:HA2	3:B3:143:THR:HG23	1.86	0.56
3:B5:12:CYS:SG	3:B5:138:SER:OG	2.63	0.56
3:B5:218:THR:HG23	3:B5:219:THR:HG23	1.88	0.56
3:C5:69:GLU:HG2	2:C6:2:ARG:NH2	2.19	0.56
3:C7:156:ARG:HG2	3:C7:195:ASN:HB2	1.87	0.56
3:D5:324:LYS:HA	3:D5:327:ASP:HB2	1.87	0.56
3:E1:172:SER:HB3	3:E1:205:GLU:HG2	1.87	0.56
3:E1:291:GLN:HB2	3:E5:122:LYS:NZ	2.20	0.56
2:F0:403:ALA:HA	3:F1:260:PHE:HE1	1.70	0.56
1:13:254:LYS:HB3	1:13:255:PRO:HD2	1.88	0.56
1:16:247:TYR:HE2	2:E0:81:GLY:HA3	1.67	0.56
2:A2:207:GLU:HG3	2:A2:304:LYS:HE3	1.87	0.56
2:A8:11:GLN:HE22	3:A9:246:LEU:HD12	1.70	0.56
2:B2:286:LEU:O	2:B2:373:ARG:NH1	2.33	0.56
3:B3:176:SER:CB	2:B4:349:THR:HG23	2.34	0.56
3:B5:330:MET:HE3	3:B5:349:MET:HB3	1.88	0.56
3:B7:281:TYR:CD2	3:C1:87:PRO:HD2	2.40	0.56
3:B7:283:ALA:HA	3:C1:55:THR:HG23	1.85	0.56
2:B8:240:ALA:HB1	2:B8:356:ASN:HD22	1.70	0.56
2:C6:188:VAL:HG13	2:C6:425:LEU:HD23	1.86	0.56
3:C9:323:THR:HA	3:C9:326:VAL:HG12	1.87	0.56
2:D0:223:THR:OG1	3:D1:245:GLN:NE2	2.38	0.56
2:D2:136:LEU:HD23	2:D2:235:ILE:HD11	1.87	0.56
2:D6:276:ILE:HD12	2:D6:281:ALA:HA	1.86	0.56
3:D9:173:PRO:HB3	3:D9:380:ARG:CZ	2.35	0.56
2:E0:96:LYS:HD3	3:E1:128:ASP:OD2	2.06	0.56
2:E2:88:HIS:HB3	2:E2:91:GLN:HG2	1.85	0.56
3:E3:385:PHE:HE2	3:E3:412:GLU:HB3	1.70	0.56
2:E6:101:ASN:HB3	2:E6:182:VAL:HG11	1.87	0.56
3:A1:210:ILE:HD11	3:A1:228:LEU:HD21	1.88	0.56
2:A2:356:ASN:OD1	2:A2:358:GLN:NE2	2.38	0.56
2:A8:262:TYR:HB3	2:A8:263:PRO:CD	2.34	0.56
2:A4:178:SER:N	3:A5:347:ASN:HD22	1.98	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:172:SER:HB3	3:A5:205:GLU:HG2	1.88	0.56
2:A8:221:ARG:HG2	3:A9:322:SER:HB3	1.88	0.56
3:C1:165:GLU:OE2	3:C1:200:GLN:NE2	2.39	0.56
2:C2:202:VAL:HA	2:C2:268:MET:HB2	1.86	0.56
2:C4:277:SER:OG	2:C4:278:ALA:N	2.38	0.56
2:E4:407:TRP:CH2	3:E5:197:ASP:OD2	2.58	0.56
3:E5:212:PHE:CD2	2:E6:326:LYS:HE3	2.40	0.56
3:E7:68:LEU:HD12	3:E7:143:THR:HG22	1.86	0.56
2:A2:253:THR:O	2:A2:256:GLN:NE2	2.39	0.56
3:A7:117:LEU:HA	3:A7:120:VAL:HG12	1.88	0.56
2:B2:107:HIS:NE2	2:B2:151:CYS:SG	2.78	0.56
3:D1:375:GLN:HG3	3:D1:419:VAL:HG13	1.87	0.56
3:D9:68:LEU:HD23	3:D9:112:LEU:HD13	1.85	0.56
3:E3:180:VAL:O	3:E3:184:ASN:ND2	2.38	0.56
3:E3:283:ALA:HA	3:E7:55:THR:HB	1.87	0.56
2:E6:76:ASP:OD1	2:E6:79:ARG:NH2	2.39	0.56
2:E6:339:ARG:NH2	2:E6:342:GLN:OE1	2.38	0.56
2:B6:88:HIS:HB3	2:B6:91:GLN:HG3	1.88	0.56
2:C2:7:ILE:HG22	2:C2:9:VAL:HG23	1.86	0.56
2:D8:2:ARG:HG3	2:D8:51:THR:HG22	1.88	0.56
3:E5:172:SER:OG	3:E5:175:VAL:O	2.22	0.56
2:B4:56:THR:O	2:B4:60:LYS:HB3	2.04	0.56
2:C0:202:VAL:HA	2:C0:268:MET:HB2	1.88	0.56
3:C5:207:LEU:HB3	3:C5:225:LEU:HD12	1.87	0.56
3:D5:95:THR:OG1	3:D5:108:GLU:OE2	2.24	0.56
3:E1:311:LEU:HD12	3:E1:342:VAL:HG11	1.87	0.56
2:A8:282:TYR:O	2:B2:60:LYS:NZ	2.39	0.56
2:B6:221:ARG:HB3	3:B7:322:SER:CB	2.36	0.56
2:B8:88:HIS:HB3	2:B8:91:GLN:HG3	1.88	0.56
2:B0:115:VAL:HG21	2:B0:152:LEU:HD22	1.87	0.56
3:B1:260:PHE:HB3	3:B1:261:PRO:HD2	1.88	0.56
3:B5:132:GLY:HA3	3:B5:163:ILE:HG22	1.88	0.56
3:C3:249:ASP:H	3:C3:252:LYS:HB2	1.71	0.56
2:C4:287:SER:OG	2:C4:290:GLU:OE1	2.21	0.56
2:E4:394:LYS:HG2	3:E5:346:PRO:CG	2.36	0.56
2:E6:71:GLU:HB2	2:E6:98:ASP:HB3	1.88	0.56
3:F1:358:PRO:HG2	3:F1:361:LEU:HB3	1.88	0.56
3:A5:219:THR:CB	2:A6:324:VAL:HG21	2.33	0.55
2:B8:175:PRO:HB3	2:B8:390:ARG:NH2	2.20	0.55
2:C2:404:PHE:CD1	3:C3:259:PRO:HA	2.41	0.55
2:C4:236:SER:O	2:C4:243:ARG:NH2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C6:309:HIS:NE2	2:C6:386:GLU:OE1	2.39	0.55
2:D4:309:HIS:NE2	2:D4:386:GLU:OE1	2.38	0.55
2:A2:372:MET:HA	2:A2:372:MET:HE3	1.87	0.55
2:D6:222:PRO:HD2	3:D7:324:LYS:NZ	2.20	0.55
3:E7:211:CYS:SG	3:E7:220:PRO:HG3	2.46	0.55
1:3:251:TYR:HE1	2:B0:22:GLU:OE2	1.89	0.55
3:B5:27:GLU:OE1	3:B5:318:ARG:NH2	2.35	0.55
3:C3:68:LEU:HA	3:C3:93:GLY:HA3	1.88	0.55
2:C4:71:GLU:HG2	2:C4:73:THR:HG22	1.87	0.55
3:C9:66:MET:CE	3:C9:151:LEU:HD22	2.35	0.55
2:D0:90:GLU:HG3	2:D0:121:ARG:HD3	1.88	0.55
3:D9:283:ALA:HA	3:E3:55:THR:CG2	2.37	0.55
2:E4:97:GLU:HG3	3:E5:129:CYS:SG	2.46	0.55
3:E5:113:ILE:HA	3:E5:116:VAL:HG12	1.87	0.55
2:E6:230:LEU:HD22	2:E6:275:ILE:HD12	1.88	0.55
3:A1:130:LEU:O	3:A1:162:ARG:NH1	2.37	0.55
3:A5:77:ARG:HG3	3:A5:90:PHE:HE2	1.71	0.55
2:B0:71:GLU:HG2	2:B0:73:THR:HG22	1.88	0.55
3:B1:68:LEU:HB3	3:B1:96:GLY:HA2	1.88	0.55
3:B9:11:GLN:HA	3:B9:72:THR:HG21	1.87	0.55
3:C1:263:LEU:HB2	3:C1:422:TYR:CZ	2.41	0.55
2:C2:306:ASP:OD1	2:C2:308:ARG:NH1	2.40	0.55
2:C8:12:ALA:CB	2:C8:140:ALA:HB2	2.35	0.55
2:D0:283:HIS:HA	2:D4:60:LYS:NZ	2.21	0.55
3:D3:172:SER:HB3	3:D3:205:GLU:HG2	1.87	0.55
3:D7:117:LEU:HA	3:D7:120:VAL:HG12	1.87	0.55
3:D9:313:ALA:HB3	3:D9:349:MET:HG2	1.87	0.55
2:E8:2:ARG:HE	2:E8:133:GLN:HE21	1.55	0.55
1:23:255:PRO:HD2	2:C4:364:PRO:HB2	1.88	0.55
2:A0:242:LEU:HD21	2:A0:251:ASP:CB	2.37	0.55
3:A7:180:VAL:O	3:A7:184:ASN:ND2	2.39	0.55
2:B6:221:ARG:HB3	3:B7:322:SER:HB2	1.88	0.55
3:C3:100:ASN:HB3	3:C3:103:LYS:HG2	1.88	0.55
3:C3:259:PRO:HG2	3:C3:311:LEU:CD2	2.35	0.55
3:C5:6:HIS:CD2	3:C5:134:GLN:HG3	2.41	0.55
2:E0:222:PRO:HG2	3:E1:324:LYS:HB2	1.88	0.55
3:E7:49:VAL:HG11	3:E7:241:ARG:HG2	1.88	0.55
2:A0:268:MET:N	2:A0:268:MET:SD	2.80	0.55
2:A6:30:ILE:HG22	2:A6:36:MET:HB3	1.88	0.55
2:C4:97:GLU:OE2	2:C4:105:ARG:NH2	2.31	0.55
2:C4:288:VAL:HA	2:C4:291:ILE:HG12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D2:69:ASP:OD1	2:D2:70:LEU:N	2.38	0.55
3:A3:117:LEU:HA	3:A3:120:VAL:HG12	1.89	0.55
3:C3:192:LEU:HD11	3:C3:199:VAL:HG21	1.89	0.55
3:C3:380:ARG:HH11	3:C3:381:VAL:HG23	1.72	0.55
3:D5:238:CYS:SG	3:D5:318:ARG:NE	2.79	0.55
2:D6:33:ASP:O	2:D6:60:LYS:NZ	2.38	0.55
3:D9:11:GLN:O	3:D9:15:GLN:HG3	2.06	0.55
2:E4:68:LEU:HD11	2:E4:118:SER:HB2	1.87	0.55
1:6:247:TYR:HE2	2:B6:81:GLY:CA	2.20	0.55
2:A2:102:ASN:HB2	2:A2:105:ARG:HB2	1.89	0.55
2:A6:403:ALA:HA	3:A7:260:PHE:HE1	1.69	0.55
2:B6:178:SER:HB3	3:B7:347:ASN:ND2	2.21	0.55
2:B6:394:LYS:HG2	3:B7:346:PRO:HG3	1.89	0.55
3:B9:55:THR:HG23	3:B9:55:THR:O	2.07	0.55
2:D4:214:ARG:CB	3:D5:324:LYS:NZ	2.62	0.55
3:E9:121:ARG:NH2	3:E9:158:GLU:OE2	2.40	0.55
3:F1:248:SER:OG	3:F1:350:LYS:NZ	2.39	0.55
2:A0:339:ARG:O	2:A0:342:GLN:NE2	2.40	0.55
2:B2:269:LEU:HD11	2:B2:384:ILE:HD11	1.89	0.55
3:B3:220:PRO:O	2:B4:325:PRO:HD2	2.07	0.55
2:B8:11:GLN:HE22	3:B9:246:LEU:CD1	2.20	0.55
3:D3:101:TRP:NE1	3:D3:145:SER:O	2.40	0.55
3:D3:129:CYS:SG	3:D3:162:ARG:NH2	2.80	0.55
3:D7:322:SER:OG	3:D7:325:GLU:OE2	2.24	0.55
2:E4:210:TYR:CD1	3:E5:324:LYS:HG3	2.42	0.55
2:A8:285:GLN:HG3	2:A8:286:LEU:N	2.21	0.55
2:B0:138:PHE:HZ	2:B0:235:ILE:HD12	1.72	0.55
2:C0:207:GLU:HA	2:C0:210:TYR:HB2	1.89	0.55
2:C0:306:ASP:N	2:C0:386:GLU:OE2	2.40	0.55
2:C2:406:HIS:CE1	3:C3:261:PRO:HB3	2.42	0.55
3:E1:49:VAL:HG21	3:E1:241:ARG:HG2	1.89	0.55
3:E3:215:LEU:HD21	3:E3:273:LEU:HD22	1.87	0.55
3:A3:77:ARG:HH22	3:A3:92:PHE:HZ	1.54	0.54
2:A6:323:VAL:HG13	2:A6:355:ILE:HG23	1.88	0.54
3:A7:259:PRO:HG2	3:A7:311:LEU:HD21	1.89	0.54
2:A8:71:GLU:HB2	2:A8:98:ASP:OD1	2.06	0.54
2:B0:73:THR:HG21	3:B1:2:ARG:HH22	1.72	0.54
3:B3:152:ILE:HG23	3:B3:164:MET:HE1	1.89	0.54
3:C5:12:CYS:HB3	3:C5:138:SER:HB3	1.88	0.54
3:C9:220:PRO:HG2	2:D0:326:LYS:CE	2.36	0.54
2:D2:269:LEU:HD11	2:D2:384:ILE:HD11	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D3:91:VAL:HG21	3:D3:116:VAL:HG22	1.89	0.54
2:A6:109:THR:HG21	2:A6:411:GLU:HB2	1.88	0.54
2:B8:406:HIS:HA	2:B8:409:VAL:HG12	1.89	0.54
2:C4:339:ARG:O	2:C4:342:GLN:NE2	2.40	0.54
2:C6:262:TYR:HB3	2:C6:263:PRO:HD2	1.89	0.54
2:C8:386:GLU:OE1	2:C8:390:ARG:NH1	2.41	0.54
2:D6:283:HIS:CD2	2:E0:60:LYS:HZ1	2.25	0.54
2:E4:241:SER:HB2	2:E4:249:ASN:HB2	1.89	0.54
2:F0:80:THR:HA	2:F0:84:ARG:HE	1.72	0.54
2:A0:356:ASN:OD1	2:A0:358:GLN:NE2	2.40	0.54
3:A5:176:SER:CB	2:A6:349:THR:HB	2.38	0.54
2:B2:163:LYS:H	2:B2:163:LYS:HD3	1.73	0.54
2:D2:182:VAL:HG11	3:D3:255:VAL:CG1	2.37	0.54
2:D4:214:ARG:HB2	3:D5:324:LYS:HZ1	1.67	0.54
3:D5:100:ASN:ND2	3:D5:397:TRP:O	2.41	0.54
2:D8:123:ARG:NH1	2:D8:160:ASP:OD2	2.37	0.54
2:D8:238:LEU:HD11	2:D8:255:PHE:CE2	2.42	0.54
3:E1:10:GLY:O	3:E1:14:ASN:ND2	2.40	0.54
2:E8:236:SER:O	2:E8:243:ARG:NH2	2.38	0.54
2:A0:406:HIS:HE1	3:A1:259:PRO:O	1.91	0.54
2:A6:178:SER:H	3:A7:347:ASN:ND2	2.04	0.54
3:A7:318:ARG:HH11	3:A7:358:PRO:HD3	1.72	0.54
3:C3:10:GLY:O	3:C3:14:ASN:ND2	2.41	0.54
2:C6:304:LYS:O	2:C6:304:LYS:HD3	2.08	0.54
3:C9:281:TYR:CE1	3:D3:58:ARG:CZ	2.89	0.54
3:D3:179:VAL:HG12	2:D4:258:ASN:OD1	2.07	0.54
3:D9:200:GLN:HB3	3:D9:268:ILE:HD12	1.88	0.54
3:E3:64:ILE:HD12	3:E3:119:VAL:HG12	1.89	0.54
3:E5:113:ILE:HD11	3:E5:147:MET:HG3	1.89	0.54
3:B7:100:ASN:HB3	3:B7:103:LYS:HD3	1.89	0.54
3:C5:68:LEU:HA	3:C5:93:GLY:HA3	1.89	0.54
3:C5:135:ILE:HG12	3:C5:166:THR:HG22	1.89	0.54
2:C6:26:LEU:HD21	2:C6:363:VAL:HG12	1.89	0.54
2:C6:276:ILE:HD12	2:C6:281:ALA:HA	1.90	0.54
2:C8:259:LEU:HD21	2:C8:316:CYS:HB2	1.90	0.54
2:A6:22:GLU:OE2	2:A6:229:ARG:NH1	2.41	0.54
2:A8:288:VAL:HG21	2:A8:323:VAL:HG13	1.88	0.54
2:B4:404:PHE:CE1	3:B5:259:PRO:HA	2.42	0.54
3:B9:11:GLN:HG3	3:B9:12:CYS:N	2.23	0.54
3:C1:248:SER:HA	3:C1:252:LYS:HG3	1.90	0.54
3:C7:139:LEU:HD13	3:C7:168:SER:HB2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:49:VAL:HG21	3:D5:241:ARG:HG2	1.89	0.54
2:D8:12:ALA:HB3	2:D8:140:ALA:HB2	1.89	0.54
2:E0:76:ASP:HA	2:E0:79:ARG:HD2	1.89	0.54
2:E0:223:THR:CG2	2:E0:225:THR:HG22	2.38	0.54
2:E4:178:SER:HB3	3:E5:347:ASN:CB	2.37	0.54
3:E5:318:ARG:HG2	3:E5:354:CYS:HB3	1.89	0.54
3:F1:113:ILE:HA	3:F1:116:VAL:HG12	1.88	0.54
1:22:251:TYR:OH	2:C6:225:THR:OG1	2.24	0.54
3:A9:292:GLN:O	3:A9:298:ASN:ND2	2.41	0.54
3:B9:311:LEU:HD12	3:B9:342:VAL:HG11	1.87	0.54
3:C3:54:ALA:HB3	3:C3:58:ARG:HG2	1.89	0.54
2:C4:401:LYS:NZ	3:C5:425:TYR:CE1	2.76	0.54
3:D1:66:MET:HE3	3:D1:151:LEU:HD22	1.89	0.54
2:E4:210:TYR:CD1	3:E5:324:LYS:CB	2.90	0.54
2:F0:208:ALA:HB2	2:F0:304:LYS:HB2	1.89	0.54
1:18:251:TYR:CE1	2:E4:22:GLU:HB2	2.43	0.54
3:A5:6:HIS:HD1	3:A5:21:TRP:HE1	1.55	0.54
2:A8:33:ASP:O	2:A8:60:LYS:NZ	2.41	0.54
3:A9:68:LEU:HG	3:A9:147:MET:HE1	1.88	0.54
3:A9:163:ILE:HD13	3:A9:250:LEU:HB3	1.90	0.54
2:C4:181:VAL:HG12	3:C5:256:ASN:CB	2.38	0.54
2:C6:186:ASN:OD1	2:C6:408:TYR:OH	2.25	0.54
2:C8:282:TYR:O	2:D2:60:LYS:NZ	2.33	0.54
2:D0:107:HIS:NE2	2:D0:151:CYS:SG	2.78	0.54
2:D2:229:ARG:HG3	2:D2:229:ARG:HH11	1.73	0.54
2:D6:69:ASP:OD1	2:D6:70:LEU:N	2.40	0.54
3:D7:135:ILE:HB	3:D7:166:THR:HG22	1.90	0.54
2:E4:223:THR:CG2	2:E4:225:THR:HG22	2.36	0.54
2:E4:422:ARG:HH12	2:E4:426:ALA:HB2	1.72	0.54
3:F1:43:GLN:HA	3:F1:242:PHE:HE1	1.72	0.54
3:A1:193:VAL:HG12	3:A1:265:PHE:CE2	2.43	0.54
3:A1:341:PHE:HB3	3:A1:348:ASN:HD22	1.72	0.54
2:A6:285:GLN:HB2	2:B0:57:GLY:H	1.72	0.54
3:A7:73:MET:HG3	3:A7:90:PHE:HD2	1.73	0.54
3:A9:192:LEU:CD2	3:A9:199:VAL:HG21	2.38	0.54
3:C1:192:LEU:HD11	3:C1:199:VAL:HG11	1.89	0.54
2:D4:283:HIS:HD2	2:D8:60:LYS:CE	2.20	0.54
2:D6:11:GLN:NE2	2:D6:15:GLN:OE1	2.39	0.54
3:D7:128:ASP:OD1	3:D7:129:CYS:N	2.36	0.54
2:E2:242:LEU:HD11	2:E2:252:VAL:HG23	1.90	0.54
2:F0:269:LEU:HD11	2:F0:384:ILE:HD11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:10:241:PHE:HB2	3:C9:359:LYS:HG2	1.89	0.54
1:18:248:ARG:HH12	3:E5:42:LEU:CD2	2.15	0.54
2:A4:220:GLU:HG2	2:A4:221:ARG:HG3	1.88	0.54
3:B1:292:GLN:NE2	3:B1:298:ASN:OD1	2.40	0.54
2:D0:8:HIS:CD2	2:D0:17:GLY:HA3	2.42	0.54
2:E0:244:PHE:HB2	2:E0:356:ASN:HD21	1.70	0.54
3:E1:281:TYR:O	3:E5:54:ALA:HB1	2.07	0.54
2:E2:96:LYS:NZ	3:E3:1:MET:N	2.55	0.54
3:E7:257:LEU:HD21	3:E7:314:SER:HB3	1.89	0.54
3:E9:220:PRO:HD2	2:F0:326:LYS:CE	2.38	0.54
3:A3:311:LEU:HD12	3:A3:342:VAL:HG11	1.89	0.53
2:B6:262:TYR:HB2	2:B6:265:ILE:HD12	1.90	0.53
2:C0:2:ARG:NH2	2:C0:133:GLN:OE1	2.38	0.53
2:C2:267:PHE:O	2:C2:380:ASN:ND2	2.42	0.53
2:E8:252:VAL:HA	2:E8:255:PHE:HD2	1.72	0.53
3:F1:139:LEU:HA	3:F1:145:SER:HB2	1.89	0.53
1:15:256:LEU:HD21	2:D8:31:GLN:CD	2.29	0.53
3:A1:139:LEU:HD13	3:A1:168:SER:HB2	1.90	0.53
3:A5:113:ILE:HG22	3:A5:154:LYS:HE2	1.90	0.53
3:B9:12:CYS:HB3	3:B9:138:SER:HB2	1.90	0.53
3:D5:192:LEU:HD21	3:D5:199:VAL:HG11	1.90	0.53
2:E6:180:ALA:HB3	2:E6:183:GLU:HB3	1.90	0.53
2:E8:137:MET:HE3	2:E8:154:LEU:HD12	1.89	0.53
2:E8:178:SER:HB3	2:E8:183:GLU:HG3	1.90	0.53
1:23:257:PRO:HG2	2:C4:26:LEU:CD1	2.38	0.53
2:B4:188:VAL:HG23	2:B4:425:LEU:HD22	1.90	0.53
2:C0:217:LEU:HD21	2:C0:275:ILE:HG13	1.91	0.53
2:C8:276:ILE:HG23	2:C8:280:LYS:HB2	1.91	0.53
2:D0:224:TYR:HB2	3:D1:245:GLN:OE1	2.09	0.53
3:D7:396:HIS:HA	3:D7:399:THR:HG22	1.89	0.53
2:E2:185:TYR:HE2	2:E2:404:PHE:HB2	1.73	0.53
2:E6:176:GLN:HB3	3:E7:331:LEU:HD11	1.91	0.53
3:E7:284:LEU:HB3	3:E7:362:LYS:HE3	1.90	0.53
2:A0:382:THR:HG22	2:A0:382:THR:O	2.07	0.53
2:A2:126:ALA:HB1	2:A2:132:LEU:HD22	1.90	0.53
2:A2:324:VAL:HG12	2:A2:326:LYS:H	1.74	0.53
2:A4:119:LEU:HD13	2:A4:122:ILE:HD11	1.90	0.53
2:A6:79:ARG:NH1	2:A6:94:SER:OG	2.42	0.53
2:A6:283:HIS:CD2	2:B0:60:LYS:HE2	2.42	0.53
3:B3:176:SER:HB2	2:B4:349:THR:HG23	1.90	0.53
2:B8:53:PHE:HB3	2:B8:61:HIS:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B9:49:VAL:HG11	3:B9:241:ARG:HG2	1.90	0.53
3:B9:128:ASP:OD1	3:B9:129:CYS:N	2.37	0.53
3:C5:167:PHE:CD2	3:C5:233:MET:HG2	2.43	0.53
2:C6:352:LYS:NZ	2:C6:353:CYS:O	2.41	0.53
3:C9:334:GLN:HE22	3:C9:348:ASN:H	1.56	0.53
2:D4:407:TRP:CH2	3:D5:258:ILE:HB	2.39	0.53
3:D9:238:CYS:SG	3:D9:318:ARG:NE	2.82	0.53
2:E2:96:LYS:NZ	3:E3:128:ASP:HB2	2.20	0.53
2:E4:10:GLY:HA2	2:E4:145:THR:HG23	1.90	0.53
3:E5:175:VAL:HG11	2:E6:332:VAL:CG1	2.26	0.53
3:E7:186:THR:HG22	3:E7:415:MET:SD	2.49	0.53
1:19:250:GLU:HG3	2:E6:225:THR:HG21	1.90	0.53
1:23:250:GLU:OE2	2:C4:225:THR:HG21	2.08	0.53
2:A4:48:ALA:HB1	2:A4:243:ARG:O	2.09	0.53
3:B1:2:ARG:NH1	3:B1:249:ASP:OD2	2.42	0.53
2:C4:290:GLU:HA	2:C4:293:ASN:HB2	1.89	0.53
2:C6:277:SER:OG	2:C6:278:ALA:N	2.40	0.53
2:E0:176:GLN:CB	3:E1:331:LEU:HD13	2.23	0.53
2:E6:277:SER:OG	2:E6:278:ALA:N	2.42	0.53
3:E7:311:LEU:HD12	3:E7:342:VAL:HG11	1.90	0.53
2:A0:18:ASN:HD21	2:A0:78:VAL:HG22	1.74	0.53
3:A9:345:ILE:O	3:A9:348:ASN:ND2	2.41	0.53
2:B2:230:LEU:HD21	2:B2:368:LEU:HD11	1.91	0.53
3:B3:372:THR:HG21	3:B3:426:GLN:HB3	1.91	0.53
2:D2:11:GLN:HE22	3:D3:246:LEU:CD1	2.21	0.53
2:D2:207:GLU:HA	2:D2:210:TYR:HB2	1.90	0.53
2:D4:262:TYR:HB3	2:D4:263:PRO:HD2	1.89	0.53
3:E1:291:GLN:HB2	3:E5:122:LYS:HZ3	1.74	0.53
3:E7:139:LEU:HA	3:E7:145:SER:HB2	1.90	0.53
2:E8:296:PHE:CE2	2:E8:335:ILE:HG21	2.43	0.53
2:B0:394:LYS:CD	3:B1:346:PRO:HG3	2.24	0.53
3:B3:336:LYS:HA	3:B3:336:LYS:CE	2.39	0.53
2:B4:404:PHE:CZ	3:B5:259:PRO:HA	2.44	0.53
2:C4:287:SER:HA	2:C4:373:ARG:HH21	1.73	0.53
3:D1:282:ARG:NH1	3:D1:288:GLU:OE2	2.41	0.53
3:F1:330:MET:HG2	3:F1:349:MET:HG2	1.91	0.53
1:16:246:CYS:CB	3:E1:320:ARG:NH2	2.72	0.53
3:A5:128:ASP:OD1	3:A5:129:CYS:N	2.38	0.53
2:B6:132:LEU:HB3	2:B6:164:LYS:HE2	1.91	0.53
2:C0:286:LEU:O	2:C0:373:ARG:NH1	2.42	0.53
3:C3:35:THR:OG1	3:C3:36:TYR:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C3:73:MET:HB3	3:C3:77:ARG:HH22	1.73	0.53
3:C9:281:TYR:CE1	3:D3:58:ARG:NH1	2.77	0.53
2:E4:224:TYR:HE2	3:E5:246:LEU:HD13	1.74	0.53
2:E6:223:THR:HG23	2:E6:225:THR:HG22	1.90	0.53
3:B3:3:GLU:HA	3:B3:49:VAL:HA	1.90	0.53
2:B4:178:SER:HG	2:B4:180:ALA:H	1.55	0.53
3:B7:175:VAL:HG21	2:B8:332:VAL:HG13	1.90	0.53
3:C5:213:ARG:HH22	3:C5:297:LYS:HG3	1.72	0.53
2:C6:240:ALA:HB1	2:C6:356:ASN:HD22	1.74	0.53
3:C7:83:GLN:OE1	3:C7:83:GLN:N	2.42	0.53
3:C9:293:MET:SD	3:C9:365:VAL:HG11	2.49	0.53
3:D1:173:PRO:HD3	3:D1:380:ARG:CZ	2.38	0.53
2:E0:73:THR:HB	3:E1:46:ARG:HH22	1.74	0.53
2:E4:71:GLU:HB3	2:E4:98:ASP:HB2	1.90	0.53
2:F0:265:ILE:HG23	2:F0:432:TYR:HE1	1.74	0.53
1:22:254:LYS:HB3	1:22:255:PRO:HD2	1.91	0.53
2:A2:101:ASN:HB2	3:A3:255:VAL:CG1	2.39	0.53
2:A8:102:ASN:HB2	2:A8:105:ARG:HB2	1.91	0.53
3:B3:15:GLN:O	3:B3:226:ASN:ND2	2.42	0.53
3:B5:3:GLU:HA	3:B5:49:VAL:HA	1.90	0.53
2:C2:254:GLU:HG2	2:C2:352:LYS:HZ3	1.74	0.53
3:D1:316:MET:HG3	3:D1:352:SER:OG	2.09	0.53
3:D5:213:ARG:HH12	3:D5:297:LYS:HB2	1.73	0.53
3:E7:176:SER:OG	3:E7:181:GLU:OE1	2.27	0.53
1:21:238:THR:HG21	3:F1:359:LYS:NZ	2.24	0.52
2:A0:120:ASP:O	2:A0:124:LYS:HG2	2.09	0.52
3:A1:205:GLU:HA	3:A1:208:TYR:HD2	1.73	0.52
3:A1:259:PRO:HB2	3:A1:260:PHE:CD2	2.44	0.52
3:B7:212:PHE:CD1	2:B8:326:LYS:HD3	2.44	0.52
2:C0:11:GLN:NE2	2:C0:15:GLN:OE1	2.42	0.52
2:C6:271:SER:HB3	2:C6:377:MET:HB3	1.91	0.52
2:C8:141:VAL:HG23	2:C8:170:CYS:HB3	1.90	0.52
2:D4:66:VAL:HG21	2:D4:122:ILE:HD11	1.91	0.52
2:E6:4:VAL:HG12	2:E6:133:GLN:HB3	1.92	0.52
2:E6:64:ARG:HB3	2:E6:125:LEU:HD21	1.90	0.52
3:E9:239:CYS:SG	3:E9:248:SER:N	2.78	0.52
2:F0:322:ASP:O	2:F0:373:ARG:NH2	2.42	0.52
2:F0:329:ASN:HA	2:F0:332:VAL:HG12	1.91	0.52
3:F1:285:SER:N	3:F1:288:GLU:OE2	2.37	0.52
1:6:256:LEU:HD22	2:B6:31:GLN:HG2	1.91	0.52
2:A0:88:HIS:CE1	2:A0:90:GLU:HG3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A0:174:SER:OG	2:A0:177:VAL:O	2.27	0.52
3:A9:27:GLU:OE2	3:A9:241:ARG:NH1	2.41	0.52
2:B0:209:ILE:HA	2:B0:212:ILE:HG22	1.91	0.52
3:C1:135:ILE:HG22	3:C1:137:HIS:HD2	1.74	0.52
2:C6:250:VAL:HG22	2:C6:352:LYS:HE3	1.91	0.52
3:D1:66:MET:CE	3:D1:151:LEU:HD22	2.38	0.52
3:D1:192:LEU:HD21	3:D1:199:VAL:HG11	1.91	0.52
2:D2:199:ASP:OD2	2:D2:256:GLN:NE2	2.41	0.52
3:E1:70:PRO:HD2	2:E2:2:ARG:HH21	1.74	0.52
2:E2:319:TYR:HB3	2:E2:323:VAL:HG21	1.92	0.52
3:A5:105:HIS:CD2	3:A5:150:LEU:HB2	2.45	0.52
3:A9:10:GLY:HA2	3:A9:143:THR:HG23	1.90	0.52
2:B4:282:TYR:HD2	2:B4:283:HIS:CE1	2.26	0.52
3:C9:309:ARG:H	3:C9:372:THR:HG22	1.74	0.52
3:D1:7:VAL:HB	3:D1:135:ILE:HG12	1.91	0.52
2:D4:210:TYR:HB3	3:D5:324:LYS:HE2	1.90	0.52
2:D8:319:TYR:CD2	2:D8:375:VAL:HG22	2.44	0.52
3:D9:248:SER:HA	3:D9:252:LYS:HD2	1.91	0.52
2:E4:108:TYR:O	2:E4:112:LYS:NZ	2.29	0.52
1:10:248:ARG:NH2	3:C9:42:LEU:HD13	2.24	0.52
1:8:257:PRO:HB2	2:C0:29:GLY:CA	2.35	0.52
2:B0:397:LEU:HD21	3:B1:344:TRP:CB	2.39	0.52
2:B2:107:HIS:HE2	2:B2:151:CYS:HG	1.56	0.52
2:B4:401:LYS:HE3	3:B5:344:TRP:CD1	2.45	0.52
2:C4:370:LYS:O	2:C4:370:LYS:HD3	2.09	0.52
2:D6:226:ASN:O	2:D6:230:LEU:HD23	2.09	0.52
3:E1:318:ARG:HG2	3:E1:354:CYS:HB3	1.92	0.52
3:E5:169:VAL:HG12	3:E5:202:ILE:HB	1.91	0.52
2:E8:306:ASP:HB3	2:E8:309:HIS:CE1	2.45	0.52
2:E8:396:ASP:OD1	2:E8:422:ARG:NH1	2.42	0.52
2:B4:219:ILE:HG22	2:B4:222:PRO:HD3	1.91	0.52
2:B8:306:ASP:OD2	2:B8:308:ARG:NH2	2.41	0.52
3:C3:309:ARG:NH1	3:C3:339:SER:O	2.43	0.52
2:D8:395:PHE:HD2	2:D8:422:ARG:HD3	1.73	0.52
2:E4:239:THR:OG1	2:E4:243:ARG:NH1	2.43	0.52
3:E7:105:HIS:CD2	3:E7:150:LEU:HB2	2.45	0.52
1:17:247:TYR:CE2	2:E2:81:GLY:HA3	2.44	0.52
2:A8:309:HIS:NE2	2:A8:386:GLU:OE1	2.39	0.52
3:B7:128:ASP:OD1	3:B7:129:CYS:N	2.37	0.52
3:C1:7:VAL:HB	3:C1:135:ILE:HD13	1.91	0.52
2:C2:215:ARG:NH2	2:C2:297:GLU:OE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C6:319:TYR:CD1	2:C6:375:VAL:HG22	2.45	0.52
3:E1:99:ASN:HD21	2:E2:258:ASN:HD21	1.55	0.52
2:E4:176:GLN:O	3:E5:347:ASN:HB3	2.09	0.52
2:F0:103:PHE:CD2	2:F0:189:LEU:HB3	2.45	0.52
3:A1:70:PRO:CD	2:A2:2:ARG:NH2	2.70	0.52
3:A1:219:THR:HG22	3:A1:219:THR:O	2.10	0.52
2:A6:155:GLU:OE1	2:A6:197:HIS:NE2	2.33	0.52
2:B6:241:SER:HB2	2:B6:249:ASN:HB2	1.91	0.52
3:B9:167:PHE:CZ	3:B9:233:MET:HG2	2.45	0.52
2:C2:217:LEU:HB3	2:C2:219:ILE:HG13	1.92	0.52
2:C6:241:SER:HB2	2:C6:249:ASN:HB2	1.91	0.52
2:C8:177:VAL:HG22	3:C9:327:ASP:OD2	2.10	0.52
3:C9:179:VAL:HG11	2:D0:258:ASN:O	2.10	0.52
3:D3:100:ASN:HB3	3:D3:103:LYS:HB2	1.90	0.52
3:E5:304:ASP:OD2	3:E5:306:ARG:NH1	2.43	0.52
2:E6:222:PRO:HG2	3:E7:324:LYS:HB2	1.91	0.52
2:E8:12:ALA:HB3	2:E8:140:ALA:HB2	1.92	0.52
2:F0:50:ASN:O	2:F0:64:ARG:NH2	2.41	0.52
3:F1:207:LEU:HD21	3:F1:225:LEU:HB3	1.92	0.52
1:19:241:PHE:CZ	3:E7:356:ILE:HD12	2.45	0.52
3:A7:139:LEU:HA	3:A7:145:SER:HB2	1.92	0.52
2:A8:338:LYS:HG2	2:A8:340:THR:HG22	1.90	0.52
3:A9:187:LEU:HA	3:A9:190:HIS:CE1	2.45	0.52
2:B6:306:ASP:OD2	2:B6:308:ARG:NH2	2.38	0.52
2:B8:50:ASN:O	2:B8:64:ARG:NH2	2.43	0.52
2:C4:309:HIS:NE2	2:C4:386:GLU:OE1	2.39	0.52
3:C5:7:VAL:HB	3:C5:135:ILE:HG22	1.92	0.52
3:D3:397:TRP:CD1	2:D4:256:GLN:OE1	2.63	0.52
3:D7:153:SER:HB2	3:D7:191:GLN:HE22	1.75	0.52
2:D8:205:ASP:OD1	2:D8:206:ASN:N	2.43	0.52
2:E2:96:LYS:HZ1	3:E3:1:MET:N	2.08	0.52
3:E9:177:ASP:HA	2:F0:351:PHE:O	2.10	0.52
1:2:241:PHE:CD2	3:A9:40:SER:HB2	2.45	0.52
2:A4:30:ILE:HG22	2:A4:36:MET:HB3	1.92	0.52
3:A7:203:ASP:HB2	3:A7:301:CYS:HA	1.92	0.52
3:B7:404:ASP:OD1	3:B7:405:GLU:N	2.42	0.52
2:B8:27:GLU:OE2	2:B8:243:ARG:NH1	2.43	0.52
3:C1:68:LEU:HA	3:C1:93:GLY:HA3	1.92	0.52
3:C3:183:TYR:HB3	3:C3:398:TYR:HE2	1.73	0.52
2:E4:277:SER:OG	2:E4:278:ALA:N	2.43	0.52
2:A0:208:ALA:HB2	2:A0:304:LYS:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B1:10:GLY:HA2	3:B1:143:THR:HG23	1.91	0.52
2:B2:177:VAL:HG13	3:B3:331:LEU:HD22	1.91	0.52
3:C1:117:LEU:O	3:C1:117:LEU:HD23	2.10	0.52
3:C3:163:ILE:HD13	3:C3:250:LEU:HB3	1.92	0.52
3:C7:286:VAL:HB	3:C7:287:PRO:HD3	1.92	0.52
3:E5:207:LEU:HB3	3:E5:225:LEU:HD22	1.92	0.52
3:E7:64:ILE:HD13	3:E7:119:VAL:HG13	1.92	0.52
3:E9:184:ASN:OD1	3:E9:398:TYR:OH	2.26	0.52
3:F1:180:VAL:O	3:F1:184:ASN:ND2	2.43	0.52
2:A2:402:ARG:O	3:A3:260:PHE:HE1	1.94	0.51
2:A8:282:TYR:O	2:B2:60:LYS:CE	2.58	0.51
2:A8:336:LYS:O	2:A8:339:ARG:NH2	2.43	0.51
3:A9:190:HIS:HB2	3:A9:414:ASN:HB3	1.92	0.51
2:B2:240:ALA:HB1	2:B2:356:ASN:HD22	1.74	0.51
3:C1:334:GLN:OE1	3:C1:348:ASN:N	2.42	0.51
3:C7:283:ALA:HB2	3:D1:54:ALA:HA	1.93	0.51
3:C9:128:ASP:OD1	3:C9:129:CYS:N	2.40	0.51
3:D1:10:GLY:O	3:D1:14:ASN:ND2	2.40	0.51
2:D8:404:PHE:CE1	3:D9:259:PRO:HA	2.45	0.51
3:D9:87:PRO:HA	3:D9:90:PHE:CD1	2.45	0.51
3:D9:178:THR:O	3:D9:181:GLU:HG2	2.10	0.51
3:A1:77:ARG:HH22	3:A1:92:PHE:HZ	1.59	0.51
3:A1:341:PHE:HB3	3:A1:348:ASN:ND2	2.25	0.51
2:A6:276:ILE:HB	2:A6:280:LYS:HB2	1.92	0.51
3:A7:139:LEU:HD12	3:A7:170:PHE:HE1	1.75	0.51
2:B0:12:ALA:HB3	2:B0:140:ALA:HB2	1.92	0.51
2:B0:65:CYS:O	2:B0:91:GLN:NE2	2.42	0.51
2:C6:71:GLU:HB3	2:C6:98:ASP:HB3	1.92	0.51
2:E0:102:ASN:HB3	2:E0:105:ARG:HB3	1.92	0.51
2:F0:176:GLN:CG	3:F1:331:LEU:HD21	2.40	0.51
1:18:254:LYS:HB3	2:E4:26:LEU:HD13	1.92	0.51
3:C1:200:GLN:HG3	3:C1:268:ILE:HD11	1.91	0.51
2:D4:298:PRO:HB3	2:D4:307:PRO:HD2	1.92	0.51
3:D5:307:HIS:ND1	3:D5:376:GLU:OE2	2.40	0.51
2:D6:181:VAL:H	3:D7:256:ASN:HD22	1.57	0.51
2:E2:176:GLN:HB3	3:E3:331:LEU:HD13	1.92	0.51
3:E5:163:ILE:HD13	3:E5:250:LEU:HB3	1.92	0.51
2:E6:107:HIS:NE2	2:E6:151:CYS:SG	2.75	0.51
3:E9:105:HIS:HD2	3:E9:150:LEU:HD12	1.76	0.51
3:C1:220:PRO:HD2	2:C2:326:LYS:HB2	1.92	0.51
3:C7:140:GLY:O	3:C7:184:ASN:ND2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C9:101:TRP:HB3	3:C9:398:TYR:HE1	1.76	0.51
3:D3:291:GLN:HB3	3:D7:122:LYS:HZ3	1.76	0.51
2:E8:274:PRO:HG3	2:E8:286:LEU:HD13	1.92	0.51
3:E9:66:MET:HG3	3:E9:116:VAL:HG21	1.92	0.51
3:F1:183:TYR:OH	3:F1:388:MET:O	2.24	0.51
1:12:244:GLN:O	3:D3:320:ARG:NH2	2.43	0.51
3:A1:128:ASP:OD1	3:A1:129:CYS:N	2.42	0.51
2:B4:9:VAL:HG12	2:B4:68:LEU:HB2	1.92	0.51
3:B9:216:LYS:HE2	3:B9:275:SER:HB3	1.93	0.51
3:D1:1:MET:N	3:D1:128:ASP:OD2	2.32	0.51
3:F1:100:ASN:HB3	3:F1:103:LYS:HG2	1.92	0.51
2:A0:133:GLN:O	2:A0:165:SER:OG	2.29	0.51
2:A0:180:ALA:HB3	2:A0:183:GLU:HG2	1.91	0.51
2:A4:27:GLU:HG3	2:A4:361:THR:HG21	1.93	0.51
2:A8:214:ARG:HG3	3:A9:324:LYS:NZ	2.26	0.51
2:C0:106:GLY:HA3	2:C0:148:GLY:HA3	1.91	0.51
3:C7:100:ASN:HB3	3:C7:103:LYS:HG2	1.93	0.51
2:C8:168:ASN:ND2	2:C8:170:CYS:SG	2.84	0.51
2:C8:420:GLU:O	2:C8:420:GLU:HG3	2.09	0.51
3:D3:117:LEU:HD11	3:D3:154:LYS:HD3	1.92	0.51
2:E0:167:LEU:HD13	2:E0:252:VAL:HG13	1.93	0.51
3:E9:169:VAL:HG12	3:E9:202:ILE:HB	1.92	0.51
3:A1:107:THR:HG21	3:A1:401:GLU:HG2	1.93	0.51
2:A2:292:THR:HG21	2:A2:331:ALA:HB1	1.92	0.51
2:A8:280:LYS:O	2:A8:284:GLU:HG2	2.11	0.51
3:A9:283:ALA:HA	3:B3:55:THR:HG22	1.92	0.51
2:B6:76:ASP:HA	2:B6:79:ARG:HD2	1.93	0.51
3:B9:10:GLY:HA2	3:B9:143:THR:HG23	1.93	0.51
3:C3:149:THR:O	3:C3:191:GLN:NE2	2.44	0.51
2:C4:274:PRO:HG2	2:C4:371:VAL:HG11	1.92	0.51
3:D1:14:ASN:ND2	3:D1:67:ASP:OD1	2.43	0.51
3:D9:107:THR:OG1	3:D9:108:GLU:OE1	2.29	0.51
3:E1:208:TYR:CE2	2:E2:329:ASN:ND2	2.78	0.51
2:E2:397:LEU:O	2:E2:397:LEU:HD23	2.10	0.51
3:E5:68:LEU:HA	3:E5:93:GLY:HA3	1.91	0.51
2:A0:245:ASP:O	2:A0:358:GLN:NE2	2.30	0.51
2:A6:221:ARG:HG2	3:A7:322:SER:OG	2.11	0.51
2:A8:306:ASP:HB3	2:A8:309:HIS:CE1	2.46	0.51
3:B9:334:GLN:HE21	3:B9:349:MET:HG2	1.74	0.51
2:C6:195:LEU:HD21	2:C6:264:ARG:HD3	1.92	0.51
3:D1:281:TYR:CE1	3:D5:58:ARG:CZ	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D2:134:GLY:HA2	2:D2:164:LYS:HE2	1.93	0.51
3:D3:15:GLN:O	3:D3:226:ASN:ND2	2.44	0.51
2:D6:298:PRO:HB3	2:D6:307:PRO:HD2	1.93	0.51
2:E2:79:ARG:NH1	2:E2:92:LEU:O	2.43	0.51
2:E8:395:PHE:HZ	2:E8:418:PHE:HB3	1.75	0.51
1:9:241:PHE:CD2	3:C3:43:GLN:NE2	2.78	0.51
2:C6:79:ARG:NH1	2:C6:92:LEU:O	2.43	0.51
2:C6:399:TYR:OH	2:C6:415:GLU:OE2	2.29	0.51
3:C7:407:GLU:HA	3:C7:410:GLU:HB3	1.93	0.51
3:D3:293:MET:SD	3:D3:365:VAL:HG11	2.51	0.51
3:E7:389:PHE:CE1	3:E7:395:LEU:HD11	2.44	0.51
2:F0:137:MET:O	2:F0:168:ASN:ND2	2.42	0.51
2:F0:152:LEU:HD11	2:F0:156:ARG:HH11	1.76	0.51
2:F0:223:THR:CG2	2:F0:225:THR:HG22	2.40	0.51
1:10:257:PRO:CD	2:C8:26:LEU:HD22	2.34	0.51
3:B3:210:ILE:O	3:B3:214:THR:OG1	2.27	0.51
3:C3:172:SER:OG	3:C3:205:GLU:OE2	2.29	0.51
3:D1:130:LEU:O	3:D1:162:ARG:HD2	2.11	0.51
3:D3:21:TRP:HA	3:D3:24:ILE:HG22	1.93	0.51
3:D5:107:THR:OG1	3:D5:108:GLU:N	2.44	0.51
3:E1:12:CYS:HB3	3:E1:138:SER:HB2	1.92	0.51
2:E2:223:THR:HG23	2:E2:225:THR:HG22	1.92	0.51
2:E4:105:ARG:NH1	3:E5:251:ARG:HD3	2.26	0.51
2:E6:280:LYS:HZ1	2:F0:89:PRO:HB2	1.75	0.51
3:F1:19:LYS:HZ1	3:F1:227:HIS:HB2	1.75	0.51
3:A1:117:LEU:HD13	3:A1:154:LYS:HZ2	1.76	0.50
2:B4:50:ASN:O	2:B4:64:ARG:NH2	2.45	0.50
3:B9:7:VAL:HB	3:B9:135:ILE:HG13	1.94	0.50
3:D7:324:LYS:O	3:D7:328:GLU:N	2.31	0.50
2:D8:265:ILE:HG22	2:D8:380:ASN:HD21	1.75	0.50
3:E1:176:SER:CB	2:E2:351:PHE:H	2.23	0.50
3:E5:394:PHE:CE1	2:E6:261:PRO:HB3	2.46	0.50
3:E9:329:GLN:HA	3:E9:332:ASN:HB3	1.93	0.50
3:A7:282:ARG:O	3:B1:55:THR:HG22	2.08	0.50
3:A9:207:LEU:HB3	3:A9:225:LEU:HD22	1.92	0.50
3:B1:16:ILE:HG22	3:B1:226:ASN:OD1	2.11	0.50
2:C0:356:ASN:OD1	2:C0:357:TYR:N	2.44	0.50
2:D0:229:ARG:HG3	2:D0:229:ARG:NH1	2.24	0.50
3:D3:139:LEU:HG	3:D3:168:SER:HB2	1.93	0.50
2:D4:97:GLU:OE2	3:D5:131:GLN:HG2	2.11	0.50
3:D5:128:ASP:OD1	3:D5:129:CYS:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:200:GLN:HB3	3:D5:268:ILE:HD11	1.93	0.50
2:D6:265:ILE:HG22	2:D6:380:ASN:HD21	1.74	0.50
3:D7:249:ASP:OD1	3:D7:250:LEU:N	2.43	0.50
2:D8:53:PHE:O	2:D8:64:ARG:NH2	2.44	0.50
3:D9:283:ALA:HA	3:E3:55:THR:CB	2.41	0.50
2:E4:210:TYR:CE1	2:E4:227:LEU:HD21	2.46	0.50
1:6:257:PRO:HD3	2:B6:26:LEU:CD1	2.41	0.50
2:B8:256:GLN:O	2:B8:260:VAL:HG22	2.12	0.50
2:C8:174:SER:OG	2:C8:177:VAL:O	2.25	0.50
3:A3:8:GLN:HE22	3:A3:17:GLY:HA3	1.76	0.50
3:A9:313:ALA:HB3	3:A9:349:MET:HG2	1.94	0.50
3:B7:178:THR:HA	2:B8:258:ASN:HD21	1.76	0.50
3:C1:274:THR:OG1	3:C1:282:ARG:NE	2.41	0.50
2:C2:103:PHE:H	2:C2:408:TYR:HE1	1.59	0.50
3:C3:337:ASN:HB3	3:C3:340:TYR:HB2	1.94	0.50
2:D8:174:SER:HB2	2:D8:177:VAL:O	2.11	0.50
3:E1:208:TYR:HE2	2:E2:329:ASN:ND2	2.09	0.50
2:E2:73:THR:HA	3:E3:46:ARG:HH12	1.75	0.50
3:E3:49:VAL:HG21	3:E3:241:ARG:HG2	1.94	0.50
3:E3:100:ASN:HB3	3:E3:103:LYS:HG2	1.93	0.50
2:E4:276:ILE:HG23	2:E4:281:ALA:HB2	1.93	0.50
3:E5:261:PRO:O	3:E5:264:HIS:ND1	2.42	0.50
2:E8:107:HIS:NE2	2:E8:151:CYS:SG	2.81	0.50
2:E8:268:MET:N	2:E8:268:MET:SD	2.85	0.50
2:F0:239:THR:OG1	2:F0:243:ARG:NH1	2.43	0.50
3:F1:320:ARG:NH1	3:F1:320:ARG:HB2	2.26	0.50
3:F1:375:GLN:HE21	3:F1:379:LYS:HD3	1.75	0.50
1:20:251:TYR:O	2:E8:82:THR:HG21	2.12	0.50
1:9:246:CYS:HB3	3:C3:245:GLN:HE21	1.76	0.50
2:A2:210:TYR:HB3	3:A3:324:LYS:HE2	1.93	0.50
3:A3:383:ASP:HA	3:A3:386:THR:HG22	1.93	0.50
3:A3:398:TYR:HB3	3:A3:403:MET:HG3	1.92	0.50
2:B2:8:HIS:CE1	2:B2:17:GLY:HA3	2.47	0.50
2:B4:156:ARG:HA	2:B4:159:VAL:HG12	1.93	0.50
3:C1:215:LEU:HD21	3:C1:273:LEU:HD22	1.93	0.50
3:C5:140:GLY:O	3:C5:184:ASN:ND2	2.41	0.50
3:D1:140:GLY:O	3:D1:184:ASN:ND2	2.43	0.50
3:D1:238:CYS:SG	3:D1:318:ARG:NE	2.84	0.50
2:D8:1:MET:N	2:D8:3:GLU:OE2	2.40	0.50
3:E7:289:LEU:HD12	3:E7:365:VAL:HG12	1.93	0.50
2:F0:8:HIS:CD2	2:F0:17:GLY:HA3	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:241:PHE:HE2	3:B7:42:LEU:HD12	1.76	0.50
3:A3:297:LYS:NZ	3:A3:306:ARG:HH22	2.10	0.50
3:A5:117:LEU:HA	3:A5:120:VAL:HG12	1.93	0.50
2:A6:191:THR:HA	2:A6:194:LEU:HB3	1.94	0.50
2:B6:195:LEU:HD21	2:B6:264:ARG:HE	1.77	0.50
3:B7:281:TYR:HD2	3:C1:87:PRO:HD2	1.77	0.50
3:C1:35:THR:OG1	3:C1:36:TYR:N	2.43	0.50
2:C4:206:ASN:HA	2:C4:209:ILE:HG22	1.92	0.50
2:D4:107:HIS:NE2	2:D4:151:CYS:SG	2.78	0.50
3:D5:239:CYS:SG	3:D5:247:ASN:HB3	2.52	0.50
3:F1:65:LEU:CD2	3:F1:76:VAL:HG21	2.41	0.50
1:8:257:PRO:HG2	2:C0:29:GLY:HA2	1.93	0.50
3:A3:205:GLU:HA	3:A3:208:TYR:HD2	1.77	0.50
2:C2:76:ASP:HA	2:C2:79:ARG:HD2	1.94	0.50
2:C2:186:ASN:OD1	2:C2:408:TYR:OH	2.29	0.50
2:C2:338:LYS:NZ	2:C2:340:THR:OG1	2.41	0.50
3:C5:207:LEU:HG	3:C5:228:LEU:HD11	1.92	0.50
3:C9:86:ARG:HG2	3:C9:88:ASP:HB3	1.92	0.50
2:E2:262:TYR:HD2	2:E2:265:ILE:HD12	1.77	0.50
2:E4:73:THR:HB	3:E5:2:ARG:HH12	1.76	0.50
3:E9:244:GLY:HA2	3:E9:355:ASP:HB2	1.94	0.50
3:A1:172:SER:OG	3:A1:175:VAL:O	2.29	0.50
3:A7:173:PRO:HB3	3:A7:380:ARG:HD2	1.93	0.50
2:B0:102:ASN:HB3	2:B0:105:ARG:H	1.77	0.50
2:B0:115:VAL:HG12	2:B0:119:LEU:HD23	1.93	0.50
3:B1:153:SER:HA	3:B1:195:ASN:HD22	1.75	0.50
2:C2:107:HIS:NE2	2:C2:151:CYS:SG	2.59	0.50
3:C3:69:GLU:HG2	3:C3:71:GLY:H	1.76	0.50
3:C7:239:CYS:HB3	3:C7:248:SER:O	2.11	0.50
2:D4:178:SER:H	3:D5:347:ASN:ND2	2.08	0.50
3:D9:132:GLY:HA3	3:D9:163:ILE:HG22	1.93	0.50
3:D9:200:GLN:HB3	3:D9:268:ILE:HD11	1.93	0.50
2:E0:98:ASP:OD1	2:E0:99:ALA:N	2.45	0.50
2:E0:178:SER:HB3	2:E0:183:GLU:HG2	1.92	0.50
2:E0:181:VAL:HG12	3:E1:256:ASN:HA	1.93	0.50
2:E0:192:HIS:NE2	2:E0:420:GLU:OE2	2.44	0.50
3:E7:128:ASP:OD1	3:E7:129:CYS:N	2.41	0.50
3:E7:234:SER:O	3:E7:241:ARG:NH2	2.44	0.50
3:E7:256:ASN:HB3	3:E7:350:LYS:HE2	1.94	0.50
2:E8:214:ARG:HH22	2:E8:220:GLU:HG2	1.77	0.50
2:F0:60:LYS:O	2:F0:61:HIS:ND1	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F0:213:CYS:HA	2:F0:217:LEU:HB2	1.93	0.50
2:F0:254:GLU:OE1	2:F0:352:LYS:NZ	2.41	0.50
2:A8:36:MET:SD	2:A8:61:HIS:NE2	2.75	0.50
3:C5:91:VAL:HB	3:C5:112:LEU:HD11	1.93	0.50
3:C7:257:LEU:HD21	3:C7:314:SER:HB2	1.94	0.50
2:D2:298:PRO:HB3	2:D2:307:PRO:HD2	1.94	0.50
2:D2:302:MET:O	2:D2:302:MET:HG2	2.11	0.50
3:D3:128:ASP:N	3:D3:128:ASP:OD1	2.42	0.50
2:D6:221:ARG:HB3	3:D7:322:SER:HB3	1.94	0.50
3:D7:282:ARG:NH1	3:D7:288:GLU:OE2	2.45	0.50
2:E8:151:CYS:SG	2:E8:193:SER:OG	2.55	0.50
2:A6:214:ARG:HD3	3:A7:324:LYS:NZ	2.27	0.49
2:B0:76:ASP:HA	2:B0:79:ARG:HG2	1.94	0.49
2:B0:210:TYR:HB3	3:B1:324:LYS:HZ2	1.75	0.49
3:B7:139:LEU:HA	3:B7:145:SER:HB3	1.94	0.49
3:B7:175:VAL:HG11	2:B8:332:VAL:HG13	1.94	0.49
2:C4:427:ALA:HA	2:C4:430:LYS:HE3	1.94	0.49
3:C5:350:LYS:NZ	3:C5:352:SER:OG	2.42	0.49
2:C6:198:THR:O	2:C6:266:HIS:NE2	2.45	0.49
3:E3:238:CYS:SG	3:E3:318:ARG:NE	2.85	0.49
3:E7:173:PRO:HB2	3:E7:174:LYS:HG2	1.94	0.49
1:0:247:TYR:CZ	2:A4:81:GLY:HA2	2.44	0.49
2:A6:221:ARG:C	3:A7:322:SER:HB2	2.33	0.49
2:A8:30:ILE:HG22	2:A8:36:MET:HB3	1.93	0.49
3:B3:68:LEU:HD23	3:B3:112:LEU:HD22	1.94	0.49
2:B4:392:ASP:OD1	2:B4:422:ARG:NE	2.45	0.49
2:B6:217:LEU:HD11	2:B6:275:ILE:HG22	1.93	0.49
2:C0:137:MET:HE2	2:C0:154:LEU:HD21	1.94	0.49
3:C1:113:ILE:HA	3:C1:116:VAL:HG12	1.93	0.49
2:C4:12:ALA:CB	2:C4:140:ALA:HB2	2.39	0.49
2:C6:251:ASP:N	2:C6:254:GLU:OE2	2.42	0.49
2:D4:182:VAL:HG11	3:D5:255:VAL:HG12	1.94	0.49
2:E0:5:ILE:HD12	2:E0:132:LEU:HD11	1.94	0.49
3:E1:249:ASP:OD1	3:E1:252:LYS:HG2	2.12	0.49
2:E2:274:PRO:HB2	2:E2:276:ILE:HG12	1.94	0.49
3:E3:2:ARG:HB2	3:E3:131:GLN:HB2	1.93	0.49
2:F0:65:CYS:SG	2:F0:66:VAL:N	2.85	0.49
2:F0:209:ILE:HB	2:F0:227:LEU:HD13	1.94	0.49
2:A2:96:LYS:HG3	3:A3:129:CYS:SG	2.52	0.49
2:B4:158:SER:OG	2:B4:166:LYS:NZ	2.45	0.49
3:B5:10:GLY:HA2	3:B5:143:THR:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B7:311:LEU:HD12	3:B7:342:VAL:HG11	1.93	0.49
2:C0:53:PHE:O	2:C0:64:ARG:NH2	2.45	0.49
3:D9:6:HIS:CE1	3:D9:8:GLN:HG2	2.47	0.49
2:E2:65:CYS:SG	2:E2:66:VAL:N	2.85	0.49
2:E6:65:CYS:SG	2:E6:66:VAL:N	2.85	0.49
3:E9:267:LEU:HB3	3:E9:299:MET:SD	2.53	0.49
2:F0:28:HIS:NE2	2:F0:243:ARG:HD2	2.28	0.49
3:F1:117:LEU:HB3	3:F1:121:ARG:HH22	1.77	0.49
1:16:254:LYS:HB2	2:E0:26:LEU:HD11	1.94	0.49
1:21:254:LYS:CD	2:F0:364:PRO:HD2	2.37	0.49
1:21:256:LEU:CD1	2:F0:31:GLN:HG3	2.36	0.49
1:8:257:PRO:HG3	2:C0:26:LEU:HD23	1.94	0.49
2:B6:73:THR:CG2	3:B7:46:ARG:NH1	2.74	0.49
2:B8:208:ALA:HB2	2:B8:304:LYS:HB2	1.93	0.49
3:D7:324:LYS:O	3:D7:327:ASP:N	2.38	0.49
3:E9:221:THR:HA	2:F0:325:PRO:HD3	1.94	0.49
3:A9:281:TYR:O	3:B3:54:ALA:HB1	2.13	0.49
2:B2:174:SER:HB2	2:B2:207:GLU:HG2	1.92	0.49
3:B3:12:CYS:HB3	3:B3:138:SER:OG	2.11	0.49
3:B5:282:ARG:NH2	3:B5:292:GLN:OE1	2.46	0.49
2:B6:213:CYS:HA	2:B6:217:LEU:HD13	1.93	0.49
3:B9:280:GLN:HG3	3:B9:280:GLN:O	2.11	0.49
2:C4:401:LYS:NZ	3:C5:425:TYR:HE1	2.10	0.49
2:D6:50:ASN:O	2:D6:64:ARG:NH2	2.43	0.49
2:D8:298:PRO:HB3	2:D8:307:PRO:HD2	1.94	0.49
3:E1:174:LYS:O	2:E2:336:LYS:HE3	2.13	0.49
1:6:239:LEU:HD13	1:6:240:PRO:HD2	1.94	0.49
2:A0:103:PHE:HD2	2:A0:189:LEU:HD23	1.77	0.49
3:A1:391:ARG:O	2:A2:262:TYR:OH	2.24	0.49
2:A4:250:VAL:HG23	2:A4:255:PHE:HE1	1.78	0.49
2:B4:286:LEU:O	2:B4:373:ARG:NH1	2.40	0.49
3:B5:181:GLU:HB2	3:B5:182:PRO:HD3	1.94	0.49
3:C3:306:ARG:HG2	3:C3:340:TYR:CE1	2.48	0.49
3:C7:295:ASP:HB3	3:C7:298:ASN:HB2	1.95	0.49
2:D2:33:ASP:OD1	2:D2:34:GLY:N	2.46	0.49
3:D3:64:ILE:HD11	3:D3:123:GLU:HG3	1.93	0.49
3:D7:91:VAL:HG11	3:D7:116:VAL:HB	1.94	0.49
2:E0:276:ILE:HG23	2:E0:280:LYS:HB2	1.92	0.49
2:E2:251:ASP:OD1	2:E2:254:GLU:HG2	2.13	0.49
2:E4:338:LYS:HZ1	2:E4:341:ILE:HG12	1.78	0.49
3:E5:260:PHE:HB3	3:E5:261:PRO:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E9:209:ASP:OD1	3:E9:213:ARG:NH1	2.46	0.49
3:B5:156:ARG:HD3	3:B5:164:MET:HG2	1.94	0.49
3:B9:170:PHE:HE2	3:B9:378:PHE:HE1	1.61	0.49
2:C6:177:VAL:HB	2:C6:207:GLU:HB3	1.94	0.49
2:C8:98:ASP:O	2:C8:105:ARG:NH2	2.45	0.49
2:D0:50:ASN:O	2:D0:64:ARG:NH2	2.35	0.49
3:D1:206:ALA:HB2	3:D1:302:ALA:HB2	1.94	0.49
3:D3:165:GLU:OE2	3:D3:200:GLN:NE2	2.45	0.49
2:D4:8:HIS:HD2	2:D4:67:PHE:CE1	2.31	0.49
2:E4:271:SER:HB2	2:E4:377:MET:HB3	1.95	0.49
2:E4:285:GLN:HG3	2:E8:56:THR:C	2.33	0.49
3:A3:309:ARG:NE	3:A3:339:SER:O	2.46	0.49
2:A6:112:LYS:HA	2:A6:115:VAL:HG12	1.95	0.49
2:A6:306:ASP:HB3	2:A6:309:HIS:CE1	2.47	0.49
3:B5:63:ALA:O	3:B5:89:ASN:ND2	2.45	0.49
2:B6:213:CYS:SG	2:B6:222:PRO:HG3	2.53	0.49
2:C6:51:THR:HG23	2:C6:52:PHE:HD1	1.76	0.49
2:C6:181:VAL:HG23	3:C7:256:ASN:OD1	2.12	0.49
3:C9:334:GLN:HE22	3:C9:348:ASN:N	2.10	0.49
3:D5:54:ALA:HB3	3:D5:58:ARG:HG2	1.94	0.49
3:D7:176:SER:HB3	3:D7:181:GLU:OE1	2.13	0.49
3:E1:3:GLU:HA	3:E1:49:VAL:HA	1.94	0.49
2:E2:406:HIS:HA	2:E2:409:VAL:HG12	1.94	0.49
2:E4:403:ALA:HA	3:E5:260:PHE:CD1	2.40	0.49
3:F1:19:LYS:NZ	3:F1:223:GLY:O	2.44	0.49
2:A2:284:GLU:HG2	2:A2:286:LEU:HD22	1.94	0.49
2:A6:77:GLU:OE2	3:A7:243:PRO:HB3	2.12	0.49
3:C7:66:MET:HB3	3:C7:91:VAL:HG23	1.95	0.49
2:E2:319:TYR:CD1	2:E2:375:VAL:HG22	2.48	0.49
1:16:247:TYR:HE2	2:E0:81:GLY:CA	2.26	0.49
1:3:254:LYS:HB3	1:3:255:PRO:HD2	1.95	0.49
1:6:257:PRO:HD3	2:B6:26:LEU:HD12	1.95	0.49
3:B9:274:THR:HG21	3:B9:279:GLN:HA	1.94	0.49
2:C2:105:ARG:HH21	2:C2:110:ILE:HG21	1.77	0.49
3:C3:113:ILE:HA	3:C3:116:VAL:HG12	1.95	0.49
3:C5:329:GLN:OE1	3:C5:332:ASN:ND2	2.38	0.49
3:D3:44:LEU:O	3:D3:44:LEU:HD23	2.13	0.49
2:D8:50:ASN:O	2:D8:64:ARG:NH2	2.46	0.49
2:E0:71:GLU:CD	3:E1:2:ARG:HH22	2.14	0.49
3:E3:213:ARG:NH2	3:E3:216:LYS:HE3	2.28	0.49
1:21:256:LEU:HD12	2:F0:37:PRO:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A2:103:PHE:H	2:A2:408:TYR:HE1	1.61	0.48
3:A7:139:LEU:HG	3:A7:168:SER:HB3	1.95	0.48
2:A8:88:HIS:NE2	2:A8:90:GLU:OE1	2.46	0.48
2:B0:2:ARG:HB2	2:B0:133:GLN:NE2	2.28	0.48
2:B0:254:GLU:O	2:B0:258:ASN:ND2	2.43	0.48
2:B6:33:ASP:O	2:B6:60:LYS:NZ	2.46	0.48
3:B7:276:ARG:NE	3:B7:276:ARG:HA	2.28	0.48
3:B7:396:HIS:CE1	2:B8:263:PRO:HD3	2.48	0.48
2:B8:288:VAL:HA	2:B8:291:ILE:HG12	1.94	0.48
2:D2:98:ASP:OD1	2:D2:99:ALA:N	2.45	0.48
3:D5:114:ASP:OD1	3:D5:114:ASP:N	2.45	0.48
2:E0:5:ILE:CD1	2:E0:132:LEU:HD11	2.43	0.48
2:E4:69:ASP:OD1	2:E4:70:LEU:N	2.45	0.48
2:E4:132:LEU:HG	2:E4:164:LYS:NZ	2.28	0.48
2:A8:259:LEU:HD11	2:A8:316:CYS:HB2	1.95	0.48
3:B3:257:LEU:HD21	3:B3:314:SER:HB2	1.95	0.48
3:B9:354:CYS:SG	3:B9:355:ASP:N	2.86	0.48
3:B9:358:PRO:HG2	3:B9:361:LEU:HD12	1.94	0.48
3:C1:220:PRO:HD2	2:C2:326:LYS:CB	2.43	0.48
2:D4:12:ALA:CB	2:D4:140:ALA:HB2	2.43	0.48
3:E1:163:ILE:HD12	3:E1:250:LEU:HB2	1.95	0.48
3:E1:164:MET:HB3	3:E1:197:ASP:H	1.77	0.48
2:E4:217:LEU:HD21	2:E4:367:ASP:OD2	2.13	0.48
3:E5:100:ASN:HB3	3:E5:103:LYS:HG2	1.94	0.48
2:E6:276:ILE:HG13	2:E6:280:LYS:HB2	1.94	0.48
3:F1:128:ASP:OD1	3:F1:129:CYS:N	2.45	0.48
3:A1:398:TYR:HB3	3:A1:403:MET:HG3	1.95	0.48
2:A6:394:LYS:HG2	3:A7:346:PRO:HG3	1.94	0.48
2:A8:183:GLU:HB2	2:A8:184:PRO:HD3	1.95	0.48
3:B1:107:THR:OG1	3:B1:108:GLU:OE1	2.31	0.48
3:B3:117:LEU:HA	3:B3:120:VAL:HG12	1.95	0.48
3:D1:99:ASN:ND2	3:D1:141:GLY:HA2	2.27	0.48
3:D9:139:LEU:HD12	3:D9:170:PHE:CE1	2.48	0.48
3:E5:94:GLN:HA	2:E6:2:ARG:HH22	1.77	0.48
2:E6:221:ARG:HB3	3:E7:322:SER:HB3	1.95	0.48
3:A1:141:GLY:O	3:A1:184:ASN:ND2	2.39	0.48
2:A2:96:LYS:HB3	3:A3:129:CYS:SG	2.53	0.48
2:A4:285:GLN:HB2	2:A8:57:GLY:N	2.28	0.48
3:A7:11:GLN:HA	3:A7:72:THR:HG21	1.96	0.48
2:A8:298:PRO:HG2	2:A8:308:ARG:HH21	1.79	0.48
2:B0:135:PHE:HD2	2:B0:166:LYS:HG2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B5:73:MET:HA	3:B5:76:VAL:HG12	1.96	0.48
2:C4:417:GLU:HA	2:C4:420:GLU:HG3	1.95	0.48
3:C5:220:PRO:HB2	3:C5:225:LEU:CD2	2.43	0.48
3:C5:262:ARG:O	3:C5:264:HIS:ND1	2.46	0.48
2:D0:204:LEU:HD13	2:D0:231:ILE:HD12	1.95	0.48
3:E1:380:ARG:O	3:E1:384:GLN:HG3	2.13	0.48
3:A1:105:HIS:CD2	3:A1:150:LEU:HB2	2.49	0.48
3:A3:230:SER:HA	3:A3:233:MET:HB3	1.95	0.48
3:A7:321:MET:HE1	3:A7:326:VAL:HG22	1.94	0.48
2:B0:172:TRP:HB3	2:B0:205:ASP:OD1	2.13	0.48
3:B5:313:ALA:HB3	3:B5:349:MET:SD	2.54	0.48
2:B6:27:GLU:OE2	2:B6:320:ARG:NH2	2.47	0.48
3:C9:286:VAL:N	3:C9:287:PRO:CD	2.77	0.48
3:D5:272:PRO:HG3	3:D5:284:LEU:HD11	1.95	0.48
3:D7:2:ARG:HB2	3:D7:131:GLN:HB2	1.96	0.48
3:D9:6:HIS:HD2	3:D9:134:GLN:HE21	1.60	0.48
3:E3:267:LEU:HD21	3:E3:374:ILE:HG12	1.96	0.48
2:E4:176:GLN:CB	3:E5:331:LEU:CD1	2.90	0.48
2:E8:271:SER:HB3	2:E8:377:MET:HB3	1.95	0.48
1:11:244:GLN:H	3:D1:320:ARG:HH22	1.60	0.48
1:18:243:ALA:HB3	3:E5:356:ILE:HD12	1.96	0.48
2:B2:80:THR:HA	2:B2:84:ARG:HE	1.79	0.48
3:B3:239:CYS:SG	3:B3:248:SER:N	2.80	0.48
2:B4:183:GLU:HG2	2:B4:184:PRO:HD3	1.94	0.48
3:D5:289:LEU:HD13	3:D5:365:VAL:HG23	1.96	0.48
3:D7:77:ARG:HH22	3:D7:92:PHE:HZ	1.60	0.48
2:E2:392:ASP:OD1	2:E2:422:ARG:NH1	2.46	0.48
3:E5:105:HIS:HD2	3:E5:150:LEU:HD22	1.79	0.48
2:F0:122:ILE:HG21	2:F0:157:LEU:HD21	1.94	0.48
1:2:247:TYR:CE1	2:A8:81:GLY:HA3	2.49	0.48
3:A5:98:GLY:H	3:A5:103:LYS:HD3	1.79	0.48
2:B0:108:TYR:HE2	2:B0:413:MET:HB3	1.78	0.48
3:B5:105:HIS:CE1	3:B5:150:LEU:HD12	2.48	0.48
3:B9:43:GLN:HA	3:B9:242:PHE:HE1	1.79	0.48
3:C1:200:GLN:HB3	3:C1:266:PHE:HB2	1.94	0.48
2:D0:34:GLY:O	2:D0:61:HIS:N	2.42	0.48
2:D2:170:CYS:SG	2:D2:194:LEU:HD11	2.53	0.48
2:D2:174:SER:HB2	2:D2:177:VAL:O	2.13	0.48
2:E0:96:LYS:NZ	3:E1:1:MET:N	2.61	0.48
2:E8:10:GLY:HA2	2:E8:145:THR:HG23	1.95	0.48
2:E8:70:LEU:HD12	2:E8:99:ALA:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F0:278:ALA:HA	2:F0:369:ALA:HB2	1.96	0.48
2:A0:73:THR:HB	3:A1:2:ARG:NH2	2.29	0.48
3:B5:128:ASP:N	3:B5:128:ASP:OD1	2.45	0.48
3:B7:287:PRO:HA	3:B7:290:THR:HG22	1.96	0.48
2:B8:265:ILE:HG23	2:B8:432:TYR:HE1	1.79	0.48
3:C5:238:CYS:SG	3:C5:239:CYS:N	2.87	0.48
3:D1:385:PHE:CE2	3:D1:412:GLU:HB3	2.49	0.48
3:D7:324:LYS:HE2	3:D7:324:LYS:HB2	1.53	0.48
2:E2:276:ILE:HG23	2:E2:280:LYS:HB2	1.95	0.48
3:E5:128:ASP:OD1	3:E5:129:CYS:N	2.45	0.48
3:E5:309:ARG:NH1	3:E5:341:PHE:O	2.46	0.48
3:E5:326:VAL:O	3:E5:330:MET:HG2	2.13	0.48
1:19:244:GLN:HB2	3:E7:320:ARG:NH1	2.28	0.48
2:A0:301:MET:HE1	2:A0:305:CYS:H	1.78	0.48
3:A1:207:LEU:HB3	3:A1:225:LEU:HD22	1.95	0.48
2:A4:76:ASP:HA	2:A4:79:ARG:HG2	1.94	0.48
2:A8:179:THR:O	3:A9:350:LYS:CB	2.62	0.48
3:B3:324:LYS:O	3:B3:328:GLU:N	2.46	0.48
3:B5:66:MET:HG3	3:B5:116:VAL:HG21	1.96	0.48
3:B5:97:ALA:HA	3:B5:103:LYS:HE2	1.95	0.48
3:B7:267:LEU:HD13	3:B7:371:SER:HB3	1.96	0.48
2:C0:276:ILE:HG23	2:C0:281:ALA:HB2	1.95	0.48
2:C6:135:PHE:CD2	2:C6:166:LYS:HG2	2.46	0.48
2:C6:158:SER:OG	2:C6:166:LYS:NZ	2.47	0.48
3:D1:180:VAL:O	3:D1:184:ASN:ND2	2.47	0.48
3:D3:289:LEU:HD21	3:D3:365:VAL:HG23	1.95	0.48
2:E6:254:GLU:O	2:E6:258:ASN:ND2	2.47	0.48
3:E7:184:ASN:OD1	3:E7:398:TYR:OH	2.30	0.48
3:E9:176:SER:OG	2:F0:349:THR:OG1	2.10	0.48
1:9:241:PHE:HZ	3:C3:356:ILE:HG23	1.79	0.48
2:A2:221:ARG:NE	3:A3:325:GLU:OE1	2.47	0.48
3:A5:105:HIS:CE1	3:A5:150:LEU:HD12	2.49	0.48
2:C0:172:TRP:HB2	2:C0:203:MET:HB3	1.95	0.48
2:C8:274:PRO:HB2	2:C8:276:ILE:HG12	1.95	0.48
2:C8:392:ASP:OD1	2:C8:422:ARG:NE	2.43	0.48
2:D4:230:LEU:HD21	2:D4:368:LEU:HD11	1.96	0.48
2:D8:285:GLN:HB2	2:E2:56:THR:HA	1.96	0.48
3:D9:139:LEU:HD12	3:D9:170:PHE:HE1	1.79	0.48
2:F0:367:ASP:OD1	2:F0:367:ASP:N	2.47	0.48
1:19:256:LEU:HA	2:E6:26:LEU:HD23	1.96	0.47
2:A2:283:HIS:HA	2:A6:60:LYS:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A3:130:LEU:H	3:A3:162:ARG:HH21	1.62	0.47
2:A4:210:TYR:HB3	3:A5:324:LYS:HE2	1.96	0.47
2:A4:310:GLY:HA3	2:A4:383:ALA:HB2	1.94	0.47
3:A9:192:LEU:HD21	3:A9:199:VAL:CG2	2.41	0.47
3:B1:383:ASP:HA	3:B1:386:THR:HG22	1.95	0.47
2:B4:6:SER:OG	2:B4:8:HIS:NE2	2.46	0.47
3:B7:49:VAL:HG11	3:B7:241:ARG:HG2	1.96	0.47
2:C0:36:MET:HB2	2:C0:37:PRO:HD2	1.95	0.47
3:C3:215:LEU:HD21	3:C3:273:LEU:HD22	1.96	0.47
2:C4:174:SER:HB3	2:C4:177:VAL:O	2.14	0.47
3:C7:281:TYR:CD2	3:D1:87:PRO:CD	2.95	0.47
3:C9:117:LEU:HA	3:C9:120:VAL:HG12	1.95	0.47
2:D0:283:HIS:CG	2:D4:60:LYS:HZ1	2.28	0.47
3:D1:99:ASN:HD21	3:D1:141:GLY:HA2	1.79	0.47
2:D2:180:ALA:HB1	3:D3:256:ASN:ND2	2.26	0.47
3:D5:16:ILE:HD11	3:D5:229:VAL:HG11	1.96	0.47
2:D6:309:HIS:NE2	2:D6:386:GLU:OE1	2.46	0.47
2:D8:241:SER:OG	2:D8:250:VAL:O	2.23	0.47
3:D9:7:VAL:HG11	3:D9:151:LEU:HD21	1.96	0.47
3:E3:317:PHE:HB3	3:E3:321:MET:SD	2.54	0.47
2:E4:256:GLN:HE21	2:E4:256:GLN:H	1.60	0.47
2:E6:176:GLN:HB3	3:E7:331:LEU:CD1	2.44	0.47
2:E8:9:VAL:HG22	2:E8:68:LEU:HB3	1.96	0.47
2:E8:319:TYR:HB3	2:E8:323:VAL:HG11	1.95	0.47
2:A2:181:VAL:HG13	3:A3:345:ILE:HG21	1.96	0.47
2:A2:204:LEU:CD2	2:A2:231:ILE:HD12	2.44	0.47
3:B1:16:ILE:HG22	3:B1:226:ASN:CG	2.34	0.47
2:B4:311:LYS:H	2:B4:382:THR:HG22	1.79	0.47
2:C0:209:ILE:HG22	2:C0:227:LEU:HD22	1.96	0.47
3:C5:196:ALA:O	3:C5:264:HIS:NE2	2.47	0.47
3:C7:192:LEU:HG	3:C7:199:VAL:HG21	1.95	0.47
2:D4:161:TYR:HB3	2:D4:164:LYS:HG3	1.96	0.47
2:D8:324:VAL:HG23	2:D8:327:ASP:H	1.77	0.47
3:E1:64:ILE:HD12	3:E1:119:VAL:HG12	1.95	0.47
3:E3:321:MET:HG2	3:E3:363:MET:SD	2.54	0.47
3:E5:286:VAL:HG13	3:E5:363:MET:SD	2.55	0.47
2:F0:25:CYS:SG	2:F0:86:LEU:HD11	2.53	0.47
2:A0:91:GLN:HA	2:A0:121:ARG:HH12	1.79	0.47
2:A0:179:THR:H	3:A1:347:ASN:ND2	2.12	0.47
2:A2:244:PHE:HD2	2:A2:358:GLN:HG2	1.79	0.47
3:A3:274:THR:HG21	3:A3:282:ARG:HD2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:139:LEU:HG	3:A5:168:SER:HB3	1.96	0.47
2:A8:97:GLU:OE2	3:A9:251:ARG:NE	2.48	0.47
3:A9:391:ARG:CZ	3:A9:391:ARG:HB2	2.44	0.47
2:B2:10:GLY:HA2	2:B2:145:THR:HG23	1.96	0.47
2:B6:339:ARG:NH1	2:B6:342:GLN:OE1	2.46	0.47
2:C0:4:VAL:HG21	2:C0:136:LEU:CD1	2.44	0.47
3:C1:1:MET:N	3:C1:128:ASP:OD2	2.45	0.47
2:C4:79:ARG:NH1	2:C4:92:LEU:O	2.48	0.47
3:C5:133:PHE:HB2	3:C5:164:MET:CB	2.44	0.47
2:C6:216:ASN:HB3	2:C6:275:ILE:O	2.14	0.47
3:D1:203:ASP:OD2	3:D1:302:ALA:N	2.40	0.47
3:D3:6:HIS:HD1	3:D3:21:TRP:HE1	1.62	0.47
2:D4:397:LEU:HD23	3:D5:346:PRO:HD3	1.96	0.47
3:D9:289:LEU:HD11	3:D9:363:MET:HG2	1.94	0.47
2:F0:207:GLU:HA	2:F0:210:TYR:HB2	1.95	0.47
2:A2:320:ARG:NH1	2:A2:360:PRO:HA	2.30	0.47
3:B1:27:GLU:OE1	3:B1:318:ARG:NH2	2.48	0.47
3:B9:272:PRO:HG3	3:B9:284:LEU:HD11	1.96	0.47
3:C1:101:TRP:NE1	3:C1:145:SER:O	2.40	0.47
3:D1:173:PRO:HD2	3:D1:205:GLU:OE2	2.14	0.47
2:D6:269:LEU:HD23	2:D6:301:MET:HG2	1.97	0.47
3:D7:117:LEU:HD23	3:D7:121:ARG:HH22	1.80	0.47
3:E3:213:ARG:NE	3:E3:213:ARG:HA	2.30	0.47
3:E9:149:THR:HA	3:E9:152:ILE:HD12	1.96	0.47
1:21:252:VAL:HG22	1:21:253:ALA:H	1.79	0.47
3:A9:272:PRO:HB2	3:A9:282:ARG:HH12	1.80	0.47
2:B2:183:GLU:OE2	2:B2:187:SER:OG	2.32	0.47
2:B2:252:VAL:HA	2:B2:255:PHE:HD2	1.78	0.47
3:B3:396:HIS:HA	3:B3:399:THR:HG22	1.97	0.47
2:C0:121:ARG:HD2	2:C0:121:ARG:HA	1.67	0.47
2:C2:251:ASP:OD1	2:C2:254:GLU:N	2.48	0.47
3:C7:91:VAL:HG21	3:C7:116:VAL:HG12	1.96	0.47
3:D3:77:ARG:HH22	3:D3:92:PHE:HZ	1.63	0.47
2:D4:292:THR:HG21	2:D4:331:ALA:HB1	1.96	0.47
3:E3:121:ARG:NE	3:E3:158:GLU:OE2	2.47	0.47
2:E4:403:ALA:N	3:E5:260:PHE:HE1	2.12	0.47
1:20:241:PHE:HE1	3:E9:356:ILE:CG2	2.27	0.47
3:A5:94:GLN:O	2:A6:2:ARG:NH2	2.48	0.47
3:A7:293:MET:SD	3:A7:365:VAL:HG11	2.54	0.47
3:B7:2:ARG:HB2	3:B7:131:GLN:HB2	1.96	0.47
3:B7:219:THR:HB	2:B8:324:VAL:HG11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C2:285:GLN:OE1	2:C6:57:GLY:CA	2.62	0.47
2:C6:34:GLY:O	2:C6:61:HIS:N	2.38	0.47
2:D6:222:PRO:HD2	3:D7:324:LYS:CE	2.44	0.47
3:D7:70:PRO:HD2	2:D8:2:ARG:NH2	2.29	0.47
3:D7:374:ILE:HD11	3:D7:422:TYR:CZ	2.50	0.47
3:D9:139:LEU:HA	3:D9:145:SER:HB2	1.97	0.47
2:E2:311:LYS:NZ	2:E2:342:GLN:OE1	2.47	0.47
2:E4:236:SER:OG	2:E4:243:ARG:NH2	2.48	0.47
3:E9:69:GLU:HG2	2:F0:2:ARG:HH12	1.79	0.47
2:F0:9:VAL:HG13	2:F0:149:LEU:HD23	1.97	0.47
1:19:241:PHE:HE1	3:E7:356:ILE:HG21	1.79	0.47
1:20:256:LEU:HD13	2:E8:29:GLY:O	2.14	0.47
1:3:245:SER:HB2	3:B1:42:LEU:HD21	1.97	0.47
2:A0:168:ASN:ND2	2:A0:170:CYS:SG	2.87	0.47
2:A0:285:GLN:OE1	2:A4:57:GLY:CA	2.62	0.47
3:A1:392:LYS:HE2	3:A1:395:LEU:HD22	1.97	0.47
2:A2:345:ASP:OD1	2:A2:346:TRP:N	2.48	0.47
2:A8:221:ARG:HG2	3:A9:322:SER:CB	2.44	0.47
2:A8:282:TYR:O	2:B2:60:LYS:HE2	2.15	0.47
3:B1:100:ASN:HB3	3:B1:103:LYS:HG2	1.96	0.47
3:B1:212:PHE:HE1	3:B1:220:PRO:HG3	1.80	0.47
2:B4:406:HIS:HA	2:B4:409:VAL:HG12	1.96	0.47
3:B7:259:PRO:HD2	3:B7:263:LEU:HD11	1.95	0.47
3:B9:13:GLY:HA2	3:B9:136:THR:HG22	1.97	0.47
2:C2:168:ASN:OD1	2:C2:169:PHE:N	2.47	0.47
2:C2:306:ASP:N	2:C2:386:GLU:OE2	2.48	0.47
3:C3:42:LEU:HD21	3:C3:356:ILE:HG13	1.97	0.47
3:C3:275:SER:OG	3:C3:276:ARG:N	2.47	0.47
2:C4:121:ARG:HH22	2:C4:124:LYS:HE3	1.79	0.47
2:C8:245:ASP:OD1	2:C8:245:ASP:N	2.48	0.47
3:C9:137:HIS:HE1	3:C9:166:THR:HB	1.79	0.47
2:D4:65:CYS:O	2:D4:91:GLN:NE2	2.47	0.47
2:D4:221:ARG:HG2	3:D5:322:SER:CB	2.37	0.47
2:D6:119:LEU:HA	2:D6:122:ILE:HG22	1.96	0.47
2:D6:209:ILE:CG2	2:D6:227:LEU:HG	2.44	0.47
3:D9:27:GLU:OE2	3:D9:241:ARG:NH1	2.43	0.47
3:E1:7:VAL:HB	3:E1:135:ILE:HG13	1.97	0.47
2:E4:176:GLN:O	3:E5:347:ASN:CB	2.63	0.47
1:1:246:CYS:SG	1:1:247:TYR:N	2.88	0.47
1:10:241:PHE:CZ	3:C9:356:ILE:HG23	2.50	0.47
3:A9:284:LEU:H	3:B3:55:THR:HG21	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B5:260:PHE:HB3	3:B5:261:PRO:HD2	1.96	0.47
2:B6:33:ASP:OD2	2:B6:35:GLN:NE2	2.48	0.47
2:B6:234:VAL:HG21	2:B6:302:MET:HE1	1.97	0.47
2:C0:103:PHE:H	2:C0:408:TYR:HE1	1.63	0.47
2:C2:399:TYR:OH	2:C2:415:GLU:OE2	2.33	0.47
2:C4:285:GLN:CG	2:C8:56:THR:HA	2.44	0.47
2:C4:285:GLN:HG2	2:C8:56:THR:HA	1.97	0.47
3:C5:6:HIS:HE2	3:C5:136:THR:HG23	1.79	0.47
2:D0:132:LEU:HB3	2:D0:164:LYS:NZ	2.29	0.47
2:D2:181:VAL:H	3:D3:256:ASN:HD22	1.63	0.47
2:D2:229:ARG:HG3	2:D2:229:ARG:NH1	2.29	0.47
2:D4:214:ARG:CG	3:D5:324:LYS:HZ3	2.28	0.47
3:D5:334:GLN:HE22	3:D5:347:ASN:HA	1.80	0.47
2:E2:316:CYS:HA	2:E2:352:LYS:HB2	1.97	0.47
2:F0:306:ASP:HB3	2:F0:309:HIS:CE1	2.50	0.47
1:18:241:PHE:HE2	3:E5:42:LEU:CB	2.28	0.47
2:A2:156:ARG:HD3	2:A2:156:ARG:HA	1.77	0.47
2:A2:191:THR:HA	2:A2:194:LEU:HB3	1.97	0.47
2:A2:384:ILE:HA	2:A2:387:VAL:HG12	1.97	0.47
2:A8:174:SER:HB2	2:A8:177:VAL:O	2.15	0.47
2:B0:286:LEU:HD13	2:B0:371:VAL:HG23	1.96	0.47
2:B6:178:SER:HB3	3:B7:347:ASN:CG	2.34	0.47
2:B6:217:LEU:HD11	2:B6:275:ILE:CG2	2.45	0.47
3:B7:281:TYR:CD2	3:C1:87:PRO:CD	2.97	0.47
2:C2:319:TYR:CD1	2:C2:375:VAL:HG22	2.50	0.47
3:C5:329:GLN:HA	3:C5:332:ASN:HB3	1.97	0.47
3:C7:164:MET:N	3:C7:197:ASP:OD2	2.41	0.47
3:C9:68:LEU:HD22	3:C9:108:GLU:HG3	1.97	0.47
3:C9:172:SER:HB3	3:C9:205:GLU:OE1	2.14	0.47
3:D3:289:LEU:CD2	3:D3:365:VAL:HG23	2.45	0.47
2:D6:3:GLU:HA	2:D6:51:THR:HA	1.96	0.47
2:D6:116:ASP:OD1	2:D6:117:LEU:N	2.48	0.47
3:D9:171:PRO:HG2	3:D9:185:ALA:HB2	1.96	0.47
2:E4:98:ASP:OD1	2:E4:100:ALA:N	2.40	0.47
3:A1:289:LEU:HD21	3:A1:365:VAL:CG1	2.45	0.47
2:A2:6:SER:OG	2:A2:8:HIS:NE2	2.48	0.47
2:A2:214:ARG:HD2	3:A3:324:LYS:HZ1	1.61	0.47
2:A4:306:ASP:HB3	2:A4:309:HIS:CE1	2.49	0.47
3:A5:10:GLY:HA2	3:A5:143:THR:HG23	1.95	0.47
3:A5:212:PHE:HD1	2:A6:326:LYS:HZ2	1.63	0.47
3:A5:238:CYS:SG	3:A5:318:ARG:NE	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A6:283:HIS:CD2	2:B0:60:LYS:CE	2.97	0.47
3:B5:171:PRO:HB3	3:B5:181:GLU:OE1	2.15	0.47
3:B5:279:GLN:HG2	3:B5:279:GLN:O	2.13	0.47
3:C1:103:LYS:HA	3:C1:107:THR:HB	1.96	0.47
2:C2:209:ILE:HA	2:C2:212:ILE:HG22	1.97	0.47
3:C3:262:ARG:HA	3:C3:262:ARG:HD2	1.73	0.47
2:C6:172:TRP:HB3	2:C6:205:ASP:OD1	2.15	0.47
2:C6:212:ILE:HD13	2:C6:215:ARG:HH22	1.80	0.47
3:C7:68:LEU:HA	3:C7:93:GLY:HA3	1.96	0.47
2:D0:265:ILE:HG23	2:D0:432:TYR:CZ	2.50	0.47
2:E4:404:PHE:N	3:E5:259:PRO:O	2.38	0.47
3:E5:257:LEU:HD21	3:E5:314:SER:HB2	1.97	0.47
2:E8:329:ASN:HA	2:E8:332:VAL:HG12	1.95	0.47
3:E9:289:LEU:HD23	3:E9:365:VAL:HG12	1.97	0.47
3:E9:330:MET:SD	3:E9:349:MET:HG3	2.55	0.47
1:21:238:THR:CG2	3:F1:359:LYS:NZ	2.78	0.46
1:22:251:TYR:HH	2:C6:225:THR:CB	2.27	0.46
2:A0:221:ARG:CG	3:A1:322:SER:OG	2.63	0.46
3:A5:16:ILE:HG22	3:A5:226:ASN:CG	2.35	0.46
2:B0:204:LEU:HD12	2:B0:209:ILE:HD11	1.96	0.46
2:B0:210:TYR:HE2	3:B1:327:ASP:OD2	1.98	0.46
3:B3:6:HIS:CE1	3:B3:20:PHE:CD2	3.03	0.46
2:B4:154:LEU:HB3	2:B4:197:HIS:HB3	1.97	0.46
3:B9:396:HIS:HA	3:B9:399:THR:HG22	1.95	0.46
2:C4:405:VAL:HG13	2:C4:418:PHE:HE2	1.80	0.46
2:D8:119:LEU:HD13	2:D8:156:ARG:HD2	1.97	0.46
3:E1:215:LEU:HB3	3:E1:217:LEU:HD13	1.97	0.46
3:E1:238:CYS:SG	3:E1:239:CYS:N	2.88	0.46
2:E2:154:LEU:HD13	2:E2:166:LYS:HE3	1.97	0.46
2:E2:224:TYR:HD1	2:E2:227:LEU:HD12	1.80	0.46
3:E9:221:THR:HA	2:F0:325:PRO:CD	2.44	0.46
2:F0:339:ARG:O	2:F0:342:GLN:NE2	2.48	0.46
1:0:244:GLN:O	3:A5:320:ARG:NH2	2.48	0.46
1:15:247:TYR:OH	2:D8:81:GLY:HA2	2.01	0.46
1:20:256:LEU:HD11	2:E8:31:GLN:CG	2.37	0.46
3:A3:192:LEU:HG	3:A3:199:VAL:HG21	1.97	0.46
2:A6:174:SER:HB2	2:A6:177:VAL:O	2.14	0.46
3:A7:318:ARG:HD3	3:A7:358:PRO:HD3	1.96	0.46
3:A9:167:PHE:CE2	3:A9:233:MET:HG2	2.50	0.46
2:B0:285:GLN:O	2:B0:285:GLN:HG3	2.15	0.46
2:B4:250:VAL:HG23	2:B4:254:GLU:HG3	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B6:215:ARG:NH2	2:B6:299:ALA:O	2.47	0.46
3:B7:318:ARG:HD3	3:B7:358:PRO:HD3	1.97	0.46
3:B9:252:LYS:HG3	3:B9:350:LYS:HE3	1.98	0.46
3:C1:275:SER:OG	3:C1:276:ARG:N	2.48	0.46
3:C3:173:PRO:HA	3:C3:380:ARG:HH21	1.80	0.46
2:C4:135:PHE:HB2	2:C4:166:LYS:HA	1.97	0.46
3:D9:139:LEU:HD11	3:D9:192:LEU:HD13	1.97	0.46
3:E3:153:SER:HB2	3:E3:191:GLN:NE2	2.30	0.46
3:E9:179:VAL:HG11	2:F0:258:ASN:O	2.15	0.46
2:A0:139:ASN:OD1	2:A0:139:ASN:N	2.48	0.46
2:A0:152:LEU:HD21	2:A0:156:ARG:NH1	2.29	0.46
3:A1:91:VAL:HG21	3:A1:116:VAL:CG2	2.46	0.46
2:B4:285:GLN:HG3	2:B4:285:GLN:O	2.15	0.46
3:B7:107:THR:HG21	3:B7:401:GLU:OE2	2.14	0.46
3:B7:220:PRO:HG2	2:B8:326:LYS:HB2	1.97	0.46
2:B8:141:VAL:HA	2:B8:147:SER:HB2	1.98	0.46
3:C1:267:LEU:HD23	3:C1:299:MET:HE3	1.97	0.46
2:C4:18:ASN:O	2:C4:22:GLU:HG2	2.15	0.46
2:C8:217:LEU:CD2	2:C8:275:ILE:HG22	2.45	0.46
3:C9:161:ASP:OD1	3:C9:161:ASP:N	2.44	0.46
3:D3:140:GLY:O	3:D3:184:ASN:ND2	2.44	0.46
3:D3:239:CYS:SG	3:D3:248:SER:N	2.87	0.46
3:D5:248:SER:HA	3:D5:252:LYS:HG2	1.96	0.46
3:E5:186:THR:HG22	3:E5:415:MET:CE	2.46	0.46
2:E6:60:LYS:NZ	2:E6:85:HIS:O	2.48	0.46
3:E9:5:VAL:HB	3:E9:133:PHE:HD1	1.81	0.46
2:A0:56:THR:HA	3:F1:283:ALA:HB2	1.97	0.46
3:A1:10:GLY:O	3:A1:14:ASN:ND2	2.40	0.46
2:A2:222:PRO:CG	3:A3:324:LYS:HB2	2.45	0.46
3:A3:64:ILE:HD12	3:A3:119:VAL:HG12	1.97	0.46
3:A7:128:ASP:OD1	3:A7:128:ASP:N	2.47	0.46
2:A8:395:PHE:HD2	2:A8:422:ARG:HD3	1.81	0.46
2:C0:298:PRO:HG3	2:C0:308:ARG:HH12	1.80	0.46
3:C1:73:MET:HB3	3:C1:77:ARG:HH22	1.79	0.46
3:C1:382:SER:O	3:C1:386:THR:N	2.45	0.46
3:C3:200:GLN:HG3	3:C3:268:ILE:HD11	1.96	0.46
2:C4:88:HIS:O	2:C4:90:GLU:N	2.48	0.46
2:C4:178:SER:HB3	3:C5:347:ASN:ND2	2.31	0.46
3:F1:320:ARG:HB2	3:F1:320:ARG:HH11	1.79	0.46
2:A2:241:SER:HB3	2:A2:249:ASN:HB3	1.97	0.46
2:A2:336:LYS:HD2	2:A2:336:LYS:HA	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:285:GLN:HB2	2:A8:57:GLY:HA2	1.95	0.46
3:A9:219:THR:HA	2:B0:324:VAL:HG11	1.97	0.46
2:B0:27:GLU:OE1	2:B0:243:ARG:NH2	2.49	0.46
3:B1:63:ALA:O	3:B1:89:ASN:ND2	2.48	0.46
3:B3:248:SER:HA	3:B3:252:LYS:HE2	1.98	0.46
3:C7:311:LEU:HD12	3:C7:342:VAL:HG11	1.98	0.46
2:C8:238:LEU:HD11	2:C8:255:PHE:HE2	1.79	0.46
2:D4:88:HIS:HB3	2:D4:91:GLN:HG2	1.98	0.46
2:D8:156:ARG:CZ	2:D8:156:ARG:HB2	2.46	0.46
2:E0:100:ALA:CB	3:E1:251:ARG:HD2	2.45	0.46
2:E4:422:ARG:NH1	2:E4:426:ALA:HB2	2.29	0.46
2:E8:296:PHE:CZ	2:E8:317:LEU:HD21	2.50	0.46
3:A3:8:GLN:HG3	3:A3:65:LEU:HD13	1.97	0.46
3:A3:163:ILE:HG12	3:A3:250:LEU:HB3	1.96	0.46
2:C2:105:ARG:HG2	2:C2:411:GLU:HG2	1.98	0.46
3:D1:274:THR:OG1	3:D1:279:GLN:OE1	2.34	0.46
2:D2:194:LEU:O	2:D2:198:THR:HG22	2.16	0.46
3:D7:163:ILE:HD11	3:D7:251:ARG:HG3	1.97	0.46
2:D8:119:LEU:CD1	2:D8:156:ARG:HD2	2.46	0.46
2:E2:220:GLU:HG3	2:E2:220:GLU:O	2.15	0.46
3:E5:248:SER:HA	3:E5:252:LYS:HG2	1.98	0.46
2:F0:176:GLN:OE1	3:F1:331:LEU:HD11	2.15	0.46
1:7:244:GLN:HE22	1:7:249:SER:N	2.14	0.46
2:A0:269:LEU:HD23	2:A0:303:ALA:HB3	1.98	0.46
3:A1:91:VAL:HG21	3:A1:116:VAL:HG23	1.97	0.46
3:A1:179:VAL:HG11	2:A2:258:ASN:O	2.15	0.46
2:A2:3:GLU:OE1	2:A2:64:ARG:NH1	2.49	0.46
2:B4:178:SER:OG	2:B4:179:THR:N	2.49	0.46
2:B8:1:MET:N	2:B8:129:CYS:SG	2.86	0.46
2:B8:26:LEU:HD21	2:B8:364:PRO:HD3	1.98	0.46
3:C3:49:VAL:HG11	3:C3:241:ARG:HG2	1.98	0.46
2:C6:274:PRO:HG2	2:C6:371:VAL:HG11	1.97	0.46
2:C8:34:GLY:O	2:C8:61:HIS:N	2.43	0.46
2:C8:88:HIS:HB3	2:C8:91:GLN:HB2	1.96	0.46
3:D3:294:PHE:CD2	3:D3:333:VAL:HG21	2.51	0.46
3:D9:10:GLY:HA2	3:D9:143:THR:HG23	1.98	0.46
3:E7:382:SER:OG	3:E7:412:GLU:OE1	2.32	0.46
1:8:251:TYR:OH	2:C0:225:THR:OG1	2.34	0.46
3:A9:173:PRO:HG2	3:A9:205:GLU:OE2	2.15	0.46
2:B6:265:ILE:HG23	2:B6:432:TYR:CZ	2.51	0.46
3:C1:208:TYR:HA	2:C2:326:LYS:NZ	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C8:206:ASN:HD22	2:C8:227:LEU:HD23	1.80	0.46
2:C8:241:SER:HB2	2:C8:249:ASN:HB2	1.97	0.46
2:C8:304:LYS:O	2:C8:304:LYS:HD3	2.16	0.46
3:D1:117:LEU:HA	3:D1:120:VAL:HG12	1.97	0.46
2:E6:180:ALA:HA	3:E7:350:LYS:HE3	1.97	0.46
1:2:247:TYR:HE1	2:A8:81:GLY:HA3	1.81	0.46
2:A4:407:TRP:CZ3	3:A5:255:VAL:HA	2.50	0.46
2:B2:145:THR:O	2:B2:149:LEU:HB2	2.16	0.46
2:B2:277:SER:OG	2:B2:278:ALA:N	2.49	0.46
3:B3:63:ALA:O	3:B3:89:ASN:ND2	2.49	0.46
2:B4:167:LEU:HD22	2:B4:200:VAL:HB	1.98	0.46
3:D3:218:THR:O	2:D4:326:LYS:HE2	2.16	0.46
3:D5:68:LEU:HB3	3:D5:96:GLY:HA2	1.98	0.46
2:D8:12:ALA:CB	2:D8:140:ALA:HB2	2.46	0.46
2:F0:28:HIS:CE1	2:F0:243:ARG:HD2	2.51	0.46
2:A6:204:LEU:HD13	2:A6:231:ILE:HD12	1.97	0.46
3:B1:114:ASP:N	3:B1:114:ASP:OD1	2.49	0.46
3:C1:392:LYS:HA	3:C1:395:LEU:HD23	1.98	0.46
3:C5:187:LEU:HD11	3:C5:408:PHE:CZ	2.50	0.46
3:D3:67:ASP:OD1	3:D3:68:LEU:N	2.49	0.46
3:D3:117:LEU:HA	3:D3:120:VAL:HG12	1.98	0.46
2:D4:30:ILE:HG22	2:D4:36:MET:HB3	1.97	0.46
3:D5:323:THR:O	3:D5:327:ASP:N	2.47	0.46
2:E4:223:THR:HA	3:E5:323:THR:OG1	2.15	0.46
3:E5:221:THR:HA	2:E6:325:PRO:HD2	1.98	0.46
2:E8:79:ARG:NH1	2:E8:92:LEU:O	2.48	0.46
1:19:256:LEU:HB2	2:E6:29:GLY:HA2	1.97	0.45
2:A0:136:LEU:HD23	2:A0:167:LEU:HB3	1.97	0.45
3:A3:237:THR:HG22	3:A3:237:THR:O	2.16	0.45
3:A5:206:ALA:HB2	3:A5:302:ALA:HB2	1.97	0.45
2:A6:222:PRO:CG	3:A7:324:LYS:HB2	2.45	0.45
2:A8:395:PHE:CD2	2:A8:422:ARG:HD3	2.51	0.45
3:A9:263:LEU:H	3:A9:263:LEU:HD23	1.81	0.45
2:B8:168:ASN:HD22	2:B8:198:THR:HG21	1.81	0.45
2:C0:224:TYR:HA	2:C0:227:LEU:HD12	1.99	0.45
3:C1:105:HIS:CE1	3:C1:150:LEU:HD13	2.51	0.45
3:C1:139:LEU:HA	3:C1:145:SER:HB2	1.98	0.45
2:C4:137:MET:HB3	2:C4:168:ASN:HA	1.97	0.45
2:C4:221:ARG:HB3	3:C5:322:SER:CB	2.45	0.45
2:C6:28:HIS:HE1	2:C6:243:ARG:HD2	1.80	0.45
2:D4:306:ASP:HB3	2:D4:309:HIS:CE1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:55:THR:O	3:D5:55:THR:HG23	2.16	0.45
3:E1:309:ARG:H	3:E1:372:THR:HG22	1.80	0.45
2:E4:406:HIS:CD2	3:E5:261:PRO:HB3	2.51	0.45
2:E6:236:SER:OG	2:E6:243:ARG:NH2	2.49	0.45
3:E9:320:ARG:HH11	3:E9:320:ARG:HD3	1.34	0.45
3:F1:167:PHE:CZ	3:F1:233:MET:HG3	2.51	0.45
1:21:238:THR:HG21	3:F1:359:LYS:HZ1	1.81	0.45
2:A6:212:ILE:HG12	2:A6:275:ILE:HD11	1.99	0.45
3:A7:4:ILE:HD11	3:A7:240:LEU:HD22	1.98	0.45
2:A8:209:ILE:HA	2:A8:212:ILE:HG22	1.98	0.45
2:B6:52:PHE:HD2	2:B6:243:ARG:HD3	1.81	0.45
3:C1:257:LEU:HB3	3:C1:266:PHE:CE1	2.51	0.45
3:C3:270:PHE:O	3:C3:298:ASN:ND2	2.36	0.45
2:C4:167:LEU:HA	2:C4:200:VAL:HG13	1.99	0.45
2:C6:1:MET:HA	2:C6:129:CYS:HB3	1.98	0.45
2:D4:214:ARG:HG3	3:D5:324:LYS:HZ3	1.80	0.45
3:E1:198:GLU:HB2	3:E1:266:PHE:CE2	2.48	0.45
3:E1:396:HIS:HA	3:E1:399:THR:HG22	1.97	0.45
2:E2:188:VAL:HG23	2:E2:391:MET:HE2	1.99	0.45
2:E6:336:LYS:HE2	2:E6:336:LYS:HB2	1.64	0.45
2:E8:265:ILE:HD12	2:E8:432:TYR:CE1	2.52	0.45
1:22:251:TYR:HH	2:C6:225:THR:HG1	1.59	0.45
2:A0:164:LYS:HD2	2:A0:164:LYS:HA	1.69	0.45
2:A0:229:ARG:HH11	2:A0:229:ARG:HG3	1.81	0.45
3:A1:274:THR:HG21	3:A1:282:ARG:HD2	1.98	0.45
2:A4:71:GLU:HB2	2:A4:98:ASP:HB2	1.98	0.45
2:B0:88:HIS:HB3	2:B0:91:GLN:HG2	1.98	0.45
3:B3:397:TRP:HA	3:B3:397:TRP:CE3	2.51	0.45
3:B5:336:LYS:HA	3:B5:336:LYS:CE	2.47	0.45
2:C6:407:TRP:CH2	3:C7:254:ALA:O	2.68	0.45
2:D0:189:LEU:HD11	2:D0:418:PHE:HD1	1.81	0.45
2:D2:241:SER:HB2	2:D2:249:ASN:HB2	1.96	0.45
3:D7:292:GLN:O	3:D7:298:ASN:ND2	2.47	0.45
3:E1:128:ASP:OD1	3:E1:129:CYS:N	2.44	0.45
3:E5:33:THR:O	3:E5:58:ARG:NH2	2.49	0.45
2:F0:328:VAL:HG21	2:F0:355:ILE:HD11	1.98	0.45
1:15:257:PRO:HG3	2:D8:26:LEU:O	2.15	0.45
2:A0:11:GLN:HG3	2:A0:74:VAL:HG11	1.98	0.45
2:A4:60:LYS:HE3	2:A4:60:LYS:HB3	1.57	0.45
3:A7:95:THR:OG1	3:A7:96:GLY:N	2.49	0.45
3:B1:190:HIS:HB2	3:B1:414:ASN:HD22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B7:190:HIS:HA	3:B7:193:VAL:HG12	1.98	0.45
3:B9:256:ASN:HD22	3:B9:350:LYS:HD2	1.82	0.45
3:B9:276:ARG:NH2	3:B9:279:GLN:OE1	2.50	0.45
3:C1:105:HIS:O	3:C1:105:HIS:ND1	2.50	0.45
3:C3:169:VAL:HG12	3:C3:202:ILE:HB	1.97	0.45
2:C6:310:GLY:HA3	2:C6:383:ALA:HB2	1.99	0.45
3:C7:321:MET:N	3:C7:321:MET:SD	2.90	0.45
2:C8:319:TYR:CD2	2:C8:375:VAL:HG22	2.51	0.45
3:D7:323:THR:HA	3:D7:326:VAL:HG12	1.97	0.45
3:D9:318:ARG:HG2	3:D9:354:CYS:HB3	1.98	0.45
2:E2:277:SER:OG	2:E2:278:ALA:N	2.50	0.45
2:E4:215:ARG:NH1	2:E4:216:ASN:OD1	2.49	0.45
3:E9:98:GLY:O	2:F0:257:THR:HG21	2.17	0.45
1:11:247:TYR:OH	2:D0:82:THR:N	2.47	0.45
1:12:250:GLU:HG3	1:12:251:TYR:CD1	2.51	0.45
2:A2:66:VAL:HG21	2:A2:122:ILE:HD11	1.97	0.45
2:A4:269:LEU:HD23	2:A4:301:MET:HE2	1.99	0.45
2:A8:277:SER:OG	2:A8:278:ALA:N	2.48	0.45
3:A9:362:LYS:HA	3:A9:362:LYS:HD2	1.69	0.45
2:C8:323:VAL:HG13	2:C8:355:ILE:HG23	1.98	0.45
2:D0:285:GLN:HB3	2:D4:57:GLY:CA	2.47	0.45
3:D1:163:ILE:HG13	3:D1:164:MET:N	2.32	0.45
2:D2:11:GLN:O	2:D2:15:GLN:HG3	2.17	0.45
3:D3:64:ILE:HD12	3:D3:119:VAL:HG22	1.99	0.45
3:D5:281:TYR:O	3:D9:54:ALA:HB1	2.17	0.45
2:D8:223:THR:HG23	2:D8:225:THR:H	1.81	0.45
2:E0:212:ILE:HD11	2:E0:300:SER:HA	1.98	0.45
2:E2:70:LEU:HD12	2:E2:99:ALA:HB2	1.98	0.45
3:F1:309:ARG:NH1	3:F1:341:PHE:O	2.48	0.45
1:23:245:SER:HB2	3:C5:42:LEU:HD11	1.99	0.45
1:5:248:ARG:NH1	3:B5:42:LEU:HD21	2.32	0.45
2:A8:282:TYR:HD2	2:A8:283:HIS:CE1	2.35	0.45
2:B0:138:PHE:CZ	2:B0:235:ILE:HD12	2.51	0.45
3:B3:46:ARG:HE	3:B3:46:ARG:HB2	1.61	0.45
3:B5:383:ASP:HA	3:B5:386:THR:HG22	1.98	0.45
3:C1:86:ARG:HD2	3:C1:88:ASP:HB2	1.98	0.45
2:C4:390:ARG:O	2:C4:394:LYS:N	2.50	0.45
3:D5:209:ASP:OD1	3:D5:213:ARG:NH1	2.45	0.45
3:E1:2:ARG:HB2	3:E1:131:GLN:HB2	1.99	0.45
2:E2:181:VAL:HG12	3:E3:256:ASN:HD22	1.81	0.45
2:E4:119:LEU:HD22	2:E4:157:LEU:HD21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E4:284:GLU:CG	2:E8:88:HIS:CD2	2.99	0.45
2:E6:192:HIS:ND1	2:E6:424:ASP:OD2	2.50	0.45
3:E7:208:TYR:CE1	3:E7:225:LEU:HD11	2.52	0.45
2:E8:91:GLN:HB3	2:E8:121:ARG:HG2	1.98	0.45
2:E8:296:PHE:HZ	2:E8:317:LEU:HD21	1.81	0.45
1:18:254:LYS:CE	2:E4:364:PRO:HD2	2.46	0.45
3:A1:32:PRO:O	3:A1:83:GLN:NE2	2.49	0.45
3:A5:226:ASN:HA	3:A5:229:VAL:HG12	1.99	0.45
3:A9:70:PRO:HD2	2:B0:2:ARG:HH12	1.81	0.45
3:C1:73:MET:HB3	3:C1:77:ARG:NH2	2.32	0.45
3:C3:253:LEU:HD11	3:C3:368:VAL:HG21	1.97	0.45
2:C4:319:TYR:HB3	2:C4:323:VAL:HG21	1.98	0.45
3:D7:238:CYS:SG	3:D7:318:ARG:NE	2.90	0.45
2:E4:214:ARG:CG	3:E5:324:LYS:NZ	2.72	0.45
3:E5:105:HIS:CD2	3:E5:150:LEU:HB2	2.51	0.45
3:E9:7:VAL:HG22	3:E9:64:ILE:HB	1.98	0.45
3:A1:193:VAL:HG12	3:A1:265:PHE:HE2	1.82	0.45
2:A2:208:ALA:HB2	2:A2:304:LYS:HB2	1.98	0.45
3:A5:23:VAL:HG11	3:A5:230:SER:HB2	1.98	0.45
3:A5:167:PHE:CE2	3:A5:233:MET:HG2	2.52	0.45
3:C1:326:VAL:O	3:C1:330:MET:HG2	2.16	0.45
2:C2:155:GLU:HG2	2:C2:197:HIS:CD2	2.52	0.45
2:C2:425:LEU:HD23	2:C2:425:LEU:HA	1.82	0.45
3:C3:136:THR:HG23	3:C3:167:PHE:HB2	1.98	0.45
2:C4:7:ILE:HG21	2:C4:153:LEU:HD23	1.99	0.45
3:C9:66:MET:HE2	3:C9:116:VAL:HG21	1.98	0.45
2:D2:277:SER:OG	2:D2:278:ALA:N	2.49	0.45
3:D3:350:LYS:NZ	3:D3:352:SER:OG	2.49	0.45
2:E0:66:VAL:HG21	2:E0:122:ILE:HD11	1.99	0.45
2:E0:177:VAL:HA	3:E1:347:ASN:ND2	2.31	0.45
3:E3:239:CYS:SG	3:E3:248:SER:N	2.83	0.45
3:E3:385:PHE:CE2	3:E3:412:GLU:HB3	2.52	0.45
3:E5:99:ASN:HB2	2:E6:257:THR:HG21	1.98	0.45
2:F0:219:ILE:HG13	2:F0:222:PRO:HD3	1.97	0.45
2:A0:241:SER:HB3	2:A0:249:ASN:HB3	1.99	0.45
3:A1:6:HIS:CD2	3:A1:134:GLN:HG3	2.51	0.45
2:A4:208:ALA:HB2	2:A4:304:LYS:HG2	1.98	0.45
3:A5:203:ASP:OD2	3:A5:302:ALA:N	2.38	0.45
2:A6:27:GLU:HG3	2:A6:361:THR:HG21	1.99	0.45
3:A7:178:THR:O	3:A7:181:GLU:HG2	2.17	0.45
3:A9:149:THR:OG1	3:A9:191:GLN:OE1	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B4:298:PRO:HB3	2:B4:307:PRO:HD2	1.99	0.45
2:B6:70:LEU:HD12	2:B6:99:ALA:HB2	1.98	0.45
2:C0:320:ARG:NH2	2:C0:358:GLN:OE1	2.50	0.45
2:C2:277:SER:OG	2:C2:278:ALA:N	2.50	0.45
3:C3:274:THR:OG1	3:C3:279:GLN:OE1	2.31	0.45
3:C5:327:ASP:OD1	3:C5:327:ASP:N	2.45	0.45
3:C7:149:THR:HG23	3:C7:152:ILE:HD12	1.97	0.45
2:D0:119:LEU:HA	2:D0:122:ILE:HG22	1.99	0.45
2:D0:156:ARG:HG2	2:D0:156:ARG:HH21	1.82	0.45
2:D2:259:LEU:HD13	2:D2:268:MET:HE2	1.99	0.45
2:E0:18:ASN:HD21	2:E0:78:VAL:HG22	1.81	0.45
2:E0:406:HIS:HA	2:E0:409:VAL:HG12	1.97	0.45
3:E1:113:ILE:HD11	3:E1:151:LEU:HD13	1.99	0.45
2:E4:182:VAL:HG22	2:E4:182:VAL:O	2.17	0.45
2:E4:222:PRO:O	3:E5:323:THR:N	2.50	0.45
2:E6:285:GLN:HG2	2:F0:56:THR:HA	1.99	0.45
3:E9:175:VAL:HG23	2:F0:332:VAL:HG11	1.99	0.45
2:F0:222:PRO:HB3	2:F0:226:ASN:HD22	1.81	0.45
1:8:256:LEU:HA	1:8:257:PRO:HD3	1.87	0.45
2:A0:172:TRP:N	2:A0:204:LEU:O	2.45	0.45
2:A4:328:VAL:O	2:A4:332:VAL:HG23	2.17	0.45
3:A9:213:ARG:HE	3:A9:297:LYS:HG3	1.81	0.45
3:A9:217:LEU:HD23	3:A9:217:LEU:HA	1.86	0.45
3:B3:27:GLU:OE2	3:B3:318:ARG:NH2	2.35	0.45
2:B6:326:LYS:HD2	2:B6:326:LYS:HA	1.57	0.45
2:B8:164:LYS:HD3	2:B8:164:LYS:HA	1.78	0.45
3:C3:222:TYR:HA	3:C3:225:LEU:HB2	1.98	0.45
2:C6:88:HIS:HB3	2:C6:91:GLN:OE1	2.17	0.45
3:C7:404:ASP:OD1	3:C7:405:GLU:N	2.45	0.45
2:C8:98:ASP:OD1	2:C8:99:ALA:N	2.50	0.45
3:C9:282:ARG:NH1	3:C9:292:GLN:OE1	2.50	0.45
2:D2:181:VAL:HG22	3:D3:256:ASN:HA	1.99	0.45
3:D3:191:GLN:HA	3:D3:194:GLU:HG2	1.98	0.45
2:D6:209:ILE:HG21	2:D6:227:LEU:HG	1.98	0.45
3:D7:179:VAL:HG11	2:D8:258:ASN:O	2.17	0.45
3:D9:63:ALA:O	3:D9:89:ASN:ND2	2.50	0.45
2:E2:269:LEU:HG	2:E2:384:ILE:HD11	1.99	0.45
3:E3:7:VAL:HB	3:E3:135:ILE:HG13	1.99	0.45
3:E7:25:SER:HB3	3:E7:30:ILE:HB	1.99	0.45
2:E8:69:ASP:OD1	2:E8:70:LEU:N	2.49	0.45
2:E8:137:MET:HB3	2:E8:168:ASN:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E9:113:ILE:HG13	3:E9:150:LEU:HD22	1.99	0.45
2:A0:356:ASN:OD1	2:A0:357:TYR:N	2.50	0.44
3:A1:22:GLU:OE2	3:A1:81:PHE:HB2	2.17	0.44
3:A1:100:ASN:HB3	3:A1:103:LYS:HB2	1.99	0.44
3:A1:122:LYS:HE3	3:A1:122:LYS:HB3	1.75	0.44
2:B0:306:ASP:HB3	2:B0:309:HIS:CE1	2.52	0.44
3:B1:238:CYS:HB3	3:B1:318:ARG:NH1	2.32	0.44
2:B2:154:LEU:CD1	2:B2:166:LYS:HD2	2.47	0.44
2:B4:240:ALA:O	2:B4:356:ASN:ND2	2.49	0.44
2:B4:285:GLN:HG2	2:B8:56:THR:HA	1.99	0.44
2:B8:188:VAL:HG23	2:B8:189:LEU:HD12	1.99	0.44
3:C3:192:LEU:HD21	3:C3:199:VAL:HG11	1.99	0.44
2:C4:175:PRO:HG3	2:C4:304:LYS:HG2	1.98	0.44
3:C5:239:CYS:SG	3:C5:248:SER:N	2.83	0.44
3:C5:259:PRO:HB2	3:C5:260:PHE:CD1	2.52	0.44
2:C8:337:THR:O	2:C8:339:ARG:NH1	2.49	0.44
2:D2:181:VAL:HG22	3:D3:256:ASN:HD22	1.82	0.44
2:D2:191:THR:HG21	2:D2:425:LEU:HD13	1.99	0.44
2:D2:259:LEU:HD21	2:D2:316:CYS:HB2	1.98	0.44
2:D4:7:ILE:HG22	2:D4:9:VAL:HG23	1.99	0.44
3:D9:135:ILE:HG22	3:D9:137:HIS:CD2	2.52	0.44
3:E1:19:LYS:NZ	3:E1:223:GLY:O	2.50	0.44
3:E1:122:LYS:HD3	3:E1:122:LYS:HA	1.78	0.44
3:E5:112:LEU:HD23	3:E5:112:LEU:O	2.16	0.44
2:E6:222:PRO:HD2	3:E7:324:LYS:HB3	1.98	0.44
2:E6:265:ILE:HG23	2:E6:432:TYR:CZ	2.51	0.44
2:E8:172:TRP:N	2:E8:204:LEU:O	2.42	0.44
2:A0:35:GLN:O	2:A0:35:GLN:HG3	2.17	0.44
3:A5:176:SER:HB2	2:A6:349:THR:HB	1.99	0.44
3:A9:258:ILE:HD11	3:A9:266:PHE:HZ	1.83	0.44
3:B1:149:THR:OG1	3:B1:191:GLN:OE1	2.22	0.44
2:B2:156:ARG:HA	2:B2:159:VAL:HG12	1.99	0.44
2:B8:269:LEU:CD1	2:B8:303:ALA:HB3	2.45	0.44
2:B8:286:LEU:O	2:B8:373:ARG:NH1	2.40	0.44
3:C1:211:CYS:HA	3:C1:215:LEU:HB2	1.99	0.44
3:C5:219:THR:HB	2:C6:324:VAL:CG1	2.28	0.44
3:C7:330:MET:HB3	3:C7:349:MET:HG3	1.99	0.44
2:D8:422:ARG:HD2	2:D8:422:ARG:HA	1.61	0.44
2:E8:53:PHE:HB3	2:E8:61:HIS:HB3	1.99	0.44
3:E9:70:PRO:HD2	2:F0:2:ARG:HH11	1.81	0.44
3:E9:167:PHE:CE1	3:E9:233:MET:HG2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A0:402:ARG:HD3	2:A0:402:ARG:HA	1.69	0.44
2:A4:103:PHE:H	2:A4:408:TYR:HE1	1.66	0.44
2:A6:283:HIS:CD2	2:B0:60:LYS:HZ1	2.35	0.44
2:A8:27:GLU:OE2	2:A8:243:ARG:NH2	2.49	0.44
3:B1:230:SER:HA	3:B1:233:MET:HG2	1.99	0.44
3:B5:8:GLN:OE1	3:B5:17:GLY:HA3	2.18	0.44
2:C2:141:VAL:HG21	2:C2:172:TRP:CZ3	2.52	0.44
2:D0:377:MET:HE2	2:D0:379:SER:HB3	2.00	0.44
3:D3:23:VAL:HG11	3:D3:230:SER:HB2	2.00	0.44
3:D3:266:PHE:HB3	3:D3:368:VAL:HG13	1.99	0.44
2:D4:174:SER:HB2	2:D4:177:VAL:O	2.18	0.44
2:D4:176:GLN:HG3	2:D4:177:VAL:HG23	1.99	0.44
3:D7:112:LEU:HA	3:D7:112:LEU:HD12	1.83	0.44
3:D9:64:ILE:HD12	3:D9:119:VAL:HG12	1.99	0.44
2:E6:306:ASP:HB3	2:E6:309:HIS:CE1	2.53	0.44
2:E6:417:GLU:HA	2:E6:420:GLU:HG3	1.99	0.44
2:F0:195:LEU:HD21	2:F0:428:LEU:HD22	1.99	0.44
3:F1:42:LEU:HD11	3:F1:243:PRO:HG3	1.99	0.44
2:A0:222:PRO:HD2	3:A1:324:LYS:HB3	1.99	0.44
3:A1:13:GLY:HA2	3:A1:16:ILE:HG22	1.99	0.44
2:A4:134:GLY:CA	2:A4:164:LYS:HZ1	2.31	0.44
2:A6:265:ILE:HG23	2:A6:432:TYR:CZ	2.53	0.44
3:B1:91:VAL:HG21	3:B1:116:VAL:HG12	1.98	0.44
3:B1:237:THR:HA	3:B1:240:LEU:HD13	2.00	0.44
2:B6:397:LEU:HD23	2:B6:397:LEU:HA	1.89	0.44
2:C6:181:VAL:CG2	3:C7:256:ASN:OD1	2.66	0.44
2:C8:217:LEU:HD13	2:C8:277:SER:HB3	1.98	0.44
3:C9:103:LYS:O	3:C9:108:GLU:HB3	2.17	0.44
3:C9:220:PRO:HD2	2:D0:326:LYS:HG3	1.99	0.44
2:D4:261:PRO:HG3	2:D4:313:MET:HE2	2.00	0.44
2:E0:71:GLU:CD	3:E1:2:ARG:NH2	2.70	0.44
3:E1:13:GLY:HA2	3:E1:136:THR:HG22	1.99	0.44
2:E4:27:GLU:HB3	2:E4:361:THR:HG21	1.99	0.44
2:E6:8:HIS:HE1	2:E6:21:TRP:HE1	1.64	0.44
3:E9:207:LEU:HB3	3:E9:225:LEU:HD22	1.99	0.44
3:F1:33:THR:O	3:F1:58:ARG:NH2	2.51	0.44
1:19:256:LEU:HA	2:E6:26:LEU:CD2	2.48	0.44
2:A0:363:VAL:HG23	2:A0:366:GLY:HA3	2.00	0.44
2:A2:205:ASP:OD1	2:A2:206:ASN:N	2.50	0.44
3:A7:113:ILE:HG13	3:A7:117:LEU:HD23	2.00	0.44
2:A8:53:PHE:HB3	2:A8:61:HIS:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:116:ASP:N	2:A8:116:ASP:OD1	2.49	0.44
3:B3:175:VAL:HG11	2:B4:329:ASN:ND2	2.32	0.44
2:C0:241:SER:OG	2:C0:250:VAL:O	2.25	0.44
2:C4:269:LEU:CD1	2:C4:384:ILE:HD11	2.47	0.44
2:C8:28:HIS:CE1	2:C8:243:ARG:HH11	2.35	0.44
2:D0:306:ASP:HB3	2:D0:309:HIS:CE1	2.53	0.44
3:D1:371:SER:OG	3:D1:372:THR:N	2.50	0.44
2:D4:32:PRO:HB3	2:D4:83:TYR:CD1	2.53	0.44
3:D5:310:TYR:CD1	3:D5:371:SER:HB2	2.52	0.44
2:D6:176:GLN:HB3	3:D7:331:LEU:HD11	1.99	0.44
2:D8:207:GLU:HA	2:D8:210:TYR:HB2	1.98	0.44
3:D9:178:THR:OG1	3:D9:181:GLU:OE2	2.35	0.44
3:E1:33:THR:HG23	3:E1:35:THR:HG23	2.00	0.44
3:E5:181:GLU:HB2	3:E5:182:PRO:HD3	1.99	0.44
3:E5:219:THR:O	3:E5:219:THR:OG1	2.34	0.44
2:E8:80:THR:HG22	2:E8:84:ARG:HH21	1.82	0.44
2:F0:319:TYR:HB3	2:F0:323:VAL:HG11	1.99	0.44
2:A6:133:GLN:NE2	2:A6:133:GLN:HA	2.32	0.44
2:B0:12:ALA:CB	2:B0:140:ALA:HB2	2.47	0.44
2:B2:319:TYR:N	2:B2:354:GLY:O	2.51	0.44
3:B7:11:GLN:HA	3:B7:72:THR:HG21	1.99	0.44
2:B8:70:LEU:HD12	2:B8:99:ALA:HB2	2.00	0.44
2:C0:328:VAL:HG11	2:C0:355:ILE:HD11	1.99	0.44
2:C2:9:VAL:HG22	2:C2:68:LEU:HB2	1.98	0.44
2:C2:276:ILE:HG23	2:C2:281:ALA:HB2	2.00	0.44
2:C2:286:LEU:O	2:C2:373:ARG:NH1	2.51	0.44
2:C4:210:TYR:CD1	2:C4:227:LEU:HD21	2.53	0.44
3:C9:99:ASN:HD21	3:C9:178:THR:HG22	1.82	0.44
3:D3:317:PHE:HB3	3:D3:321:MET:SD	2.57	0.44
3:D9:6:HIS:HD2	3:D9:134:GLN:NE2	2.15	0.44
2:E0:100:ALA:O	3:E1:255:VAL:HG11	2.17	0.44
2:E0:352:LYS:HD3	2:E0:352:LYS:HA	1.76	0.44
2:F0:274:PRO:HG3	2:F0:286:LEU:HD13	1.98	0.44
3:F1:151:LEU:HD12	3:F1:151:LEU:HA	1.88	0.44
1:8:257:PRO:CG	2:C0:29:GLY:HA2	2.47	0.44
2:A0:9:VAL:HG22	2:A0:68:LEU:HD22	1.98	0.44
2:A2:199:ASP:OD1	2:A2:200:VAL:N	2.50	0.44
3:A3:304:ASP:CG	3:A3:307:HIS:HD1	2.21	0.44
2:A4:241:SER:OG	2:A4:250:VAL:O	2.24	0.44
2:B0:90:GLU:HB2	2:B0:121:ARG:NH2	2.33	0.44
3:B3:219:THR:CB	2:B4:324:VAL:HG21	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B3:282:ARG:O	3:B7:55:THR:HG22	2.18	0.44
3:B7:209:ASP:O	3:B7:213:ARG:HG2	2.17	0.44
3:B9:101:TRP:H	3:B9:398:TYR:HE1	1.65	0.44
2:C0:210:TYR:HE1	2:C0:227:LEU:HD11	1.82	0.44
3:C1:149:THR:O	3:C1:191:GLN:NE2	2.51	0.44
3:C1:279:GLN:HG3	3:C1:282:ARG:NH1	2.32	0.44
2:C2:207:GLU:HA	2:C2:210:TYR:HB2	2.00	0.44
2:C2:346:TRP:HZ2	2:C2:435:VAL:HG13	1.82	0.44
2:C6:132:LEU:HD13	2:C6:132:LEU:HA	1.82	0.44
3:C7:200:GLN:HB3	3:C7:266:PHE:HB2	1.99	0.44
2:C8:7:ILE:HG23	2:C8:66:VAL:HG23	2.00	0.44
2:C8:70:LEU:HD12	2:C8:145:THR:HG22	1.98	0.44
3:C9:121:ARG:NH2	3:C9:158:GLU:OE2	2.50	0.44
2:D2:272:TYR:HD2	2:D2:275:ILE:HG12	1.83	0.44
3:D7:130:LEU:HD22	3:D7:162:ARG:HG3	2.00	0.44
2:D8:19:ALA:HB3	2:D8:228:ASN:HB3	1.99	0.44
2:D8:393:HIS:O	2:D8:397:LEU:HD13	2.18	0.44
2:E0:176:GLN:CD	3:E1:331:LEU:HD11	2.38	0.44
2:E0:394:LYS:HE3	3:E1:346:PRO:CG	2.48	0.44
2:E4:406:HIS:HA	2:E4:409:VAL:HG12	2.00	0.44
3:E5:260:PHE:HE2	3:E5:425:TYR:HH	1.62	0.44
2:F0:113:GLU:OE1	2:F0:113:GLU:N	2.45	0.44
2:A0:292:THR:HG21	2:A0:331:ALA:HB1	1.99	0.44
2:A0:343:PHE:HZ	2:A0:351:PHE:CE1	2.35	0.44
2:A2:277:SER:OG	2:A2:278:ALA:N	2.50	0.44
3:A5:44:LEU:HD11	3:A5:59:PHE:CZ	2.53	0.44
3:A5:54:ALA:HB3	3:A5:58:ARG:HG2	2.00	0.44
3:A9:259:PRO:HB2	3:A9:260:PHE:CD1	2.52	0.44
2:B0:286:LEU:CD1	2:B0:371:VAL:HG23	2.48	0.44
3:B7:326:VAL:O	3:B7:330:MET:HG2	2.18	0.44
2:B8:391:MET:O	2:B8:395:PHE:N	2.50	0.44
3:C1:219:THR:HB	2:C2:324:VAL:HG11	1.99	0.44
2:C2:432:TYR:O	2:C2:436:GLY:N	2.51	0.44
2:C4:210:TYR:CE1	2:C4:227:LEU:HD11	2.53	0.44
3:D5:96:GLY:N	3:D5:108:GLU:OE2	2.50	0.44
3:E1:268:ILE:HD12	3:E1:368:VAL:HG22	1.99	0.44
3:E3:113:ILE:HD11	3:E3:151:LEU:HB2	1.99	0.44
2:E4:217:LEU:HD21	2:E4:367:ASP:OD1	2.17	0.44
2:E4:278:ALA:HA	2:E4:369:ALA:HB2	2.00	0.44
3:E7:86:ARG:HG2	3:E7:88:ASP:H	1.83	0.44
2:E8:181:VAL:HG11	2:E8:404:PHE:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E8:234:VAL:HG21	2:E8:302:MET:HE1	2.00	0.44
1:19:241:PHE:HE1	3:E7:356:ILE:CG2	2.31	0.44
2:A0:210:TYR:CG	3:A1:324:LYS:HD3	2.53	0.44
3:A1:12:CYS:HB3	3:A1:138:SER:HB2	2.00	0.44
2:A4:115:VAL:O	2:A4:119:LEU:HD23	2.18	0.44
2:A4:135:PHE:CE2	2:A4:157:LEU:HD12	2.52	0.44
3:A5:95:THR:OG1	3:A5:96:GLY:N	2.51	0.44
3:B1:239:CYS:SG	3:B1:248:SER:N	2.90	0.44
3:B7:282:ARG:HB2	3:B7:282:ARG:NH2	2.33	0.44
2:C0:70:LEU:HD21	2:C0:149:LEU:HD22	1.99	0.44
2:C0:166:LYS:HE3	2:C0:166:LYS:HB2	1.90	0.44
3:C1:211:CYS:SG	3:C1:220:PRO:HB3	2.57	0.44
3:C5:69:GLU:OE2	2:C6:2:ARG:NH1	2.50	0.44
3:C9:16:ILE:HD11	3:C9:229:VAL:HG21	2.00	0.44
3:C9:220:PRO:HD2	2:D0:326:LYS:CG	2.48	0.44
3:D3:19:LYS:HE2	3:D3:19:LYS:HB2	1.75	0.44
2:D4:5:ILE:HD13	2:D4:64:ARG:HB3	1.99	0.44
3:D9:6:HIS:HE1	3:D9:8:GLN:HE21	1.64	0.44
2:E0:329:ASN:HA	2:E0:332:VAL:HG12	1.99	0.44
3:E3:253:LEU:HD11	3:E3:368:VAL:HG21	1.99	0.44
2:E4:210:TYR:CZ	3:E5:323:THR:O	2.71	0.44
2:E4:309:HIS:NE2	2:E4:386:GLU:OE1	2.41	0.44
3:E9:311:LEU:HD12	3:E9:342:VAL:HG11	2.00	0.44
2:F0:65:CYS:O	2:F0:91:GLN:HG3	2.17	0.44
2:A0:228:ASN:HA	2:A0:231:ILE:HG22	1.99	0.43
2:A6:296:PHE:CE2	2:A6:335:ILE:HG21	2.53	0.43
2:A8:138:PHE:CZ	2:A8:235:ILE:HD13	2.52	0.43
2:A8:139:ASN:N	2:A8:139:ASN:OD1	2.51	0.43
3:B5:67:ASP:OD1	3:B5:68:LEU:N	2.49	0.43
3:B5:287:PRO:HA	3:B5:290:THR:HG22	2.00	0.43
2:C2:51:THR:HG21	2:C2:243:ARG:HG2	2.00	0.43
2:C2:241:SER:OG	2:C2:250:VAL:O	2.25	0.43
3:C7:273:LEU:HD23	3:C7:273:LEU:HA	1.77	0.43
2:D4:116:ASP:OD1	2:D4:116:ASP:N	2.49	0.43
3:D5:180:VAL:HG22	3:D5:183:TYR:HB2	2.00	0.43
3:E1:1:MET:N	3:E1:128:ASP:OD2	2.43	0.43
2:E2:107:HIS:NE2	2:E2:151:CYS:SG	2.87	0.43
2:E4:221:ARG:HH11	2:E4:221:ARG:HD2	1.67	0.43
2:E6:111:GLY:O	2:E6:115:VAL:HG23	2.17	0.43
2:E6:286:LEU:O	2:E6:373:ARG:NH1	2.44	0.43
2:E8:325:PRO:HA	2:E8:328:VAL:HG12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F1:149:THR:HA	3:F1:152:ILE:HD12	2.00	0.43
3:F1:237:THR:O	3:F1:241:ARG:NH1	2.51	0.43
1:12:254:LYS:HE3	2:D2:364:PRO:O	2.18	0.43
2:A8:172:TRP:HB3	2:A8:205:ASP:OD1	2.18	0.43
3:B1:181:GLU:HB2	3:B1:182:PRO:HD3	2.00	0.43
2:B4:141:VAL:O	2:B4:147:SER:OG	2.36	0.43
2:B4:212:ILE:HD11	2:B4:300:SER:HA	2.00	0.43
3:B5:13:GLY:HA2	3:B5:16:ILE:HG22	2.00	0.43
2:B6:73:THR:HA	3:B7:46:ARG:HH11	1.83	0.43
2:B8:274:PRO:HB2	2:B8:276:ILE:HG12	2.00	0.43
2:C4:93:ILE:HD12	2:C4:114:ILE:HG13	1.99	0.43
2:C8:262:TYR:HB3	2:C8:263:PRO:HD2	1.99	0.43
2:D0:224:TYR:H	3:D1:245:GLN:HE22	1.66	0.43
2:D6:64:ARG:HG2	2:D6:125:LEU:HD11	1.99	0.43
3:D9:87:PRO:HA	3:D9:90:PHE:HD1	1.83	0.43
2:E0:394:LYS:HB3	3:E1:346:PRO:HG3	2.00	0.43
2:E4:109:THR:HG23	2:E4:411:GLU:OE1	2.19	0.43
2:E6:32:PRO:HG3	2:E6:83:TYR:HE1	1.83	0.43
2:E6:177:VAL:HG22	3:E7:331:LEU:HD13	2.00	0.43
2:F0:274:PRO:HG2	2:F0:371:VAL:HG11	1.99	0.43
2:A0:259:LEU:HD21	2:A0:316:CYS:HB2	2.00	0.43
3:A3:113:ILE:HA	3:A3:116:VAL:HG22	2.00	0.43
3:A3:187:LEU:HD11	3:A3:408:PHE:CE1	2.52	0.43
2:A4:28:HIS:CD2	2:A4:53:PHE:HE2	2.36	0.43
3:A5:260:PHE:HE2	3:A5:425:TYR:HH	1.65	0.43
3:B1:40:SER:OG	3:B1:43:GLN:OE1	2.33	0.43
3:B1:192:LEU:HD21	3:B1:199:VAL:HG21	2.00	0.43
3:B9:67:ASP:OD1	3:B9:68:LEU:N	2.51	0.43
2:C0:70:LEU:HD12	2:C0:99:ALA:HB2	2.00	0.43
2:C0:278:ALA:HA	2:C0:369:ALA:HB2	2.00	0.43
2:C4:14:ILE:O	2:C4:18:ASN:N	2.48	0.43
2:C4:396:ASP:N	2:C4:396:ASP:OD1	2.50	0.43
2:D2:188:VAL:HG22	2:D2:425:LEU:HD22	1.99	0.43
3:D3:385:PHE:HE2	3:D3:412:GLU:HB2	1.83	0.43
3:D5:274:THR:HG22	3:D5:282:ARG:HH21	1.83	0.43
2:E0:12:ALA:HB3	2:E0:140:ALA:HB2	2.00	0.43
2:E0:100:ALA:HB2	3:E1:251:ARG:HD2	1.99	0.43
2:E0:306:ASP:OD1	2:E0:308:ARG:NH1	2.51	0.43
3:E3:113:ILE:HA	3:E3:116:VAL:HG12	2.00	0.43
2:E6:280:LYS:NZ	2:F0:89:PRO:HB2	2.34	0.43
3:E7:8:GLN:OE1	3:E7:17:GLY:HA3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E8:306:ASP:N	2:E8:386:GLU:OE2	2.51	0.43
3:E9:27:GLU:O	3:E9:359:LYS:NZ	2.35	0.43
3:E9:70:PRO:HD2	2:F0:2:ARG:NH1	2.33	0.43
3:E9:206:ALA:HB2	3:E9:302:ALA:HB2	2.01	0.43
1:21:256:LEU:HD21	2:F0:31:GLN:HA	2.00	0.43
3:A1:47:ILE:HG12	3:A1:51:TYR:HB2	2.00	0.43
3:A1:392:LYS:CE	3:A1:395:LEU:HD22	2.48	0.43
3:A3:167:PHE:CE2	3:A3:233:MET:HG3	2.54	0.43
2:A4:340:THR:HG23	2:A4:341:ILE:HG13	1.99	0.43
3:A7:216:LYS:HE2	3:A7:216:LYS:HA	2.00	0.43
2:A8:262:TYR:HB2	2:A8:265:ILE:HD12	1.99	0.43
3:A9:36:TYR:CD2	3:A9:44:LEU:HD12	2.54	0.43
2:C6:151:CYS:SG	2:C6:193:SER:OG	2.52	0.43
3:C9:252:LYS:O	3:C9:256:ASN:ND2	2.34	0.43
3:D3:12:CYS:HB3	3:D3:138:SER:HB2	2.01	0.43
2:D4:261:PRO:HG3	2:D4:313:MET:CE	2.49	0.43
2:E0:179:THR:O	2:E0:180:ALA:HB2	2.18	0.43
3:E5:396:HIS:HA	3:E5:399:THR:HG22	2.00	0.43
3:E7:362:LYS:HD2	3:E7:363:MET:HB2	2.01	0.43
3:F1:216:LYS:HA	3:F1:216:LYS:HD3	1.84	0.43
1:2:245:SER:HB2	3:A9:42:LEU:CD2	2.47	0.43
2:A2:91:GLN:HA	2:A2:121:ARG:NH1	2.33	0.43
3:A3:180:VAL:O	3:A3:184:ASN:ND2	2.51	0.43
2:A4:309:HIS:NE2	2:A4:386:GLU:OE1	2.51	0.43
3:B1:103:LYS:HB2	3:B1:108:GLU:OE1	2.19	0.43
3:B9:68:LEU:HD23	3:B9:112:LEU:HD13	2.00	0.43
3:C3:73:MET:HB3	3:C3:77:ARG:NH2	2.33	0.43
3:C7:90:PHE:HB3	3:C7:92:PHE:CE1	2.53	0.43
3:C9:281:TYR:HE1	3:D3:58:ARG:CZ	2.30	0.43
2:D0:285:GLN:HB3	2:D4:57:GLY:HA2	2.00	0.43
3:D1:281:TYR:HA	3:D5:58:ARG:HD3	2.00	0.43
2:D4:265:ILE:HD11	2:D4:435:VAL:HG21	2.01	0.43
3:D5:139:LEU:HD12	3:D5:170:PHE:HE1	1.83	0.43
3:D5:318:ARG:HD3	3:D5:358:PRO:HD3	1.99	0.43
2:E4:132:LEU:O	2:E4:164:LYS:NZ	2.52	0.43
2:E4:306:ASP:HB3	2:E4:309:HIS:CE1	2.54	0.43
2:E6:115:VAL:HG12	2:E6:156:ARG:HE	1.83	0.43
2:E6:179:THR:O	2:E6:180:ALA:HB2	2.18	0.43
3:E7:391:ARG:HD2	3:E7:391:ARG:HA	1.74	0.43
1:7:256:LEU:HD11	2:B8:31:GLN:N	2.34	0.43
2:A4:269:LEU:HB3	2:A4:301:MET:HE1	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A7:404:ASP:OD1	3:A7:405:GLU:N	2.51	0.43
2:B8:36:MET:HA	2:B8:37:PRO:HD3	1.83	0.43
3:C1:287:PRO:O	3:C1:291:GLN:HG2	2.19	0.43
2:C4:2:ARG:HB3	2:C4:133:GLN:NE2	2.31	0.43
2:C4:268:MET:SD	2:C4:380:ASN:ND2	2.92	0.43
3:C5:10:GLY:O	3:C5:14:ASN:ND2	2.52	0.43
2:D2:75:VAL:HG11	2:D2:94:SER:HB3	2.01	0.43
2:D2:121:ARG:HD2	2:D2:121:ARG:HA	1.82	0.43
3:D9:287:PRO:HA	3:D9:290:THR:HG22	2.00	0.43
3:D9:290:THR:HG21	3:D9:329:GLN:HB3	2.00	0.43
2:E0:216:ASN:HB3	2:E0:275:ILE:O	2.19	0.43
3:E1:19:LYS:HD2	3:E1:227:HIS:ND1	2.33	0.43
3:E3:213:ARG:HH21	3:E3:216:LYS:HE3	1.83	0.43
3:E5:156:ARG:HA	3:E5:156:ARG:HD2	1.81	0.43
3:E5:379:LYS:O	3:E5:383:ASP:N	2.47	0.43
1:2:248:ARG:HH22	2:A8:82:THR:N	2.17	0.43
1:20:241:PHE:HE1	3:E9:356:ILE:HG21	1.84	0.43
1:21:257:PRO:O	2:F0:29:GLY:HA3	2.19	0.43
3:A1:7:VAL:HG11	3:A1:151:LEU:HD23	2.01	0.43
3:A1:104:GLY:HA3	3:A1:146:GLY:HA3	2.01	0.43
3:A1:220:PRO:HD2	2:A2:326:LYS:NZ	2.33	0.43
2:A8:68:LEU:HD23	2:A8:93:ILE:HB	1.99	0.43
2:A8:160:ASP:OD1	2:A8:161:TYR:N	2.51	0.43
2:A8:356:ASN:OD1	2:A8:357:TYR:N	2.51	0.43
3:B1:5:VAL:HG23	3:B1:130:LEU:HD11	1.99	0.43
2:B2:208:ALA:HB2	2:B2:304:LYS:HB2	2.00	0.43
2:B4:356:ASN:OD1	2:B4:357:TYR:N	2.52	0.43
2:B4:377:MET:HE3	2:B4:379:SER:HB3	2.00	0.43
2:B6:119:LEU:HG	2:B6:156:ARG:HG2	1.99	0.43
2:B8:280:LYS:HA	2:B8:280:LYS:HD3	1.72	0.43
2:C0:275:ILE:HD12	2:C0:368:LEU:HD11	2.01	0.43
3:C7:165:GLU:HG3	3:C7:198:GLU:HG3	2.00	0.43
2:D2:297:GLU:HA	2:D2:298:PRO:HD3	1.89	0.43
3:D3:247:ASN:O	3:D3:252:LYS:HE2	2.18	0.43
2:D6:154:LEU:HB3	2:D6:197:HIS:HB3	2.01	0.43
3:D9:6:HIS:CE1	3:D9:8:GLN:HE21	2.37	0.43
3:E1:272:PRO:HG3	3:E1:284:LEU:HD11	2.01	0.43
3:E3:218:THR:HG23	3:E3:219:THR:HG23	2.01	0.43
2:E4:269:LEU:HD23	2:E4:303:ALA:HB3	2.01	0.43
2:E6:222:PRO:HD2	3:E7:324:LYS:CB	2.49	0.43
2:E6:345:ASP:OD1	2:E6:346:TRP:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F0:51:THR:HG23	2:F0:52:PHE:CD2	2.53	0.43
1:19:257:PRO:HD2	2:E6:26:LEU:C	2.37	0.43
2:A0:3:GLU:HB2	2:A0:64:ARG:HH11	1.84	0.43
3:A5:216:LYS:HA	3:A5:216:LYS:HD2	1.81	0.43
3:A9:67:ASP:OD1	3:A9:68:LEU:N	2.50	0.43
3:B7:121:ARG:NH1	3:B7:158:GLU:OE2	2.41	0.43
2:C0:168:ASN:HD22	2:C0:198:THR:HG21	1.84	0.43
3:C3:154:LYS:HB2	3:C3:154:LYS:HE3	1.72	0.43
2:C4:356:ASN:OD1	2:C4:357:TYR:N	2.51	0.43
2:C8:306:ASP:HB3	2:C8:309:HIS:CE1	2.54	0.43
2:C8:399:TYR:OH	2:C8:415:GLU:OE1	2.30	0.43
3:D1:282:ARG:NH1	3:D1:292:GLN:OE1	2.52	0.43
2:D4:343:PHE:CE2	2:D4:350:GLY:HA3	2.54	0.43
2:D8:388:PHE:HB2	2:D8:429:GLU:OE2	2.18	0.43
3:D9:296:ALA:HB2	3:D9:305:PRO:HD2	2.01	0.43
3:E7:67:ASP:OD1	3:E7:68:LEU:N	2.50	0.43
2:F0:154:LEU:HG	2:F0:197:HIS:HB3	2.00	0.43
3:F1:30:ILE:HD12	3:F1:51:TYR:HE2	1.82	0.43
1:6:247:TYR:OH	2:B6:81:GLY:HA3	2.18	0.43
2:A0:306:ASP:HB3	2:A0:309:HIS:CE1	2.54	0.43
3:A3:67:ASP:OD1	3:A3:68:LEU:N	2.47	0.43
3:A5:139:LEU:HD12	3:A5:170:PHE:CE1	2.54	0.43
2:B2:432:TYR:HD1	2:B2:432:TYR:HA	1.72	0.43
3:B5:6:HIS:HE2	3:B5:8:GLN:HB3	1.84	0.43
2:B6:192:HIS:ND1	2:B6:424:ASP:OD2	2.49	0.43
2:B6:238:LEU:HD12	2:B6:238:LEU:HA	1.83	0.43
3:B7:375:GLN:HE22	3:B7:419:VAL:HA	1.84	0.43
2:C0:283:HIS:CD2	2:C4:60:LYS:NZ	2.87	0.43
3:C3:184:ASN:OD1	3:C3:398:TYR:OH	2.32	0.43
2:C4:105:ARG:HG2	2:C4:411:GLU:HG2	2.01	0.43
2:C4:121:ARG:HH12	2:C4:124:LYS:HE3	1.84	0.43
3:C5:177:ASP:OD2	3:C5:178:THR:HG23	2.19	0.43
2:C8:28:HIS:NE2	2:C8:243:ARG:HD2	2.34	0.43
3:C9:167:PHE:HZ	3:C9:236:VAL:HG11	1.83	0.43
3:C9:317:PHE:HB3	3:C9:321:MET:HE1	1.99	0.43
2:D0:394:LYS:CG	3:D1:346:PRO:HG3	2.46	0.43
3:D1:53:GLU:OE2	3:D1:55:THR:N	2.52	0.43
3:D3:65:LEU:HB3	3:D3:73:MET:HE2	2.00	0.43
3:D3:68:LEU:HA	3:D3:93:GLY:HA3	2.01	0.43
3:D5:404:ASP:OD1	3:D5:405:GLU:N	2.51	0.43
2:D6:222:PRO:CD	3:D7:324:LYS:NZ	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D7:167:PHE:CE1	3:D7:233:MET:HG2	2.54	0.43
2:E2:244:PHE:HB2	2:E2:356:ASN:HD21	1.83	0.43
2:E6:195:LEU:HD21	2:E6:428:LEU:HD22	2.01	0.43
2:F0:174:SER:HB3	2:F0:177:VAL:O	2.18	0.43
2:A0:285:GLN:OE1	2:A4:57:GLY:HA2	2.19	0.43
2:A4:28:HIS:CE1	2:A4:243:ARG:HD2	2.53	0.43
3:A5:248:SER:HA	3:A5:252:LYS:HD2	2.00	0.43
2:A8:394:LYS:HD3	3:A9:346:PRO:CG	2.49	0.43
3:B1:5:VAL:CG2	3:B1:130:LEU:HD11	2.49	0.43
2:B2:90:GLU:HG2	2:B2:121:ARG:HH21	1.84	0.43
3:B3:207:LEU:HB3	3:B3:225:LEU:HD22	2.00	0.43
2:B4:338:LYS:HG2	2:B4:340:THR:HG22	2.00	0.43
3:B9:103:LYS:HA	3:B9:107:THR:HG22	2.00	0.43
2:C0:188:VAL:HG12	2:C0:425:LEU:HD13	2.01	0.43
2:C0:256:GLN:O	2:C0:260:VAL:HG22	2.19	0.43
3:C3:220:PRO:HB2	3:C3:225:LEU:HD21	2.01	0.43
3:C3:257:LEU:HD21	3:C3:314:SER:HB2	2.01	0.43
2:C4:141:VAL:HG11	2:C4:172:TRP:CE3	2.54	0.43
2:D0:283:HIS:HA	2:D4:60:LYS:CE	2.48	0.43
3:D1:248:SER:HA	3:D1:252:LYS:HG3	2.01	0.43
3:D1:334:GLN:HE22	3:D1:347:ASN:HA	1.84	0.43
2:D6:319:TYR:CD2	2:D6:375:VAL:HG22	2.54	0.43
3:D7:211:CYS:HB2	2:D8:326:LYS:NZ	2.33	0.43
3:D7:281:TYR:CE1	3:E1:58:ARG:NE	2.87	0.43
3:D9:8:GLN:NE2	3:D9:17:GLY:HA3	2.34	0.43
3:D9:14:ASN:HD22	3:D9:72:THR:HG23	1.84	0.43
3:D9:124:ALA:HB1	3:D9:130:LEU:HD22	2.00	0.43
3:E1:84:LEU:HD12	3:E1:84:LEU:HA	1.90	0.43
2:E4:194:LEU:O	2:E4:198:THR:HG22	2.18	0.43
3:E9:167:PHE:CZ	3:E9:233:MET:HG2	2.54	0.43
3:F1:198:GLU:OE2	3:F1:200:GLN:NE2	2.46	0.43
1:18:254:LYS:HZ3	2:E4:364:PRO:HD2	1.84	0.42
2:A0:71:GLU:HB3	2:A0:98:ASP:HB2	2.01	0.42
2:A0:315:CYS:HB2	2:A0:351:PHE:CD1	2.54	0.42
3:A1:49:VAL:HG11	3:A1:241:ARG:HG2	2.01	0.42
2:A2:282:TYR:CE2	2:A6:60:LYS:NZ	2.84	0.42
3:A5:91:VAL:HG21	3:A5:116:VAL:HG22	2.01	0.42
3:A7:200:GLN:HG2	3:A7:268:ILE:HD11	2.01	0.42
3:A9:225:LEU:HD21	2:B0:326:LYS:NZ	2.34	0.42
3:B1:60:VAL:HA	3:B1:61:PRO:HD3	1.93	0.42
2:B2:28:HIS:CE1	2:B2:243:ARG:HD2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B3:98:GLY:O	2:B4:257:THR:HG21	2.18	0.42
3:B3:219:THR:CA	2:B4:324:VAL:HG21	2.49	0.42
3:B7:282:ARG:HB2	3:B7:282:ARG:CZ	2.49	0.42
2:B8:262:TYR:HB3	2:B8:263:PRO:HD2	2.01	0.42
2:B8:265:ILE:HG23	2:B8:432:TYR:CE1	2.54	0.42
2:C0:262:TYR:HB2	2:C0:265:ILE:HG22	2.01	0.42
3:C1:280:GLN:OE1	3:C1:280:GLN:HA	2.18	0.42
3:C5:219:THR:CB	2:C6:324:VAL:HG11	2.29	0.42
2:C6:217:LEU:HD21	2:C6:367:ASP:OD2	2.19	0.42
3:C7:6:HIS:HD1	3:C7:21:TRP:HE1	1.67	0.42
2:D4:52:PHE:HD2	2:D4:243:ARG:HD3	1.84	0.42
2:D6:269:LEU:CD1	2:D6:384:ILE:HD11	2.48	0.42
2:E4:98:ASP:OD1	2:E4:99:ALA:N	2.52	0.42
3:E5:174:LYS:HA	3:E5:174:LYS:HD2	1.68	0.42
3:E7:44:LEU:HG	3:E7:44:LEU:O	2.18	0.42
1:18:250:GLU:HB2	2:E4:229:ARG:HH22	1.84	0.42
1:3:247:TYR:OH	2:B0:81:GLY:HA3	2.19	0.42
3:A1:229:VAL:O	3:A1:233:MET:HB2	2.19	0.42
2:A2:133:GLN:NE2	2:A2:251:ASP:HB3	2.34	0.42
3:A7:206:ALA:HB2	3:A7:302:ALA:HB2	2.00	0.42
2:B4:277:SER:OG	2:B4:278:ALA:N	2.52	0.42
3:B5:8:GLN:HE21	3:B5:65:LEU:HD11	1.84	0.42
2:B8:285:GLN:CG	2:B8:285:GLN:O	2.67	0.42
2:C0:265:ILE:HG13	2:C0:432:TYR:CZ	2.54	0.42
2:C4:3:GLU:HG3	2:C4:51:THR:HA	2.01	0.42
3:C5:397:TRP:CH2	2:C6:260:VAL:HB	2.54	0.42
3:D1:128:ASP:OD1	3:D1:129:CYS:N	2.42	0.42
3:D1:268:ILE:HG23	3:D1:300:MET:SD	2.59	0.42
3:D3:383:ASP:HA	3:D3:386:THR:HG22	2.01	0.42
3:D7:186:THR:HG22	3:D7:411:ALA:HB1	2.02	0.42
3:D7:383:ASP:HA	3:D7:386:THR:HG22	2.01	0.42
2:E0:88:HIS:HB3	2:E0:91:GLN:HB2	2.01	0.42
3:E3:165:GLU:OE1	3:E3:200:GLN:NE2	2.52	0.42
3:E5:67:ASP:OD1	3:E5:68:LEU:N	2.53	0.42
2:E8:269:LEU:CD2	2:E8:384:ILE:HD11	2.49	0.42
3:F1:205:GLU:HA	3:F1:208:TYR:HB2	2.00	0.42
1:10:257:PRO:HG3	2:C8:26:LEU:O	2.19	0.42
1:13:253:ALA:CB	2:D4:32:PRO:HG3	2.48	0.42
1:18:241:PHE:CZ	3:E5:356:ILE:HD12	2.54	0.42
2:A2:137:MET:HB3	2:A2:168:ASN:HA	2.00	0.42
2:A2:143:GLY:O	2:A2:186:ASN:ND2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:273:ALA:HA	2:A8:274:PRO:HA	1.86	0.42
3:A9:166:THR:HG23	3:A9:199:VAL:HG13	2.02	0.42
2:B2:69:ASP:OD1	2:B2:70:LEU:N	2.52	0.42
2:B4:69:ASP:OD1	2:B4:70:LEU:N	2.52	0.42
2:B4:210:TYR:CE2	3:B5:327:ASP:OD2	2.72	0.42
2:B8:278:ALA:HA	2:B8:369:ALA:HB2	2.00	0.42
2:C0:206:ASN:O	2:C0:210:TYR:N	2.51	0.42
2:C0:223:THR:HG23	2:C0:225:THR:HG22	2.02	0.42
3:C3:103:LYS:HB3	3:C3:103:LYS:HE2	1.84	0.42
3:C5:167:PHE:CE2	3:C5:233:MET:HG2	2.55	0.42
2:C6:135:PHE:HB2	2:C6:166:LYS:HA	2.00	0.42
2:C8:352:LYS:HA	2:C8:352:LYS:HD3	1.78	0.42
3:C9:190:HIS:HB2	3:C9:414:ASN:HD21	1.84	0.42
2:D0:298:PRO:HB3	2:D0:307:PRO:HD2	2.01	0.42
2:D2:10:GLY:HA2	2:D2:145:THR:HG23	2.02	0.42
3:D3:205:GLU:CD	2:D4:329:ASN:HD21	2.21	0.42
3:D5:32:PRO:HD3	3:D5:81:PHE:CZ	2.53	0.42
3:D5:310:TYR:HD1	3:D5:371:SER:HB2	1.84	0.42
2:E0:195:LEU:HD13	2:E0:264:ARG:HH21	1.85	0.42
2:E0:208:ALA:O	2:E0:212:ILE:HG12	2.19	0.42
2:E0:220:GLU:O	3:E1:325:GLU:OE2	2.38	0.42
2:E0:274:PRO:HG3	2:E0:286:LEU:HD12	2.01	0.42
3:E1:273:LEU:H	3:E1:292:GLN:HE22	1.67	0.42
3:E3:68:LEU:HD23	3:E3:112:LEU:HD22	2.01	0.42
2:E4:221:ARG:HD2	2:E4:221:ARG:HA	1.54	0.42
2:E4:230:LEU:HD22	2:E4:275:ILE:HD12	2.01	0.42
3:E5:186:THR:HG22	3:E5:415:MET:HE1	2.01	0.42
3:E5:211:CYS:SG	3:E5:220:PRO:HB3	2.58	0.42
2:E8:2:ARG:NE	2:E8:133:GLN:HE21	2.15	0.42
3:F1:30:ILE:HD12	3:F1:51:TYR:CE2	2.55	0.42
1:0:254:LYS:HA	1:0:255:PRO:HD3	1.88	0.42
2:A0:152:LEU:HD21	2:A0:156:ARG:HH11	1.85	0.42
2:A6:271:SER:OG	2:A6:377:MET:HB3	2.19	0.42
2:A8:298:PRO:HG2	2:A8:308:ARG:NH2	2.34	0.42
2:A8:298:PRO:HB3	2:A8:307:PRO:HD2	2.02	0.42
2:A8:394:LYS:HD3	3:A9:346:PRO:HG3	2.01	0.42
3:A9:318:ARG:HG2	3:A9:354:CYS:HB3	2.01	0.42
3:A9:415:MET:O	3:A9:419:VAL:HG23	2.18	0.42
3:B1:281:TYR:CD2	3:B5:87:PRO:HD3	2.54	0.42
3:B7:147:MET:HE2	3:B7:147:MET:HB2	1.93	0.42
2:C0:133:GLN:HG3	2:C0:252:VAL:HG22	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C0:406:HIS:CD2	3:C1:261:PRO:HD3	2.55	0.42
3:C1:281:TYR:HA	3:C5:58:ARG:HD3	2.00	0.42
2:C2:187:SER:O	2:C2:191:THR:OG1	2.34	0.42
2:C2:209:ILE:HG22	2:C2:227:LEU:HG	2.01	0.42
2:C4:139:ASN:N	2:C4:139:ASN:OD1	2.52	0.42
2:C8:250:VAL:HG13	2:C8:255:PHE:HE1	1.84	0.42
3:C9:135:ILE:HD12	3:C9:152:ILE:HG12	2.01	0.42
3:C9:281:TYR:HE1	3:D3:58:ARG:NH2	2.17	0.42
3:D3:10:GLY:HA2	3:D3:143:THR:HG23	2.01	0.42
3:D3:155:VAL:HG13	3:D3:164:MET:CE	2.49	0.42
2:D6:183:GLU:HA	2:D6:186:ASN:HD22	1.84	0.42
2:D6:297:GLU:HA	2:D6:298:PRO:HD3	1.94	0.42
3:D9:239:CYS:SG	3:D9:248:SER:N	2.83	0.42
3:D9:301:CYS:SG	3:D9:302:ALA:N	2.93	0.42
2:E0:229:ARG:NH1	2:E0:229:ARG:CG	2.83	0.42
2:E0:283:HIS:ND1	2:E4:60:LYS:CE	2.72	0.42
2:E2:265:ILE:HG23	2:E2:432:TYR:CE1	2.55	0.42
3:E3:247:ASN:HD22	3:E3:247:ASN:C	2.23	0.42
2:E4:4:VAL:HG21	2:E4:136:LEU:HD13	2.00	0.42
2:E8:238:LEU:HD12	2:E8:238:LEU:HA	1.83	0.42
3:E9:293:MET:SD	3:E9:367:PHE:HB2	2.59	0.42
2:F0:12:ALA:HB3	2:F0:140:ALA:HB2	2.01	0.42
2:F0:319:TYR:HB2	2:F0:355:ILE:HG12	2.00	0.42
1:0:254:LYS:H	1:0:254:LYS:HG2	1.43	0.42
1:19:250:GLU:HB3	2:E6:229:ARG:HH21	1.83	0.42
2:A0:224:TYR:O	2:A0:228:ASN:ND2	2.52	0.42
2:A0:242:LEU:HD21	2:A0:251:ASP:HA	2.00	0.42
3:A1:326:VAL:O	3:A1:330:MET:HG2	2.19	0.42
2:A4:98:ASP:O	2:A4:105:ARG:NH1	2.49	0.42
3:A5:7:VAL:HG11	3:A5:151:LEU:HD21	2.01	0.42
2:A8:151:CYS:SG	2:A8:193:SER:OG	2.61	0.42
3:A9:167:PHE:CD1	3:A9:200:GLN:HB2	2.54	0.42
3:B5:314:SER:OG	3:B5:315:ALA:N	2.51	0.42
3:B9:15:GLN:O	3:B9:226:ASN:ND2	2.53	0.42
3:C1:49:VAL:HG11	3:C1:241:ARG:HG2	2.02	0.42
3:C1:102:ALA:HB1	3:C1:401:GLU:HB2	2.01	0.42
3:C1:260:PHE:HE2	3:C1:425:TYR:HH	1.65	0.42
3:C1:283:ALA:O	3:C1:288:GLU:HG2	2.18	0.42
2:C6:135:PHE:HB2	2:C6:166:LYS:HG2	2.01	0.42
2:C6:191:THR:OG1	2:C6:425:LEU:HD21	2.20	0.42
2:C6:325:PRO:HA	2:C6:328:VAL:HB	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C6:328:VAL:HG21	2:C6:355:ILE:HD11	2.02	0.42
3:D5:113:ILE:O	3:D5:117:LEU:HB2	2.19	0.42
2:D6:4:VAL:HG12	2:D6:133:GLN:HB3	2.01	0.42
3:D7:117:LEU:HD23	3:D7:121:ARG:NH2	2.33	0.42
3:D9:128:ASP:OD1	3:D9:128:ASP:N	2.50	0.42
2:E4:97:GLU:CG	3:E5:129:CYS:SG	3.08	0.42
3:E5:260:PHE:HE2	3:E5:425:TYR:CE2	2.37	0.42
3:E5:286:VAL:HG23	3:E5:287:PRO:HD3	2.00	0.42
3:E7:139:LEU:HB2	3:E7:171:PRO:HD3	2.01	0.42
2:F0:320:ARG:HG2	2:F0:360:PRO:HG3	2.01	0.42
2:A2:306:ASP:HB3	2:A2:309:HIS:CE1	2.55	0.42
2:A6:296:PHE:HE2	2:A6:335:ILE:HG21	1.84	0.42
2:A8:212:ILE:HG12	2:A8:275:ILE:HD11	2.00	0.42
2:B2:422:ARG:HD2	2:B2:422:ARG:HA	1.92	0.42
3:B5:357:PRO:HB2	3:B5:361:LEU:O	2.19	0.42
2:B6:285:GLN:HB3	2:C0:57:GLY:HA3	2.01	0.42
3:B9:165:GLU:OE2	3:B9:200:GLN:NE2	2.51	0.42
3:B9:192:LEU:HD21	3:B9:199:VAL:HG21	2.01	0.42
3:B9:383:ASP:HA	3:B9:386:THR:HG22	2.01	0.42
2:C0:54:SER:OG	2:C0:55:GLU:N	2.53	0.42
3:C1:97:ALA:HB3	3:C1:143:THR:HG22	2.02	0.42
2:C4:76:ASP:OD1	2:C4:77:GLU:N	2.52	0.42
2:C6:340:THR:HG23	2:C6:341:ILE:HG13	2.02	0.42
2:D0:273:ALA:HA	2:D0:274:PRO:HA	1.85	0.42
2:D6:98:ASP:OD1	2:D6:99:ALA:N	2.52	0.42
2:E0:65:CYS:SG	2:E0:66:VAL:N	2.92	0.42
2:E0:163:LYS:HA	2:E0:163:LYS:CE	2.49	0.42
3:E1:388:MET:HG2	2:E2:346:TRP:O	2.19	0.42
3:E3:122:LYS:HD3	3:E3:122:LYS:HA	1.84	0.42
3:E3:289:LEU:HD23	3:E3:289:LEU:HA	1.85	0.42
2:E4:181:VAL:HG21	3:E5:312:THR:HG22	2.01	0.42
2:E6:335:ILE:HG23	2:E6:341:ILE:HD11	2.01	0.42
3:E7:216:LYS:HD3	3:E7:216:LYS:HA	1.89	0.42
3:E7:276:ARG:NH2	3:E7:279:GLN:OE1	2.44	0.42
3:F1:258:ILE:HG13	3:F1:258:ILE:O	2.19	0.42
1:18:254:LYS:NZ	2:E4:364:PRO:HD2	2.35	0.42
2:A0:209:ILE:HA	2:A0:212:ILE:HB	2.02	0.42
3:A3:135:ILE:HD13	3:A3:152:ILE:HD11	2.02	0.42
2:A4:282:TYR:O	2:A8:60:LYS:HE2	2.20	0.42
2:A8:205:ASP:O	2:A8:209:ILE:HG13	2.20	0.42
2:B0:30:ILE:HG21	2:B0:61:HIS:HD2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B0:73:THR:OG1	3:B1:2:ARG:NH2	2.52	0.42
3:B5:200:GLN:HB3	3:B5:268:ILE:HD11	2.02	0.42
2:B6:276:ILE:HB	2:B6:280:LYS:HB3	2.00	0.42
3:B7:11:GLN:HG2	3:B7:12:CYS:N	2.34	0.42
3:B7:63:ALA:O	3:B7:89:ASN:ND2	2.52	0.42
2:B8:274:PRO:HG3	2:B8:286:LEU:HD12	2.00	0.42
2:C0:357:TYR:HD1	2:C0:357:TYR:HA	1.76	0.42
3:C5:100:ASN:HB3	3:C5:103:LYS:HG2	2.01	0.42
2:C6:76:ASP:OD2	3:C7:46:ARG:NH1	2.49	0.42
2:C8:370:LYS:HG3	2:C8:370:LYS:O	2.18	0.42
3:C9:187:LEU:HD23	3:C9:187:LEU:HA	1.90	0.42
3:C9:309:ARG:NH1	3:C9:341:PHE:O	2.52	0.42
2:D4:324:VAL:HA	2:D4:325:PRO:HD3	1.90	0.42
3:D5:172:SER:HB3	3:D5:205:GLU:CG	2.48	0.42
3:D9:200:GLN:CG	3:D9:268:ILE:HD11	2.47	0.42
2:E0:269:LEU:HD22	2:E0:384:ILE:HD11	2.01	0.42
3:E5:20:PHE:HA	3:E5:230:SER:OG	2.19	0.42
2:E6:27:GLU:OE2	2:E6:320:ARG:NH2	2.52	0.42
3:E9:42:LEU:O	3:E9:42:LEU:HG	2.19	0.42
3:F1:292:GLN:O	3:F1:298:ASN:ND2	2.39	0.42
1:20:245:SER:HB3	1:20:248:ARG:HD3	2.01	0.42
2:A0:240:ALA:HA	2:A0:243:ARG:HE	1.85	0.42
2:A6:125:LEU:HD23	2:A6:125:LEU:HA	1.90	0.42
2:A8:268:MET:HB3	2:A8:378:ILE:HG23	2.01	0.42
2:B6:282:TYR:HB3	2:B6:283:HIS:ND1	2.35	0.42
2:B8:65:CYS:SG	2:B8:66:VAL:N	2.93	0.42
2:B8:238:LEU:HD12	2:B8:238:LEU:HA	1.85	0.42
3:C3:20:PHE:HD2	3:C3:233:MET:HE2	1.85	0.42
2:C6:179:THR:OG1	3:C7:246:LEU:HD21	2.20	0.42
3:D3:100:ASN:ND2	3:D3:397:TRP:O	2.50	0.42
2:D4:172:TRP:CD1	2:D4:173:PRO:HD2	2.54	0.42
2:E0:282:TYR:HB2	2:E0:283:HIS:CD2	2.55	0.42
2:E4:214:ARG:CG	3:E5:324:LYS:HZ2	2.17	0.42
2:E8:345:ASP:OD1	2:E8:346:TRP:N	2.52	0.42
2:F0:60:LYS:HE3	2:F0:60:LYS:HB3	1.82	0.42
3:F1:256:ASN:ND2	3:F1:350:LYS:HG3	2.35	0.42
1:1:247:TYR:HH	2:A6:82:THR:H	1.55	0.42
1:19:243:ALA:CB	3:E7:356:ILE:HA	2.49	0.42
1:6:247:TYR:CZ	2:B6:81:GLY:HA3	2.54	0.42
1:7:256:LEU:CD1	2:B8:31:GLN:HB3	2.49	0.42
3:A5:40:SER:HB3	3:A5:43:GLN:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A9:320:ARG:HG3	3:A9:320:ARG:NH1	2.32	0.42
3:B1:27:GLU:OE2	3:B1:241:ARG:NH1	2.39	0.42
3:B3:31:ASP:HB3	3:B3:32:PRO:HD2	2.01	0.42
2:B6:339:ARG:HA	2:B6:339:ARG:HD2	1.67	0.42
3:B7:50:PHE:CD2	3:B7:241:ARG:HD3	2.55	0.42
3:B7:112:LEU:O	3:B7:112:LEU:HD23	2.20	0.42
3:B7:383:ASP:HA	3:B7:386:THR:HG22	2.01	0.42
2:B8:156:ARG:HH21	2:B8:156:ARG:HD2	1.60	0.42
2:C0:7:ILE:HG22	2:C0:9:VAL:HG23	2.01	0.42
2:C2:324:VAL:HA	2:C2:325:PRO:HD3	1.91	0.42
3:C3:289:LEU:HD12	3:C3:365:VAL:CG1	2.48	0.42
3:C5:122:LYS:O	3:C5:122:LYS:HG2	2.19	0.42
2:D6:138:PHE:CZ	2:D6:235:ILE:HD12	2.47	0.42
2:D6:401:LYS:HD2	3:D7:344:TRP:CE3	2.55	0.42
3:D7:2:ARG:HH11	3:D7:240:LEU:HD22	1.84	0.42
2:E0:166:LYS:N	2:E0:199:ASP:OD2	2.50	0.42
2:E0:176:GLN:CB	3:E1:331:LEU:CD1	2.81	0.42
3:E1:156:ARG:NH1	3:E1:162:ARG:O	2.53	0.42
3:E3:48:ASN:OD1	3:E3:48:ASN:N	2.53	0.42
3:E5:258:ILE:HD12	3:E5:264:HIS:HA	2.00	0.42
2:E6:174:SER:OG	2:E6:177:VAL:O	2.20	0.42
2:E6:258:ASN:HB3	2:E6:352:LYS:CE	2.48	0.42
2:E6:316:CYS:HA	2:E6:352:LYS:HB2	2.01	0.42
3:F1:398:TYR:HB3	3:F1:403:MET:HG3	2.02	0.42
1:10:254:LYS:H	1:10:254:LYS:HG2	1.46	0.42
2:A0:359:PRO:HA	2:A0:360:PRO:HD3	1.94	0.42
2:A2:204:LEU:HD23	2:A2:231:ILE:HD12	2.02	0.42
2:A4:3:GLU:OE1	2:A4:132:LEU:HD13	2.20	0.42
3:A5:205:GLU:CD	2:A6:329:ASN:HD21	2.20	0.42
3:B1:156:ARG:HH21	3:B1:164:MET:HB2	1.85	0.42
3:B5:49:VAL:HG21	3:B5:241:ARG:HG2	2.02	0.42
3:B5:139:LEU:HA	3:B5:145:SER:HB3	2.01	0.42
2:B8:280:LYS:NZ	2:C2:89:PRO:HB2	2.35	0.42
2:C2:288:VAL:HA	2:C2:291:ILE:HG12	2.00	0.42
3:C5:313:ALA:HA	3:C5:369:GLY:HA2	2.02	0.42
3:C7:6:HIS:CD2	3:C7:134:GLN:HG3	2.54	0.42
3:D3:200:GLN:HB3	3:D3:268:ILE:HD11	2.00	0.42
2:D4:248:LEU:HD22	2:D4:354:GLY:HA2	2.02	0.42
2:D4:338:LYS:HB2	2:D4:338:LYS:HE3	1.87	0.42
3:D5:135:ILE:HB	3:D5:166:THR:HG22	2.01	0.42
2:D6:402:ARG:HH21	2:D6:402:ARG:HG2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D7:281:TYR:HE1	3:E1:58:ARG:HH21	1.65	0.42
3:D9:228:LEU:HD21	3:D9:273:LEU:HD21	2.01	0.42
3:E1:51:TYR:HB3	3:E1:59:PHE:HB3	2.02	0.42
2:E4:23:LEU:HD11	2:E4:361:THR:HG23	2.01	0.42
3:E5:3:GLU:HA	3:E5:49:VAL:HA	2.02	0.42
2:E6:12:ALA:HB3	2:E6:140:ALA:HB2	2.00	0.42
2:F0:223:THR:OG1	2:F0:224:TYR:N	2.52	0.42
3:F1:20:PHE:HA	3:F1:230:SER:HB2	2.00	0.42
1:11:241:PHE:HZ	3:D1:356:ILE:HG23	1.85	0.41
1:19:254:LYS:HD3	1:19:254:LYS:HA	1.91	0.41
1:3:248:ARG:HG3	3:B1:42:LEU:HD11	2.01	0.41
3:A5:201:VAL:HG11	3:A5:374:ILE:HD11	2.01	0.41
2:A8:384:ILE:HB	2:A8:432:TYR:CE2	2.55	0.41
3:A9:132:GLY:HA2	3:A9:162:ARG:HB3	2.02	0.41
2:B0:221:ARG:CB	3:B1:322:SER:CB	2.73	0.41
3:B5:117:LEU:HD12	3:B5:117:LEU:HA	1.84	0.41
3:B9:281:TYR:O	3:C3:54:ALA:HB1	2.20	0.41
3:C5:121:ARG:NH1	3:C5:158:GLU:OE1	2.45	0.41
3:C9:77:ARG:HH21	3:C9:92:PHE:HZ	1.67	0.41
2:D0:189:LEU:HD11	2:D0:418:PHE:CE1	2.55	0.41
2:D0:283:HIS:HA	2:D4:60:LYS:HZ3	1.83	0.41
3:D3:219:THR:HB	2:D4:324:VAL:HG11	2.02	0.41
2:D4:69:ASP:OD1	2:D4:70:LEU:N	2.53	0.41
3:D7:282:ARG:HH12	3:D7:292:GLN:HG3	1.85	0.41
3:D7:317:PHE:CD1	3:D7:326:VAL:HG23	2.55	0.41
2:D8:105:ARG:O	2:D8:110:ILE:HG22	2.20	0.41
3:D9:200:GLN:CB	3:D9:268:ILE:HD11	2.49	0.41
2:E0:132:LEU:HB3	2:E0:164:LYS:NZ	2.34	0.41
2:E6:256:GLN:O	2:E6:260:VAL:HG22	2.20	0.41
3:E9:46:ARG:HG3	3:E9:49:VAL:HG13	2.00	0.41
3:E9:257:LEU:HD12	3:E9:266:PHE:HE1	1.85	0.41
2:F0:99:ALA:O	2:F0:105:ARG:HD3	2.20	0.41
1:11:245:SER:OG	3:D1:42:LEU:CD2	2.59	0.41
1:18:247:TYR:CE2	2:E4:18:ASN:OD1	2.73	0.41
1:21:256:LEU:HD11	2:F0:31:GLN:N	2.35	0.41
1:23:257:PRO:HG2	2:C4:26:LEU:HD13	2.01	0.41
2:A0:210:TYR:HD1	2:A0:210:TYR:HA	1.74	0.41
2:A0:210:TYR:CE1	2:A0:227:LEU:HD21	2.51	0.41
2:A4:36:MET:HA	2:A4:37:PRO:HD3	1.76	0.41
2:A4:96:LYS:HZ2	3:A5:128:ASP:CG	2.24	0.41
2:A6:291:ILE:HD12	2:A6:375:VAL:HG23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:304:LYS:HG3	2:A8:304:LYS:O	2.21	0.41
2:B0:324:VAL:HA	2:B0:325:PRO:HD3	1.94	0.41
3:B1:248:SER:HA	3:B1:252:LYS:HG2	2.01	0.41
2:B4:204:LEU:HD22	2:B4:302:MET:HE2	2.01	0.41
2:B6:345:ASP:OD1	2:B6:346:TRP:N	2.53	0.41
3:B7:105:HIS:CD2	3:B7:150:LEU:HD12	2.55	0.41
2:C2:172:TRP:CG	2:C2:173:PRO:HD2	2.55	0.41
2:C4:377:MET:SD	2:C4:379:SER:HB3	2.60	0.41
2:C6:231:ILE:HD13	2:C6:302:MET:CE	2.50	0.41
2:C8:205:ASP:O	2:C8:209:ILE:HG13	2.20	0.41
3:C9:23:VAL:HG11	3:C9:230:SER:HB2	2.01	0.41
2:D4:90:GLU:HB3	2:D4:121:ARG:HD3	2.01	0.41
3:D5:377:MET:O	3:D5:381:VAL:HG23	2.20	0.41
2:D8:99:ALA:O	2:D8:105:ARG:HD3	2.20	0.41
2:E0:189:LEU:HD11	2:E0:418:PHE:HE1	1.84	0.41
2:E0:219:ILE:HG21	2:E0:219:ILE:HD13	1.75	0.41
3:E7:113:ILE:HA	3:E7:116:VAL:HG12	2.02	0.41
2:F0:101:ASN:HB3	2:F0:182:VAL:HG21	2.01	0.41
1:10:250:GLU:O	1:10:250:GLU:HG2	2.20	0.41
1:18:254:LYS:CB	2:E4:26:LEU:HD13	2.50	0.41
3:A5:262:ARG:HD3	3:A5:421:GLU:OE2	2.20	0.41
2:B0:259:LEU:HD11	2:B0:316:CYS:HB2	2.02	0.41
2:B4:66:VAL:HG21	2:B4:122:ILE:HD11	2.02	0.41
2:B4:185:TYR:CD2	2:B4:395:PHE:HE1	2.37	0.41
2:B4:240:ALA:HB1	2:B4:356:ASN:HD22	1.85	0.41
2:B4:397:LEU:HD23	2:B4:397:LEU:HA	1.92	0.41
3:B5:324:LYS:O	3:B5:328:GLU:N	2.45	0.41
2:B8:422:ARG:NH1	2:B8:426:ALA:HB2	2.35	0.41
2:C0:71:GLU:HB3	2:C0:98:ASP:HB3	2.02	0.41
3:C1:148:GLY:O	3:C1:152:ILE:HG13	2.21	0.41
3:C1:164:MET:H	3:C1:197:ASP:HB3	1.85	0.41
3:C3:420:SER:O	3:C3:424:GLN:N	2.54	0.41
3:C7:28:HIS:NE2	3:C7:241:ARG:HD2	2.35	0.41
3:C9:347:ASN:OD1	3:C9:349:MET:HB3	2.20	0.41
2:D0:98:ASP:OD1	2:D0:99:ALA:N	2.53	0.41
2:D0:241:SER:HB2	2:D0:249:ASN:HB2	2.03	0.41
3:D1:135:ILE:HD12	3:D1:152:ILE:HG12	2.03	0.41
2:D4:394:LYS:HG2	3:D5:346:PRO:HG3	2.02	0.41
2:D8:392:ASP:OD1	2:D8:422:ARG:NH2	2.46	0.41
3:E1:131:GLN:OE1	3:E1:163:ILE:HD11	2.21	0.41
2:E2:336:LYS:HB2	2:E2:336:LYS:HE2	1.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E5:213:ARG:HH12	3:E5:297:LYS:HB3	1.85	0.41
2:E8:274:PRO:HG2	2:E8:371:VAL:HG11	2.03	0.41
3:E9:47:ILE:HD12	3:E9:47:ILE:HA	1.96	0.41
3:F1:327:ASP:HA	3:F1:330:MET:HE2	2.02	0.41
1:16:256:LEU:HD12	2:E0:29:GLY:HA2	1.98	0.41
3:A1:166:THR:OG1	3:A1:199:VAL:HG22	2.20	0.41
3:A1:252:LYS:O	3:A1:256:ASN:ND2	2.54	0.41
2:A2:306:ASP:HB3	2:A2:309:HIS:HE1	1.84	0.41
3:A3:41:ASP:OD1	3:A3:41:ASP:N	2.54	0.41
3:A3:86:ARG:HA	3:A3:87:PRO:HD3	1.97	0.41
3:A5:178:THR:O	3:A5:181:GLU:HG2	2.20	0.41
3:A7:114:ASP:OD1	3:A7:115:SER:N	2.54	0.41
2:A8:157:LEU:HD23	2:A8:157:LEU:HA	1.85	0.41
2:A8:221:ARG:HA	3:A9:322:SER:OG	2.21	0.41
2:B0:3:GLU:HA	2:B0:51:THR:HA	2.03	0.41
3:B1:249:ASP:H	3:B1:252:LYS:CB	2.33	0.41
2:B4:208:ALA:HB2	2:B4:304:LYS:HB2	2.02	0.41
2:B4:311:LYS:H	2:B4:382:THR:CG2	2.33	0.41
2:B4:395:PHE:HD2	2:B4:422:ARG:HD2	1.85	0.41
3:B5:190:HIS:CE1	3:B5:414:ASN:HD22	2.39	0.41
3:B7:208:TYR:HB3	2:B8:326:LYS:CE	2.51	0.41
3:B9:256:ASN:ND2	3:B9:350:LYS:HD2	2.35	0.41
3:C1:117:LEU:CD1	3:C1:154:LYS:HG2	2.50	0.41
2:C2:219:ILE:HG22	2:C2:222:PRO:HD3	2.01	0.41
2:C2:223:THR:OG1	3:C3:245:GLN:OE1	2.28	0.41
2:C6:238:LEU:HD13	2:C6:318:MET:HE1	2.01	0.41
2:C8:28:HIS:HE1	2:C8:243:ARG:HH11	1.68	0.41
3:C9:53:GLU:OE2	3:C9:54:ALA:N	2.53	0.41
2:D0:344:VAL:HG22	2:D0:345:ASP:N	2.35	0.41
2:E0:155:GLU:HG3	2:E0:197:HIS:NE2	2.36	0.41
2:E4:394:LYS:HZ1	3:E5:347:ASN:ND2	2.16	0.41
2:E4:406:HIS:ND1	3:E5:261:PRO:HD3	2.35	0.41
3:E7:309:ARG:H	3:E7:372:THR:HG22	1.84	0.41
3:E9:156:ARG:HH22	3:E9:197:ASP:HB2	1.85	0.41
1:23:246:CYS:SG	3:C5:355:ASP:OD2	2.78	0.41
2:A0:264:ARG:HG3	2:A0:264:ARG:NH1	2.31	0.41
3:A1:257:LEU:HD21	3:A1:314:SER:HB2	2.02	0.41
2:A4:11:GLN:HG3	2:A4:74:VAL:HG21	2.03	0.41
2:A4:28:HIS:HD2	2:A4:53:PHE:HE2	1.67	0.41
2:A6:413:MET:HE2	2:A6:413:MET:HB3	1.85	0.41
2:A8:2:ARG:HG3	2:A8:51:THR:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:36:MET:HA	2:A8:37:PRO:HD3	1.89	0.41
2:A8:123:ARG:NH2	2:A8:160:ASP:OD2	2.49	0.41
2:B2:119:LEU:HD13	2:B2:156:ARG:CD	2.37	0.41
2:B2:298:PRO:HB3	2:B2:307:PRO:HD2	2.02	0.41
2:B4:88:HIS:HA	2:B4:89:PRO:HD3	1.94	0.41
2:B6:342:GLN:OE1	2:B6:342:GLN:HA	2.21	0.41
2:C2:53:PHE:O	2:C2:64:ARG:NH2	2.53	0.41
2:C2:414:GLU:HG2	2:C2:417:GLU:OE2	2.20	0.41
3:C3:238:CYS:SG	3:C3:239:CYS:N	2.93	0.41
3:C7:150:LEU:O	3:C7:154:LYS:HG2	2.20	0.41
2:C8:60:LYS:NZ	2:C8:61:HIS:O	2.48	0.41
3:D1:253:LEU:O	3:D1:257:LEU:HB2	2.21	0.41
3:D5:23:VAL:CG1	3:D5:230:SER:HB2	2.48	0.41
2:D6:105:ARG:HH11	2:D6:110:ILE:HD13	1.86	0.41
3:D7:3:GLU:HA	3:D7:49:VAL:HA	2.02	0.41
2:D8:419:SER:O	2:D8:423:GLU:HG2	2.21	0.41
2:E0:96:LYS:HD3	3:E1:128:ASP:CG	2.41	0.41
3:E3:44:LEU:HG	3:E3:44:LEU:O	2.21	0.41
2:E6:370:LYS:HB2	2:E6:370:LYS:HE2	1.75	0.41
3:E9:128:ASP:N	3:E9:128:ASP:OD1	2.50	0.41
3:E9:198:GLU:HG3	3:E9:266:PHE:CE2	2.55	0.41
3:E9:238:CYS:SG	3:E9:239:CYS:N	2.92	0.41
3:E9:257:LEU:HD13	3:E9:312:THR:HG23	2.02	0.41
1:7:242:ASN:OD1	1:7:242:ASN:N	2.54	0.41
2:A2:100:ALA:O	3:A3:255:VAL:HG11	2.21	0.41
2:A6:298:PRO:HG3	2:A6:308:ARG:HH22	1.85	0.41
2:A6:397:LEU:HG	3:A7:344:TRP:HB2	2.02	0.41
2:A8:223:THR:HB	3:A9:245:GLN:OE1	2.21	0.41
3:A9:283:ALA:HA	3:B3:55:THR:CG2	2.51	0.41
2:B0:173:PRO:HG3	2:B0:187:SER:OG	2.20	0.41
2:B4:31:GLN:NE2	2:B4:37:PRO:HG3	2.36	0.41
3:B5:324:LYS:HB2	3:B5:324:LYS:HE3	1.79	0.41
2:B8:215:ARG:HH12	2:B8:299:ALA:HB1	1.86	0.41
2:C0:411:GLU:OE1	2:C0:411:GLU:N	2.54	0.41
2:C4:423:GLU:HA	2:C4:426:ALA:HB3	2.02	0.41
3:C5:321:MET:SD	3:C5:321:MET:N	2.93	0.41
2:C6:66:VAL:HG12	2:C6:91:GLN:HB2	2.03	0.41
3:D3:100:ASN:ND2	3:D3:401:GLU:OE2	2.53	0.41
3:D5:215:LEU:HB3	3:D5:217:LEU:HD13	2.02	0.41
2:E0:12:ALA:CB	2:E0:140:ALA:HB2	2.50	0.41
3:E3:295:ASP:OD2	3:E3:297:LYS:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E5:2:ARG:HD3	3:E5:131:GLN:OE1	2.20	0.41
2:E8:191:THR:CG2	2:E8:425:LEU:HD21	2.50	0.41
3:E9:28:HIS:CE1	3:E9:241:ARG:HE	2.37	0.41
3:F1:249:ASP:OD1	3:F1:250:LEU:N	2.54	0.41
2:A0:428:LEU:HD12	2:A0:428:LEU:HA	1.92	0.41
3:A1:215:LEU:HD11	3:A1:273:LEU:HD22	2.03	0.41
2:A2:77:GLU:HA	2:A2:80:THR:HG22	2.02	0.41
3:A3:252:LYS:O	3:A3:256:ASN:ND2	2.54	0.41
2:A4:68:LEU:HD21	2:A4:149:LEU:HD21	2.03	0.41
2:A4:121:ARG:HD2	2:A4:121:ARG:HA	1.82	0.41
2:A6:154:LEU:HD23	2:A6:154:LEU:HA	1.91	0.41
3:A7:10:GLY:HA2	3:A7:143:THR:HG23	2.02	0.41
3:A9:135:ILE:HG21	3:A9:152:ILE:HD11	2.03	0.41
2:B0:124:LYS:HE3	2:B0:124:LYS:HB2	1.82	0.41
3:B3:77:ARG:HH22	3:B3:92:PHE:HZ	1.69	0.41
2:B4:367:ASP:OD1	2:B4:367:ASP:N	2.49	0.41
2:B4:402:ARG:HD3	2:B4:402:ARG:HA	1.92	0.41
3:B7:386:THR:O	3:B7:390:ARG:HG2	2.21	0.41
3:C1:309:ARG:O	3:C1:372:THR:HG22	2.21	0.41
3:C1:330:MET:HB3	3:C1:349:MET:HG2	2.01	0.41
3:C3:206:ALA:O	3:C3:210:ILE:HG12	2.21	0.41
3:C3:256:ASN:HD22	3:C3:350:LYS:HD2	1.86	0.41
2:C4:23:LEU:HD11	2:C4:233:GLN:OE1	2.21	0.41
3:C9:211:CYS:CB	2:D0:326:LYS:HZ1	2.33	0.41
3:D1:16:ILE:HD11	3:D1:229:VAL:HB	2.02	0.41
3:D7:289:LEU:HD22	3:D7:365:VAL:HG12	2.03	0.41
3:D9:374:ILE:HD11	3:D9:422:TYR:CZ	2.56	0.41
3:D9:396:HIS:HA	3:D9:399:THR:HG22	2.03	0.41
2:E0:50:ASN:O	2:E0:64:ARG:NH2	2.54	0.41
3:E1:207:LEU:HB3	3:E1:225:LEU:HD22	2.01	0.41
2:E4:394:LYS:HZ3	3:E5:347:ASN:ND2	2.18	0.41
3:E5:101:TRP:CE3	3:E5:187:LEU:HD23	2.55	0.41
3:E9:375:GLN:NE2	3:E9:423:GLN:HB2	2.36	0.41
3:F1:51:TYR:HB3	3:F1:59:PHE:HB3	2.02	0.41
1:17:253:ALA:HB1	2:E2:32:PRO:HG2	2.03	0.41
1:19:250:GLU:O	2:E6:229:ARG:NH2	2.53	0.41
2:A0:182:VAL:HG22	2:A0:185:TYR:HB2	2.01	0.41
3:A1:263:LEU:HD12	3:A1:370:ASN:HD21	1.84	0.41
2:A4:291:ILE:HD12	2:A4:375:VAL:HG23	2.02	0.41
3:A5:211:CYS:O	2:A6:326:LYS:NZ	2.53	0.41
3:A7:139:LEU:HD12	3:A7:170:PHE:CE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B1:362:LYS:HE2	3:B1:362:LYS:HB2	1.52	0.41
3:B3:375:GLN:HG3	3:B3:419:VAL:HG13	2.01	0.41
2:B6:217:LEU:O	2:B6:218:ASP:HB3	2.21	0.41
3:B7:54:ALA:HB3	3:B7:58:ARG:HG2	2.03	0.41
3:B7:283:ALA:HA	3:C1:55:THR:CG2	2.50	0.41
2:B8:254:GLU:HG2	2:B8:352:LYS:HE2	2.01	0.41
3:B9:50:PHE:CE2	3:B9:241:ARG:HD3	2.56	0.41
3:B9:290:THR:HA	3:B9:293:MET:HE3	2.03	0.41
3:C1:262:ARG:HA	3:C1:262:ARG:HD2	1.79	0.41
3:C3:107:THR:OG1	3:C3:108:GLU:N	2.54	0.41
3:C5:32:PRO:HD3	3:C5:81:PHE:CZ	2.56	0.41
3:C5:295:ASP:HB3	3:C5:298:ASN:HB2	2.03	0.41
3:C9:204:ASN:HB3	3:C9:208:TYR:CE2	2.55	0.41
3:D1:101:TRP:HD1	3:D1:145:SER:HG	1.64	0.41
2:D2:319:TYR:CD2	2:D2:375:VAL:HG22	2.55	0.41
3:D3:113:ILE:HD12	3:D3:113:ILE:HA	1.97	0.41
3:D3:403:MET:HB2	3:D3:403:MET:HE3	1.95	0.41
3:D5:87:PRO:HA	3:D5:90:PHE:CD1	2.56	0.41
3:D5:311:LEU:HD23	3:D5:311:LEU:HA	1.95	0.41
3:D9:237:THR:HG23	3:D9:241:ARG:HH21	1.85	0.41
2:E4:383:ALA:O	2:E4:386:GLU:HG2	2.21	0.41
2:E6:230:LEU:CD2	2:E6:368:LEU:HD11	2.51	0.41
3:E7:267:LEU:CD1	3:E7:301:CYS:HB3	2.51	0.41
2:E8:141:VAL:HG11	2:E8:172:TRP:CZ3	2.56	0.41
2:F0:218:ASP:OD2	2:F0:280:LYS:NZ	2.39	0.41
2:F0:231:ILE:O	2:F0:235:ILE:HG12	2.21	0.41
1:0:239:LEU:HA	1:0:240:PRO:HD3	1.87	0.41
1:18:241:PHE:CZ	3:E5:356:ILE:CG2	3.03	0.41
1:19:241:PHE:HB2	3:E7:43:GLN:NE2	2.22	0.41
1:4:253:ALA:HB1	2:B2:32:PRO:HG2	2.02	0.41
1:5:257:PRO:HD3	2:B4:26:LEU:HD11	2.03	0.41
1:7:253:ALA:HB2	2:B8:82:THR:HG21	2.03	0.41
3:A1:43:GLN:HA	3:A1:242:PHE:HE1	1.85	0.41
3:A1:212:PHE:CE1	2:A2:326:LYS:HB3	2.56	0.41
2:A2:370:LYS:HB3	2:A2:370:LYS:HE3	1.71	0.41
2:A4:2:ARG:H	2:A4:2:ARG:HG2	1.75	0.41
3:A5:239:CYS:SG	3:A5:247:ASN:HA	2.61	0.41
3:A5:317:PHE:HB3	3:A5:321:MET:SD	2.61	0.41
2:A6:238:LEU:HD12	2:A6:238:LEU:HA	1.88	0.41
2:A6:262:TYR:HB3	2:A6:263:PRO:HD2	2.03	0.41
2:A8:117:LEU:HD23	2:A8:117:LEU:HA	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:219:ILE:HD13	2:A8:219:ILE:HG21	1.79	0.41
3:A9:396:HIS:CE1	2:B0:261:PRO:O	2.69	0.41
2:B0:102:ASN:HA	2:B0:408:TYR:HE1	1.85	0.41
2:B0:241:SER:OG	2:B0:250:VAL:O	2.31	0.41
3:B1:118:ASP:O	3:B1:122:LYS:HG2	2.21	0.41
2:B2:8:HIS:CD2	2:B2:138:PHE:HD2	2.39	0.41
3:B3:103:LYS:HA	3:B3:107:THR:HG22	2.03	0.41
2:B4:359:PRO:HA	2:B4:360:PRO:HD3	1.93	0.41
3:B5:330:MET:CE	3:B5:349:MET:HB3	2.51	0.41
2:B6:52:PHE:CD2	2:B6:243:ARG:HD3	2.55	0.41
2:B6:357:TYR:HD1	2:B6:357:TYR:HA	1.75	0.41
3:B7:267:LEU:HB3	3:B7:299:MET:CE	2.51	0.41
2:B8:367:ASP:OD1	2:B8:368:LEU:HD12	2.21	0.41
3:B9:141:GLY:O	3:B9:145:SER:OG	2.29	0.41
3:C1:220:PRO:HG2	2:C2:326:LYS:HB2	2.03	0.41
3:C1:281:TYR:CE1	3:C5:58:ARG:NH1	2.89	0.41
3:C1:318:ARG:HD3	3:C1:358:PRO:HD3	2.03	0.41
3:C3:263:LEU:HD12	3:C3:370:ASN:HD21	1.86	0.41
2:C4:287:SER:N	2:C4:290:GLU:OE2	2.46	0.41
3:C5:52:ASN:ND2	3:C5:123:GLU:OE2	2.42	0.41
2:C6:121:ARG:HH11	2:C6:121:ARG:HD2	1.77	0.41
2:D0:319:TYR:N	2:D0:354:GLY:O	2.49	0.41
3:D1:167:PHE:CE2	3:D1:233:MET:HG3	2.56	0.41
3:D1:286:VAL:N	3:D1:287:PRO:HD2	2.35	0.41
3:D1:422:TYR:HD1	3:D1:422:TYR:HA	1.78	0.41
3:D3:117:LEU:HA	3:D3:117:LEU:HD23	1.88	0.41
3:D5:169:VAL:HG12	3:D5:202:ILE:HB	2.03	0.41
2:D6:101:ASN:HB2	3:D7:255:VAL:HG21	2.03	0.41
2:D6:402:ARG:HD3	2:D6:405:VAL:HG11	2.03	0.41
2:D8:109:THR:OG1	2:D8:411:GLU:O	2.39	0.41
2:E2:319:TYR:CE1	2:E2:375:VAL:HG22	2.55	0.41
3:E3:55:THR:O	3:E3:55:THR:HG23	2.20	0.41
2:E4:402:ARG:HG2	2:E4:402:ARG:HH21	1.86	0.41
3:E5:64:ILE:HD12	3:E5:119:VAL:HG12	2.03	0.41
2:E6:72:PRO:O	2:E6:76:ASP:HB2	2.21	0.41
2:E6:270:SER:OG	2:E6:302:MET:HB3	2.20	0.41
2:E6:404:PHE:CE1	3:E7:259:PRO:HA	2.56	0.41
3:E7:28:HIS:HA	3:E7:43:GLN:HG2	2.03	0.41
3:E9:183:TYR:OH	3:E9:388:MET:O	2.22	0.41
2:F0:258:ASN:ND2	2:F0:352:LYS:HD2	2.36	0.41
1:17:253:ALA:CB	2:E2:32:PRO:HG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A1:193:VAL:HG12	3:A1:265:PHE:CZ	2.56	0.41
3:A1:219:THR:CG2	3:A1:219:THR:O	2.69	0.41
3:A1:365:VAL:HG22	3:A1:366:THR:N	2.35	0.41
2:A2:356:ASN:OD1	2:A2:357:TYR:N	2.54	0.41
2:A6:69:ASP:OD1	2:A6:70:LEU:N	2.54	0.41
3:A9:361:LEU:HD23	3:A9:361:LEU:HA	1.95	0.41
2:B0:397:LEU:CD2	3:B1:344:TRP:O	2.69	0.41
3:B7:86:ARG:HA	3:B7:87:PRO:HD3	1.96	0.41
3:B9:392:LYS:HD2	3:B9:395:LEU:HD22	2.03	0.41
3:C3:21:TRP:CH2	3:C3:61:PRO:HB3	2.55	0.41
3:C3:167:PHE:HE1	3:C3:200:GLN:NE2	2.19	0.41
3:C7:385:PHE:HZ	3:C7:408:PHE:HD2	1.69	0.41
3:C9:246:LEU:HD12	3:C9:246:LEU:HA	1.90	0.41
2:D0:12:ALA:HB3	2:D0:140:ALA:HB2	2.03	0.41
2:D2:6:SER:OG	2:D2:8:HIS:NE2	2.54	0.41
2:D2:276:ILE:HD11	2:D2:286:LEU:HD11	2.02	0.41
2:D6:264:ARG:HH11	2:D6:264:ARG:HD2	1.67	0.41
2:E4:256:GLN:HE21	2:E4:256:GLN:N	2.19	0.41
2:E6:217:LEU:HD23	2:E6:219:ILE:HG13	2.03	0.41
2:E8:157:LEU:HD23	2:E8:157:LEU:HA	1.95	0.41
2:E8:319:TYR:HB2	2:E8:355:ILE:HD13	2.03	0.41
2:E8:339:ARG:HD2	2:E8:339:ARG:HA	1.81	0.41
2:F0:214:ARG:NH2	2:F0:220:GLU:HA	2.36	0.41
3:F1:42:LEU:O	3:F1:42:LEU:HG	2.21	0.41
3:F1:205:GLU:OE1	3:F1:205:GLU:N	2.54	0.41
3:A1:117:LEU:HD13	3:A1:154:LYS:HZ1	1.83	0.40
2:A2:372:MET:HA	2:A2:372:MET:CE	2.49	0.40
2:A4:272:TYR:HB3	2:A4:275:ILE:HD11	2.03	0.40
3:A9:182:PRO:HD2	3:A9:388:MET:HE1	2.03	0.40
3:A9:391:ARG:O	3:A9:391:ARG:HG3	2.22	0.40
2:B2:259:LEU:HB3	2:B2:268:MET:HE2	2.03	0.40
3:B5:253:LEU:O	3:B5:257:LEU:HB2	2.21	0.40
2:B6:406:HIS:HA	2:B6:409:VAL:HG12	2.01	0.40
3:B7:10:GLY:HA2	3:B7:143:THR:HG23	2.02	0.40
3:B9:186:THR:HG22	3:B9:415:MET:SD	2.61	0.40
3:C1:292:GLN:HG2	3:C1:298:ASN:HD22	1.85	0.40
2:C2:214:ARG:HG3	3:C3:324:LYS:HZ2	1.85	0.40
3:C7:133:PHE:HB2	3:C7:164:MET:HB3	2.02	0.40
3:C9:22:GLU:HG3	3:C9:81:PHE:CD2	2.56	0.40
3:C9:236:VAL:HG13	3:C9:237:THR:HG23	2.03	0.40
3:C9:240:LEU:HD21	3:C9:249:ASP:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D2:164:LYS:HD2	2:D2:164:LYS:HA	1.87	0.40
3:D3:60:VAL:HA	3:D3:61:PRO:HD3	1.97	0.40
3:D5:21:TRP:CZ3	3:D5:61:PRO:HB3	2.57	0.40
3:D5:21:TRP:HA	3:D5:24:ILE:HG22	2.03	0.40
2:D8:221:ARG:HB3	3:D9:322:SER:HB3	2.02	0.40
2:D8:251:ASP:H	2:D8:254:GLU:HG3	1.86	0.40
3:E1:326:VAL:O	3:E1:330:MET:HG2	2.21	0.40
3:E5:25:SER:HB3	3:E5:30:ILE:HB	2.03	0.40
3:E9:105:HIS:HB3	3:E9:106:TYR:CD1	2.56	0.40
3:A1:136:THR:HG22	3:A1:167:PHE:HD2	1.85	0.40
2:A2:141:VAL:HG11	2:A2:172:TRP:CE3	2.56	0.40
3:A5:2:ARG:NH2	3:A5:249:ASP:OD2	2.55	0.40
3:B1:284:LEU:H	3:B5:55:THR:HB	1.87	0.40
2:B8:259:LEU:HD21	2:B8:316:CYS:HB2	2.03	0.40
2:B8:262:TYR:HB2	2:B8:265:ILE:HD12	2.01	0.40
2:C0:254:GLU:HA	2:C0:257:THR:HG22	2.04	0.40
2:C0:306:ASP:HB2	2:C0:309:HIS:NE2	2.37	0.40
3:C3:141:GLY:O	3:C3:184:ASN:ND2	2.48	0.40
2:C4:10:GLY:O	2:C4:14:ILE:HG12	2.21	0.40
3:C5:154:LYS:HB3	3:C5:154:LYS:HE2	1.64	0.40
2:C6:296:PHE:CD2	2:C6:335:ILE:HG21	2.56	0.40
3:C7:374:ILE:HD11	3:C7:422:TYR:OH	2.21	0.40
3:D1:193:VAL:HG13	3:D1:194:GLU:HG3	2.03	0.40
2:D2:207:GLU:HG3	2:D2:304:LYS:HG3	2.03	0.40
2:D2:217:LEU:HD11	2:D2:275:ILE:HG22	2.02	0.40
2:D2:407:TRP:HZ2	3:D3:258:ILE:HD11	1.87	0.40
3:D3:283:ALA:HA	3:D7:54:ALA:O	2.21	0.40
3:D3:313:ALA:HB1	3:D3:367:PHE:HE1	1.85	0.40
2:D4:229:ARG:NH1	2:D4:229:ARG:HG3	2.35	0.40
3:D5:13:GLY:HA2	3:D5:16:ILE:HG22	2.04	0.40
3:D5:289:LEU:HD23	3:D5:289:LEU:HA	1.95	0.40
2:E0:174:SER:HB3	2:E0:177:VAL:O	2.21	0.40
2:E2:212:ILE:HD11	2:E2:300:SER:HA	2.02	0.40
2:E6:250:VAL:HG12	2:E6:254:GLU:HG2	2.02	0.40
2:E8:211:ASP:OD1	2:E8:211:ASP:N	2.52	0.40
2:F0:261:PRO:HG3	2:F0:313:MET:CE	2.52	0.40
1:1:254:LYS:HG3	2:A6:364:PRO:HB2	2.04	0.40
1:18:246:CYS:HB2	3:E5:245:GLN:HG2	2.02	0.40
3:A3:113:ILE:HG23	3:A3:117:LEU:HD23	2.04	0.40
3:A5:219:THR:CG2	2:A6:324:VAL:HG21	2.50	0.40
3:A5:257:LEU:HD21	3:A5:314:SER:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A6:121:ARG:HH12	2:A6:125:LEU:HG	1.86	0.40
3:A9:208:TYR:HD1	2:B0:326:LYS:HZ2	1.68	0.40
2:B2:262:TYR:HB3	2:B2:263:PRO:HD2	2.02	0.40
2:B6:269:LEU:HD21	2:B6:384:ILE:HD11	2.03	0.40
3:B7:152:ILE:HG22	3:B7:195:ASN:HB3	2.04	0.40
3:B7:213:ARG:HD3	3:B7:297:LYS:NZ	2.36	0.40
2:B8:305:CYS:HG	2:B8:309:HIS:HE2	1.66	0.40
2:C2:214:ARG:HG3	3:C3:324:LYS:NZ	2.37	0.40
2:C4:30:ILE:HD13	2:C4:53:PHE:CE2	2.56	0.40
3:C5:105:HIS:ND1	3:C5:150:LEU:HB2	2.37	0.40
3:C7:10:GLY:HA2	3:C7:143:THR:OG1	2.21	0.40
2:C8:147:SER:HB2	2:C8:190:SER:HB3	2.02	0.40
2:C8:402:ARG:HA	2:C8:402:ARG:HD3	1.95	0.40
3:C9:281:TYR:CD1	3:D3:58:ARG:CZ	3.04	0.40
2:D0:231:ILE:O	2:D0:235:ILE:HG12	2.21	0.40
2:D0:258:ASN:HD22	2:D0:258:ASN:HA	1.64	0.40
2:D2:208:ALA:HB2	2:D2:304:LYS:HG2	2.04	0.40
2:D2:221:ARG:HB3	3:D3:322:SER:HB3	2.03	0.40
3:D3:169:VAL:HG12	3:D3:202:ILE:HB	2.03	0.40
2:E0:64:ARG:HB3	2:E0:125:LEU:HD21	2.03	0.40
2:E2:152:LEU:HD12	2:E2:152:LEU:HA	1.91	0.40
3:E3:60:VAL:HA	3:E3:61:PRO:HD3	1.93	0.40
3:E9:7:VAL:HG11	3:E9:151:LEU:HD23	2.03	0.40
2:F0:319:TYR:CD2	2:F0:375:VAL:HG22	2.56	0.40
2:A0:244:PHE:CD2	2:A0:358:GLN:HG2	2.56	0.40
2:A4:17:GLY:HA2	2:A4:20:CYS:HB2	2.04	0.40
3:A7:7:VAL:HB	3:A7:135:ILE:HG13	2.04	0.40
3:A7:104:GLY:O	3:A7:147:MET:HB3	2.22	0.40
2:B0:9:VAL:HG13	2:B0:139:ASN:HB3	2.04	0.40
2:B0:149:LEU:HD23	2:B0:149:LEU:HA	1.94	0.40
2:B2:3:GLU:OE1	2:B2:64:ARG:NE	2.54	0.40
2:B2:12:ALA:HB3	2:B2:140:ALA:HB2	2.02	0.40
3:B7:297:LYS:HE3	3:B7:297:LYS:HB3	1.79	0.40
3:B9:287:PRO:O	3:B9:291:GLN:HG3	2.22	0.40
2:C6:207:GLU:HA	2:C6:210:TYR:HB2	2.03	0.40
3:C7:5:VAL:HB	3:C7:133:PHE:CD1	2.57	0.40
3:D1:4:ILE:HD11	3:D1:131:GLN:HG2	2.03	0.40
3:D7:281:TYR:CD1	3:E1:58:ARG:NE	2.89	0.40
3:E3:309:ARG:H	3:E3:372:THR:HG22	1.85	0.40
2:E4:210:TYR:OH	3:E5:323:THR:O	2.37	0.40
3:E5:136:THR:HG22	3:E5:167:PHE:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E5:209:ASP:CG	3:E5:213:ARG:HH21	2.24	0.40
2:E6:273:ALA:HA	2:E6:274:PRO:HA	1.84	0.40
2:E8:322:ASP:O	2:E8:373:ARG:NE	2.54	0.40
1:0:244:GLN:H	3:A5:320:ARG:NH1	2.19	0.40
2:A0:176:GLN:OE1	2:A0:176:GLN:HA	2.21	0.40
2:A0:211:ASP:OD2	2:A0:304:LYS:NZ	2.54	0.40
3:A1:21:TRP:CZ2	3:A1:63:ALA:HB2	2.57	0.40
2:A2:51:THR:HG21	2:A2:243:ARG:HA	2.04	0.40
2:A4:115:VAL:HG21	2:A4:152:LEU:HG	2.02	0.40
2:A6:273:ALA:HA	2:A6:274:PRO:HA	1.76	0.40
3:A7:249:ASP:H	3:A7:252:LYS:HG3	1.87	0.40
3:A9:214:THR:HG22	3:A9:297:LYS:HG2	2.03	0.40
3:B3:6:HIS:HE1	3:B3:20:PHE:CD2	2.39	0.40
2:B4:221:ARG:HA	3:B5:322:SER:HB2	2.04	0.40
3:B5:136:THR:HG22	3:B5:167:PHE:HB2	2.02	0.40
2:B6:69:ASP:OD2	2:B6:71:GLU:HB3	2.21	0.40
2:B6:280:LYS:HD3	2:B6:280:LYS:HA	1.92	0.40
2:B8:62:VAL:HA	2:B8:63:PRO:HD3	1.88	0.40
2:C0:336:LYS:HE3	2:C0:336:LYS:HB3	1.92	0.40
3:C3:284:LEU:HA	3:C3:284:LEU:HD12	1.80	0.40
2:C4:132:LEU:HB3	2:C4:164:LYS:NZ	2.36	0.40
3:C5:310:TYR:CD1	3:C5:371:SER:HB2	2.57	0.40
2:C6:327:ASP:HA	2:C6:330:ALA:HB3	2.04	0.40
2:C6:395:PHE:HZ	2:C6:418:PHE:HB3	1.85	0.40
3:D1:100:ASN:HB3	3:D1:103:LYS:HG2	2.03	0.40
2:D2:88:HIS:HA	2:D2:89:PRO:HD3	1.92	0.40
2:D4:393:HIS:O	2:D4:397:LEU:HD13	2.22	0.40
3:D7:19:LYS:HD2	3:D7:19:LYS:HA	1.94	0.40
3:D7:117:LEU:CD2	3:D7:121:ARG:HH22	2.33	0.40
2:E0:311:LYS:NZ	2:E0:342:GLN:OE1	2.49	0.40
2:E4:64:ARG:HB3	2:E4:125:LEU:HD21	2.04	0.40
2:E4:251:ASP:OD1	2:E4:251:ASP:N	2.52	0.40
3:E5:180:VAL:HB	3:E5:183:TYR:HB2	2.04	0.40
3:E7:77:ARG:HH11	3:E7:77:ARG:HD2	1.67	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	0	20/351 (6%)	19 (95%)	1 (5%)	0	100	100
1	1	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	10	20/351 (6%)	17 (85%)	3 (15%)	0	100	100
1	11	20/351 (6%)	15 (75%)	5 (25%)	0	100	100
1	12	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	13	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	14	20/351 (6%)	19 (95%)	1 (5%)	0	100	100
1	15	20/351 (6%)	19 (95%)	1 (5%)	0	100	100
1	16	20/351 (6%)	19 (95%)	1 (5%)	0	100	100
1	17	20/351 (6%)	20 (100%)	0	0	100	100
1	18	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	19	20/351 (6%)	17 (85%)	3 (15%)	0	100	100
1	2	20/351 (6%)	17 (85%)	3 (15%)	0	100	100
1	20	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	21	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
1	22	18/351 (5%)	14 (78%)	4 (22%)	0	100	100
1	23	18/351 (5%)	15 (83%)	3 (17%)	0	100	100
1	3	20/351 (6%)	18 (90%)	1 (5%)	1 (5%)	1	16
1	4	20/351 (6%)	20 (100%)	0	0	100	100
1	5	20/351 (6%)	19 (95%)	1 (5%)	0	100	100
1	6	20/351 (6%)	20 (100%)	0	0	100	100
1	7	20/351 (6%)	20 (100%)	0	0	100	100
1	8	20/351 (6%)	17 (85%)	3 (15%)	0	100	100
1	9	20/351 (6%)	18 (90%)	2 (10%)	0	100	100
2	A0	424/453 (94%)	397 (94%)	27 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	A2	424/453 (94%)	406 (96%)	17 (4%)	1 (0%)	44 78
2	A4	424/453 (94%)	398 (94%)	26 (6%)	0	100 100
2	A6	424/453 (94%)	399 (94%)	25 (6%)	0	100 100
2	A8	424/453 (94%)	400 (94%)	24 (6%)	0	100 100
2	B0	424/453 (94%)	404 (95%)	20 (5%)	0	100 100
2	B2	424/453 (94%)	406 (96%)	18 (4%)	0	100 100
2	B4	424/453 (94%)	407 (96%)	17 (4%)	0	100 100
2	B6	424/453 (94%)	403 (95%)	21 (5%)	0	100 100
2	B8	424/453 (94%)	404 (95%)	20 (5%)	0	100 100
2	C0	424/453 (94%)	400 (94%)	24 (6%)	0	100 100
2	C2	424/453 (94%)	395 (93%)	28 (7%)	1 (0%)	44 78
2	C4	424/453 (94%)	390 (92%)	33 (8%)	1 (0%)	44 78
2	C6	424/453 (94%)	396 (93%)	28 (7%)	0	100 100
2	C8	424/453 (94%)	393 (93%)	31 (7%)	0	100 100
2	D0	424/453 (94%)	400 (94%)	24 (6%)	0	100 100
2	D2	424/453 (94%)	405 (96%)	18 (4%)	1 (0%)	44 78
2	D4	424/453 (94%)	406 (96%)	18 (4%)	0	100 100
2	D6	424/453 (94%)	409 (96%)	15 (4%)	0	100 100
2	D8	424/453 (94%)	409 (96%)	15 (4%)	0	100 100
2	E0	424/453 (94%)	403 (95%)	21 (5%)	0	100 100
2	E2	424/453 (94%)	401 (95%)	23 (5%)	0	100 100
2	E4	424/453 (94%)	401 (95%)	23 (5%)	0	100 100
2	E6	424/453 (94%)	401 (95%)	23 (5%)	0	100 100
2	E8	424/453 (94%)	400 (94%)	24 (6%)	0	100 100
2	F0	424/453 (94%)	402 (95%)	22 (5%)	0	100 100
3	A1	424/449 (94%)	390 (92%)	34 (8%)	0	100 100
3	A3	424/449 (94%)	402 (95%)	21 (5%)	1 (0%)	44 78
3	A5	424/449 (94%)	388 (92%)	34 (8%)	2 (0%)	25 64
3	A7	424/449 (94%)	394 (93%)	29 (7%)	1 (0%)	44 78
3	A9	424/449 (94%)	395 (93%)	28 (7%)	1 (0%)	44 78
3	B1	424/449 (94%)	401 (95%)	23 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	B3	424/449 (94%)	397 (94%)	25 (6%)	2 (0%)	25	64
3	B5	424/449 (94%)	394 (93%)	28 (7%)	2 (0%)	25	64
3	B7	424/449 (94%)	399 (94%)	24 (6%)	1 (0%)	44	78
3	B9	424/449 (94%)	405 (96%)	18 (4%)	1 (0%)	44	78
3	C1	424/449 (94%)	399 (94%)	25 (6%)	0	100	100
3	C3	424/449 (94%)	398 (94%)	25 (6%)	1 (0%)	44	78
3	C5	424/449 (94%)	403 (95%)	21 (5%)	0	100	100
3	C7	424/449 (94%)	394 (93%)	29 (7%)	1 (0%)	44	78
3	C9	424/449 (94%)	395 (93%)	28 (7%)	1 (0%)	44	78
3	D1	424/449 (94%)	398 (94%)	25 (6%)	1 (0%)	44	78
3	D3	424/449 (94%)	394 (93%)	28 (7%)	2 (0%)	25	64
3	D5	424/449 (94%)	396 (93%)	26 (6%)	2 (0%)	25	64
3	D7	424/449 (94%)	404 (95%)	20 (5%)	0	100	100
3	D9	424/449 (94%)	398 (94%)	25 (6%)	1 (0%)	44	78
3	E1	424/449 (94%)	402 (95%)	21 (5%)	1 (0%)	44	78
3	E3	424/449 (94%)	400 (94%)	23 (5%)	1 (0%)	44	78
3	E5	424/449 (94%)	396 (93%)	28 (7%)	0	100	100
3	E7	424/449 (94%)	400 (94%)	23 (5%)	1 (0%)	44	78
3	E9	424/449 (94%)	393 (93%)	31 (7%)	0	100	100
3	F1	424/449 (94%)	391 (92%)	32 (8%)	1 (0%)	44	78
4	a	146/220 (66%)	134 (92%)	11 (8%)	1 (1%)	19	57
4	b	146/220 (66%)	134 (92%)	12 (8%)	0	100	100
4	c	197/220 (90%)	185 (94%)	12 (6%)	0	100	100
4	d	197/220 (90%)	180 (91%)	17 (9%)	0	100	100
4	e	197/220 (90%)	185 (94%)	11 (6%)	1 (0%)	25	64
4	f	197/220 (90%)	184 (93%)	13 (7%)	0	100	100
4	g	197/220 (90%)	184 (93%)	13 (7%)	0	100	100
4	h	197/220 (90%)	183 (93%)	14 (7%)	0	100	100
4	i	197/220 (90%)	182 (92%)	14 (7%)	1 (0%)	25	64
4	j	197/220 (90%)	182 (92%)	15 (8%)	0	100	100
4	k	197/220 (90%)	183 (93%)	13 (7%)	1 (0%)	25	64

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
4	l	197/220 (90%)	186 (94%)	11 (6%)	0	100 100
4	m	197/220 (90%)	181 (92%)	16 (8%)	0	100 100
4	n	197/220 (90%)	182 (92%)	14 (7%)	1 (0%)	25 64
4	o	197/220 (90%)	180 (91%)	17 (9%)	0	100 100
4	p	197/220 (90%)	185 (94%)	12 (6%)	0	100 100
4	q	197/220 (90%)	185 (94%)	12 (6%)	0	100 100
4	r	197/220 (90%)	184 (93%)	12 (6%)	1 (0%)	25 64
4	s	197/220 (90%)	181 (92%)	16 (8%)	0	100 100
4	t	197/220 (90%)	188 (95%)	7 (4%)	2 (1%)	13 49
4	u	197/220 (90%)	188 (95%)	8 (4%)	1 (0%)	25 64
4	v	197/220 (90%)	180 (91%)	17 (9%)	0	100 100
4	x	197/220 (90%)	185 (94%)	12 (6%)	0	100 100
4	y	197/220 (90%)	184 (93%)	12 (6%)	1 (0%)	25 64
5	w	139/189 (74%)	133 (96%)	6 (4%)	0	100 100
All	All	27289/37345 (73%)	25630 (94%)	1620 (6%)	39 (0%)	50 83

All (39) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A3	179	VAL
3	A5	55	THR
3	A7	55	THR
3	A9	55	THR
3	B3	55	THR
3	B7	55	THR
3	D1	179	VAL
2	D2	163	LYS
3	D3	55	THR
3	E1	55	THR
1	3	251	TYR
3	B3	179	VAL
3	B5	55	THR
2	C2	58	ALA
3	C3	179	VAL
2	C4	89	PRO
3	C7	39	ASP
3	D3	179	VAL

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Mol	Chain	Res	Type
3	D5	179	VAL
3	E7	55	THR
4	y	154	TYR
3	B5	336	LYS
3	B9	55	THR
3	C9	55	THR
3	D5	55	THR
3	E3	55	THR
4	e	60	ASN
4	t	154	TYR
2	A2	32	PRO
3	D9	39	ASP
3	F1	171	PRO
4	i	159	TYR
4	n	51	PRO
4	u	51	PRO
4	t	51	PRO
4	k	51	PRO
3	A5	259	PRO
4	r	51	PRO
4	a	51	PRO

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	0	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	1	20/304 (7%)	20 (100%)	0	100 100
1	10	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	11	20/304 (7%)	18 (90%)	2 (10%)	6 20
1	12	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	13	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	14	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	15	20/304 (7%)	20 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	16	20/304 (7%)	20 (100%)	0	100 100
1	17	20/304 (7%)	20 (100%)	0	100 100
1	18	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	19	20/304 (7%)	17 (85%)	3 (15%)	2 11
1	2	20/304 (7%)	20 (100%)	0	100 100
1	20	20/304 (7%)	20 (100%)	0	100 100
1	21	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	22	18/304 (6%)	18 (100%)	0	100 100
1	23	18/304 (6%)	18 (100%)	0	100 100
1	3	20/304 (7%)	18 (90%)	2 (10%)	6 20
1	4	20/304 (7%)	20 (100%)	0	100 100
1	5	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	6	20/304 (7%)	18 (90%)	2 (10%)	6 20
1	7	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	8	20/304 (7%)	19 (95%)	1 (5%)	20 41
1	9	20/304 (7%)	20 (100%)	0	100 100
2	A0	359/379 (95%)	353 (98%)	6 (2%)	56 72
2	A2	359/379 (95%)	352 (98%)	7 (2%)	52 69
2	A4	359/379 (95%)	348 (97%)	11 (3%)	35 54
2	A6	359/379 (95%)	351 (98%)	8 (2%)	47 65
2	A8	359/379 (95%)	354 (99%)	5 (1%)	62 75
2	B0	359/379 (95%)	349 (97%)	10 (3%)	38 57
2	B2	359/379 (95%)	351 (98%)	8 (2%)	47 65
2	B4	359/379 (95%)	352 (98%)	7 (2%)	52 69
2	B6	359/379 (95%)	354 (99%)	5 (1%)	62 75
2	B8	359/379 (95%)	356 (99%)	3 (1%)	79 85
2	C0	359/379 (95%)	355 (99%)	4 (1%)	70 80
2	C2	359/379 (95%)	356 (99%)	3 (1%)	79 85
2	C4	359/379 (95%)	353 (98%)	6 (2%)	56 72
2	C6	359/379 (95%)	351 (98%)	8 (2%)	47 65
2	C8	359/379 (95%)	350 (98%)	9 (2%)	42 61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	D0	359/379 (95%)	355 (99%)	4 (1%)	70	80
2	D2	359/379 (95%)	352 (98%)	7 (2%)	52	69
2	D4	359/379 (95%)	350 (98%)	9 (2%)	42	61
2	D6	359/379 (95%)	354 (99%)	5 (1%)	62	75
2	D8	359/379 (95%)	355 (99%)	4 (1%)	70	80
2	E0	359/379 (95%)	356 (99%)	3 (1%)	79	85
2	E2	359/379 (95%)	353 (98%)	6 (2%)	56	72
2	E4	359/379 (95%)	354 (99%)	5 (1%)	62	75
2	E6	359/379 (95%)	355 (99%)	4 (1%)	70	80
2	E8	359/379 (95%)	357 (99%)	2 (1%)	84	88
2	F0	359/379 (95%)	349 (97%)	10 (3%)	38	57
3	A1	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	A3	364/381 (96%)	358 (98%)	6 (2%)	58	74
3	A5	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	A7	364/381 (96%)	358 (98%)	6 (2%)	58	74
3	A9	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	B1	364/381 (96%)	361 (99%)	3 (1%)	79	85
3	B3	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	B5	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	B7	364/381 (96%)	356 (98%)	8 (2%)	47	65
3	B9	364/381 (96%)	357 (98%)	7 (2%)	52	69
3	C1	364/381 (96%)	361 (99%)	3 (1%)	79	85
3	C3	364/381 (96%)	360 (99%)	4 (1%)	70	80
3	C5	364/381 (96%)	355 (98%)	9 (2%)	42	61
3	C7	364/381 (96%)	351 (96%)	13 (4%)	30	50
3	C9	364/381 (96%)	360 (99%)	4 (1%)	70	80
3	D1	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	D3	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	D5	364/381 (96%)	354 (97%)	10 (3%)	40	58
3	D7	364/381 (96%)	358 (98%)	6 (2%)	58	74
3	D9	364/381 (96%)	359 (99%)	5 (1%)	62	75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	E1	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	E3	364/381 (96%)	357 (98%)	7 (2%)	52	69
3	E5	364/381 (96%)	357 (98%)	7 (2%)	52	69
3	E7	364/381 (96%)	355 (98%)	9 (2%)	42	61
3	E9	364/381 (96%)	359 (99%)	5 (1%)	62	75
3	F1	364/381 (96%)	358 (98%)	6 (2%)	58	74
4	a	130/190 (68%)	126 (97%)	4 (3%)	35	54
4	b	130/190 (68%)	128 (98%)	2 (2%)	60	75
4	c	174/190 (92%)	172 (99%)	2 (1%)	70	80
4	d	174/190 (92%)	169 (97%)	5 (3%)	37	56
4	e	174/190 (92%)	168 (97%)	6 (3%)	32	51
4	f	174/190 (92%)	170 (98%)	4 (2%)	45	64
4	g	174/190 (92%)	170 (98%)	4 (2%)	45	64
4	h	174/190 (92%)	169 (97%)	5 (3%)	37	56
4	i	174/190 (92%)	171 (98%)	3 (2%)	56	72
4	j	174/190 (92%)	172 (99%)	2 (1%)	70	80
4	k	174/190 (92%)	169 (97%)	5 (3%)	37	56
4	l	174/190 (92%)	170 (98%)	4 (2%)	45	64
4	m	174/190 (92%)	169 (97%)	5 (3%)	37	56
4	n	174/190 (92%)	168 (97%)	6 (3%)	32	51
4	o	174/190 (92%)	166 (95%)	8 (5%)	23	44
4	p	174/190 (92%)	171 (98%)	3 (2%)	56	72
4	q	174/190 (92%)	169 (97%)	5 (3%)	37	56
4	r	174/190 (92%)	168 (97%)	6 (3%)	32	51
4	s	174/190 (92%)	170 (98%)	4 (2%)	45	64
4	t	174/190 (92%)	171 (98%)	3 (2%)	56	72
4	u	174/190 (92%)	171 (98%)	3 (2%)	56	72
4	v	174/190 (92%)	166 (95%)	8 (5%)	23	44
4	x	174/190 (92%)	167 (96%)	7 (4%)	27	47
4	y	174/190 (92%)	170 (98%)	4 (2%)	45	64
5	w	127/164 (77%)	123 (97%)	4 (3%)	35	54

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	23489/31780 (74%)	23041 (98%)	448 (2%)	52 69

All (448) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	254	LYS
1	10	254	LYS
1	11	241	PHE
1	11	246	CYS
1	12	256	LEU
1	13	248	ARG
1	14	248	ARG
1	18	256	LEU
1	19	238	THR
1	19	248	ARG
1	19	256	LEU
1	21	256	LEU
1	3	241	PHE
1	3	256	LEU
1	5	248	ARG
1	6	239	LEU
1	6	256	LEU
1	7	239	LEU
1	8	237	PRO
2	A0	163	LYS
2	A0	221	ARG
2	A0	285	GLN
2	A0	322	ASP
2	A0	370	LYS
2	A0	401	LYS
3	A1	179	VAL
3	A1	297	LYS
3	A1	306	ARG
3	A1	362	LYS
3	A1	379	LYS
2	A2	15	GLN
2	A2	163	LYS
2	A2	224	TYR
2	A2	285	GLN
2	A2	370	LYS
2	A2	401	LYS
2	A2	402	ARG

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Mol	Chain	Res	Type
3	A3	174	LYS
3	A3	180	VAL
3	A3	298	ASN
3	A3	320	ARG
3	A3	347	ASN
3	A3	414	ASN
2	A4	15	GLN
2	A4	60	LYS
2	A4	96	LYS
2	A4	163	LYS
2	A4	224	TYR
2	A4	257	THR
2	A4	308	ARG
2	A4	338	LYS
2	A4	370	LYS
2	A4	372	MET
2	A4	401	LYS
3	A5	11	GLN
3	A5	99	ASN
3	A5	276	ARG
3	A5	320	ARG
3	A5	350	LYS
2	A6	96	LYS
2	A6	214	ARG
2	A6	224	TYR
2	A6	254	GLU
2	A6	370	LYS
2	A6	401	LYS
2	A6	413	MET
2	A6	430	LYS
3	A7	11	GLN
3	A7	73	MET
3	A7	247	ASN
3	A7	297	LYS
3	A7	336	LYS
3	A7	390	ARG
2	A8	85	HIS
2	A8	92	LEU
2	A8	163	LYS
2	A8	285	GLN
2	A8	353	CYS
3	A9	46	ARG

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Mol	Chain	Res	Type
3	A9	174	LYS
3	A9	324	LYS
3	A9	351	SER
3	A9	391	ARG
2	B0	82	THR
2	B0	84	ARG
2	B0	98	ASP
2	B0	117	LEU
2	B0	156	ARG
2	B0	163	LYS
2	B0	308	ARG
2	B0	338	LYS
2	B0	372	MET
2	B0	401	LYS
3	B1	252	LYS
3	B1	280	GLN
3	B1	362	LYS
2	B2	32	PRO
2	B2	96	LYS
2	B2	163	LYS
2	B2	196	GLU
2	B2	297	GLU
2	B2	336	LYS
2	B2	370	LYS
2	B2	393	HIS
3	B3	46	ARG
3	B3	154	LYS
3	B3	256	ASN
3	B3	298	ASN
3	B3	306	ARG
2	B4	60	LYS
2	B4	163	LYS
2	B4	221	ARG
2	B4	224	TYR
2	B4	316	CYS
2	B4	336	LYS
2	B4	370	LYS
3	B5	16	ILE
3	B5	162	ARG
3	B5	298	ASN
3	B5	324	LYS
3	B5	336	LYS

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Mol	Chain	Res	Type
2	B6	124	LYS
2	B6	285	GLN
2	B6	308	ARG
2	B6	326	LYS
2	B6	339	ARG
3	B7	11	GLN
3	B7	55	THR
3	B7	122	LYS
3	B7	147	MET
3	B7	162	ARG
3	B7	256	ASN
3	B7	282	ARG
3	B7	324	LYS
2	B8	308	ARG
2	B8	372	MET
2	B8	397	LEU
3	B9	46	ARG
3	B9	55	THR
3	B9	157	GLU
3	B9	162	ARG
3	B9	177	ASP
3	B9	359	LYS
3	B9	379	LYS
2	C0	96	LYS
2	C0	112	LYS
2	C0	258	ASN
2	C0	370	LYS
3	C1	174	LYS
3	C1	251	ARG
3	C1	324	LYS
2	C2	163	LYS
2	C2	256	GLN
2	C2	336	LYS
3	C3	122	LYS
3	C3	297	LYS
3	C3	324	LYS
3	C3	388	MET
2	C4	124	LYS
2	C4	163	LYS
2	C4	326	LYS
2	C4	390	ARG
2	C4	401	LYS

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Mol	Chain	Res	Type
2	C4	422	ARG
3	C5	11	GLN
3	C5	83	GLN
3	C5	131	GLN
3	C5	174	LYS
3	C5	213	ARG
3	C5	291	GLN
3	C5	297	LYS
3	C5	359	LYS
3	C5	379	LYS
2	C6	112	LYS
2	C6	336	LYS
2	C6	338	LYS
2	C6	339	ARG
2	C6	370	LYS
2	C6	401	LYS
2	C6	422	ARG
2	C6	430	LYS
3	C7	11	GLN
3	C7	42	LEU
3	C7	88	ASP
3	C7	174	LYS
3	C7	276	ARG
3	C7	297	LYS
3	C7	306	ARG
3	C7	321	MET
3	C7	324	LYS
3	C7	334	GLN
3	C7	362	LYS
3	C7	379	LYS
3	C7	405	GLU
2	C8	2	ARG
2	C8	35	GLN
2	C8	96	LYS
2	C8	163	LYS
2	C8	224	TYR
2	C8	285	GLN
2	C8	368	LEU
2	C8	390	ARG
2	C8	401	LYS
3	C9	154	LYS
3	C9	291	GLN

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Mol	Chain	Res	Type
3	C9	390	ARG
3	C9	426	GLN
2	D0	156	ARG
2	D0	370	LYS
2	D0	390	ARG
2	D0	401	LYS
3	D1	11	GLN
3	D1	99	ASN
3	D1	134	GLN
3	D1	245	GLN
3	D1	343	GLU
2	D2	85	HIS
2	D2	121	ARG
2	D2	248	LEU
2	D2	264	ARG
2	D2	311	LYS
2	D2	339	ARG
2	D2	370	LYS
3	D3	19	LYS
3	D3	122	LYS
3	D3	191	GLN
3	D3	362	LYS
3	D3	379	LYS
2	D4	124	LYS
2	D4	156	ARG
2	D4	163	LYS
2	D4	214	ARG
2	D4	224	TYR
2	D4	305	CYS
2	D4	370	LYS
2	D4	401	LYS
2	D4	437	ILE
3	D5	48	ASN
3	D5	55	THR
3	D5	118	ASP
3	D5	157	GLU
3	D5	216	LYS
3	D5	276	ARG
3	D5	298	ASN
3	D5	324	LYS
3	D5	391	ARG
3	D5	397	TRP

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Mol	Chain	Res	Type
2	D6	85	HIS
2	D6	96	LYS
2	D6	218	ASP
2	D6	229	ARG
2	D6	297	GLU
3	D7	122	LYS
3	D7	164	MET
3	D7	216	LYS
3	D7	222	TYR
3	D7	279	GLN
3	D7	306	ARG
2	D8	163	LYS
2	D8	326	LYS
2	D8	372	MET
2	D8	430	LYS
3	D9	32	PRO
3	D9	48	ASN
3	D9	216	LYS
3	D9	336	LYS
3	D9	362	LYS
2	E0	96	LYS
2	E0	221	ARG
2	E0	401	LYS
3	E1	11	GLN
3	E1	328	GLU
3	E1	361	LEU
3	E1	390	ARG
3	E1	391	ARG
2	E2	130	THR
2	E2	184	PRO
2	E2	221	ARG
2	E2	397	LEU
2	E2	430	LYS
2	E2	431	ASP
3	E3	11	GLN
3	E3	83	GLN
3	E3	174	LYS
3	E3	247	ASN
3	E3	362	LYS
3	E3	391	ARG
3	E3	406	MET
2	E4	124	LYS

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Mol	Chain	Res	Type
2	E4	256	GLN
2	E4	280	LYS
2	E4	358	GLN
2	E4	401	LYS
3	E5	11	GLN
3	E5	122	LYS
3	E5	212	PHE
3	E5	306	ARG
3	E5	359	LYS
3	E5	362	LYS
3	E5	390	ARG
2	E6	101	ASN
2	E6	124	LYS
2	E6	221	ARG
2	E6	285	GLN
3	E7	55	THR
3	E7	122	LYS
3	E7	174	LYS
3	E7	213	ARG
3	E7	297	LYS
3	E7	306	ARG
3	E7	320	ARG
3	E7	347	ASN
3	E7	362	LYS
2	E8	401	LYS
2	E8	430	LYS
3	E9	83	GLN
3	E9	122	LYS
3	E9	280	GLN
3	E9	281	TYR
3	E9	391	ARG
2	F0	112	LYS
2	F0	124	LYS
2	F0	227	LEU
2	F0	280	LYS
2	F0	282	TYR
2	F0	304	LYS
2	F0	326	LYS
2	F0	336	LYS
2	F0	401	LYS
2	F0	430	LYS
3	F1	177	ASP

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Mol	Chain	Res	Type
3	F1	306	ARG
3	F1	320	ARG
3	F1	324	LYS
3	F1	359	LYS
3	F1	384	GLN
4	a	117	ARG
4	a	126	ARG
4	a	196	LEU
4	a	202	ARG
4	b	126	ARG
4	b	176	ASP
4	c	126	ARG
4	c	202	ARG
4	d	28	LYS
4	d	35	ASN
4	d	101	GLU
4	d	191	GLU
4	d	202	ARG
4	e	97	ARG
4	e	107	LYS
4	e	120	GLU
4	e	146	ARG
4	e	152	LYS
4	e	194	ARG
4	f	35	ASN
4	f	36	ILE
4	f	69	LYS
4	f	194	ARG
4	g	24	MET
4	g	126	ARG
4	g	130	PRO
4	g	194	ARG
4	h	15	ARG
4	h	117	ARG
4	h	126	ARG
4	h	130	PRO
4	h	194	ARG
4	i	97	ARG
4	i	117	ARG
4	i	152	LYS
4	j	97	ARG
4	j	206	PHE

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Mol	Chain	Res	Type
4	k	4	PRO
4	k	28	LYS
4	k	117	ARG
4	k	126	ARG
4	k	194	ARG
4	l	3	GLN
4	l	28	LYS
4	l	126	ARG
4	l	194	ARG
4	m	97	ARG
4	m	99	MET
4	m	117	ARG
4	m	126	ARG
4	m	194	ARG
4	n	28	LYS
4	n	62	VAL
4	n	101	GLU
4	n	117	ARG
4	n	126	ARG
4	n	202	ARG
4	o	24	MET
4	o	63	ILE
4	o	91	PHE
4	o	117	ARG
4	o	126	ARG
4	o	151	MET
4	o	164	ARG
4	o	202	ARG
4	p	97	ARG
4	p	126	ARG
4	p	202	ARG
4	q	97	ARG
4	q	126	ARG
4	q	152	LYS
4	q	164	ARG
4	q	198	ARG
4	r	117	ARG
4	r	126	ARG
4	r	131	TRP
4	r	152	LYS
4	r	194	ARG
4	r	202	ARG

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Mol	Chain	Res	Type
4	s	63	ILE
4	s	97	ARG
4	s	126	ARG
4	s	202	ARG
4	t	126	ARG
4	t	173	ILE
4	t	194	ARG
4	u	28	LYS
4	u	117	ARG
4	u	126	ARG
4	v	3	GLN
4	v	69	LYS
4	v	94	ASN
4	v	97	ARG
4	v	117	ARG
4	v	119	ARG
4	v	126	ARG
4	v	202	ARG
5	w	25	ARG
5	w	58	LYS
5	w	66	LYS
5	w	160	ARG
4	x	17	LEU
4	x	56	LYS
4	x	101	GLU
4	x	117	ARG
4	x	126	ARG
4	x	194	ARG
4	x	198	ARG
4	y	47	LEU
4	y	126	ARG
4	y	194	ARG
4	y	198	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (185) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	244	GLN
1	10	244	GLN
1	15	242	ASN
1	21	242	ASN
1	3	242	ASN

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Mol	Chain	Res	Type
2	A0	228	ASN
2	A0	406	HIS
3	A1	256	ASN
3	A1	347	ASN
2	A2	101	ASN
2	A2	133	GLN
2	A2	285	GLN
2	A2	358	GLN
3	A3	256	ASN
3	A3	348	ASN
3	A3	426	GLN
2	A4	88	HIS
3	A5	191	GLN
3	A5	329	GLN
3	A5	347	ASN
2	A6	11	GLN
2	A6	18	ASN
2	A6	133	GLN
2	A6	256	GLN
2	A6	283	HIS
3	A7	245	GLN
3	A7	247	ASN
3	A7	335	ASN
2	A8	11	GLN
2	A8	31	GLN
2	A8	101	ASN
3	A9	137	HIS
3	A9	396	HIS
2	B0	91	GLN
2	B0	233	GLN
3	B1	334	GLN
3	B1	347	ASN
2	B2	11	GLN
3	B3	6	HIS
3	B3	11	GLN
3	B3	99	ASN
3	B3	134	GLN
3	B3	347	ASN
2	B4	11	GLN
3	B5	8	GLN
3	B5	99	ASN
3	B5	334	GLN

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Mol	Chain	Res	Type
3	B5	347	ASN
2	B6	31	GLN
3	B7	396	HIS
2	B8	11	GLN
2	B8	15	GLN
2	B8	258	ASN
3	B9	83	GLN
3	B9	245	GLN
2	C0	258	ASN
2	C0	283	HIS
2	C2	28	HIS
2	C2	256	GLN
2	C2	380	ASN
3	C3	8	GLN
3	C3	14	ASN
3	C3	43	GLN
3	C3	105	HIS
3	C3	137	HIS
3	C3	191	GLN
2	C4	133	GLN
2	C6	168	ASN
3	C7	8	GLN
3	C7	14	ASN
3	C7	134	GLN
3	C7	245	GLN
2	C8	28	HIS
2	C8	168	ASN
2	C8	206	ASN
2	C8	226	ASN
3	C9	11	GLN
3	C9	99	ASN
3	C9	298	ASN
3	C9	334	GLN
2	D0	139	ASN
2	D0	258	ASN
2	D0	283	HIS
3	D1	11	GLN
3	D1	99	ASN
2	D2	11	GLN
2	D2	15	GLN
2	D2	85	HIS
2	D2	283	HIS

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Mol	Chain	Res	Type
3	D3	256	ASN
2	D4	11	GLN
2	D4	216	ASN
2	D4	256	GLN
2	D4	283	HIS
3	D5	298	ASN
3	D5	347	ASN
2	D6	133	GLN
2	D6	176	GLN
2	D6	283	HIS
2	D6	393	HIS
3	D7	99	ASN
3	D7	204	ASN
3	D7	256	ASN
2	D8	283	HIS
3	D9	6	HIS
3	D9	14	ASN
3	D9	134	GLN
3	D9	204	ASN
3	D9	347	ASN
2	E0	31	GLN
3	E1	11	GLN
3	E1	14	ASN
3	E1	245	GLN
3	E1	347	ASN
2	E2	11	GLN
2	E2	258	ASN
2	E2	283	HIS
2	E2	309	HIS
3	E3	6	HIS
3	E3	291	GLN
2	E4	11	GLN
2	E4	31	GLN
2	E4	85	HIS
2	E4	256	GLN
2	E4	283	HIS
3	E5	11	GLN
3	E5	245	GLN
3	E5	347	ASN
2	E6	11	GLN
3	E7	43	GLN
3	E7	245	GLN

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Mol	Chain	Res	Type
3	E7	291	GLN
3	E7	414	ASN
2	E8	85	HIS
2	E8	133	GLN
3	E9	11	GLN
3	E9	14	ASN
3	E9	256	ASN
2	F0	226	ASN
2	F0	258	ASN
3	F1	105	HIS
3	F1	134	GLN
4	a	105	ASN
4	d	35	ASN
4	f	18	ASN
4	g	37	GLN
4	h	37	GLN
4	i	37	GLN
4	i	67	HIS
4	i	106	GLN
4	j	67	HIS
4	k	11	ASN
4	k	181	GLN
4	k	203	ASN
4	l	11	ASN
4	l	67	HIS
4	l	181	GLN
4	m	11	ASN
4	m	59	ASN
4	m	147	HIS
4	n	59	ASN
4	n	105	ASN
4	n	125	HIS
4	o	67	HIS
4	p	18	ASN
4	p	100	ASN
4	q	37	GLN
4	q	181	GLN
4	r	11	ASN
4	t	11	ASN
4	t	94	ASN
4	t	181	GLN
4	u	59	ASN

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Mol	Chain	Res	Type
4	u	100	ASN
4	u	106	GLN
4	u	181	GLN
4	v	18	ASN
4	v	59	ASN
4	v	67	HIS
4	v	94	ASN
4	x	11	ASN
4	x	181	GLN
4	y	11	ASN
4	y	37	GLN
4	y	181	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

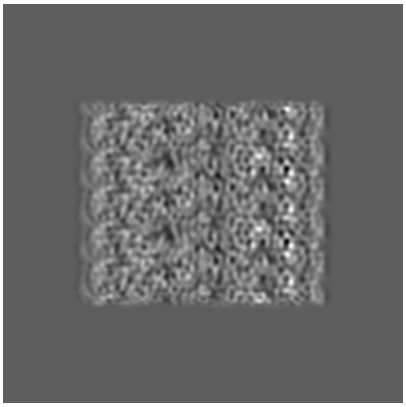
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26019. These allow visual inspection of the internal detail of the map and identification of artifacts.

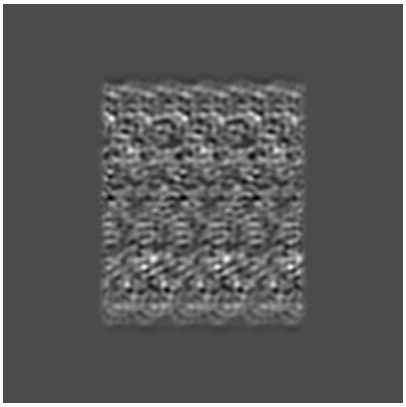
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

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: 108

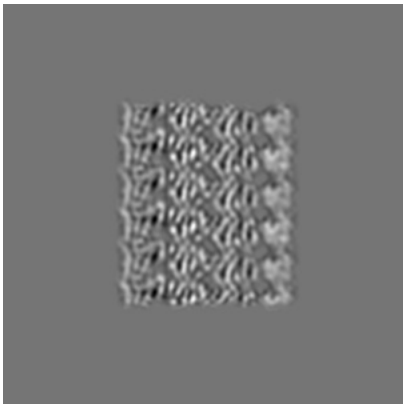
Y Index: 108

Z Index: 108

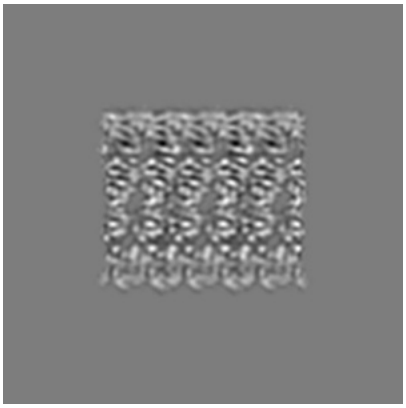
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 156



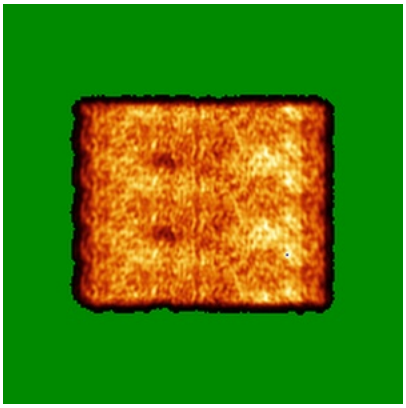
Y Index: 153

Z Index: 155

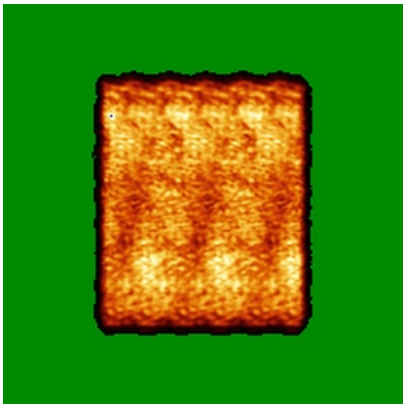
The images above show the largest variance slices of the map in three orthogonal directions.

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

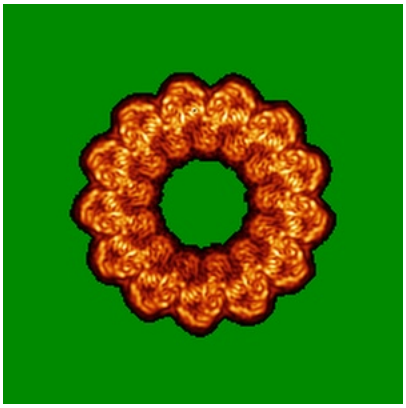
6.4.1 Primary map



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

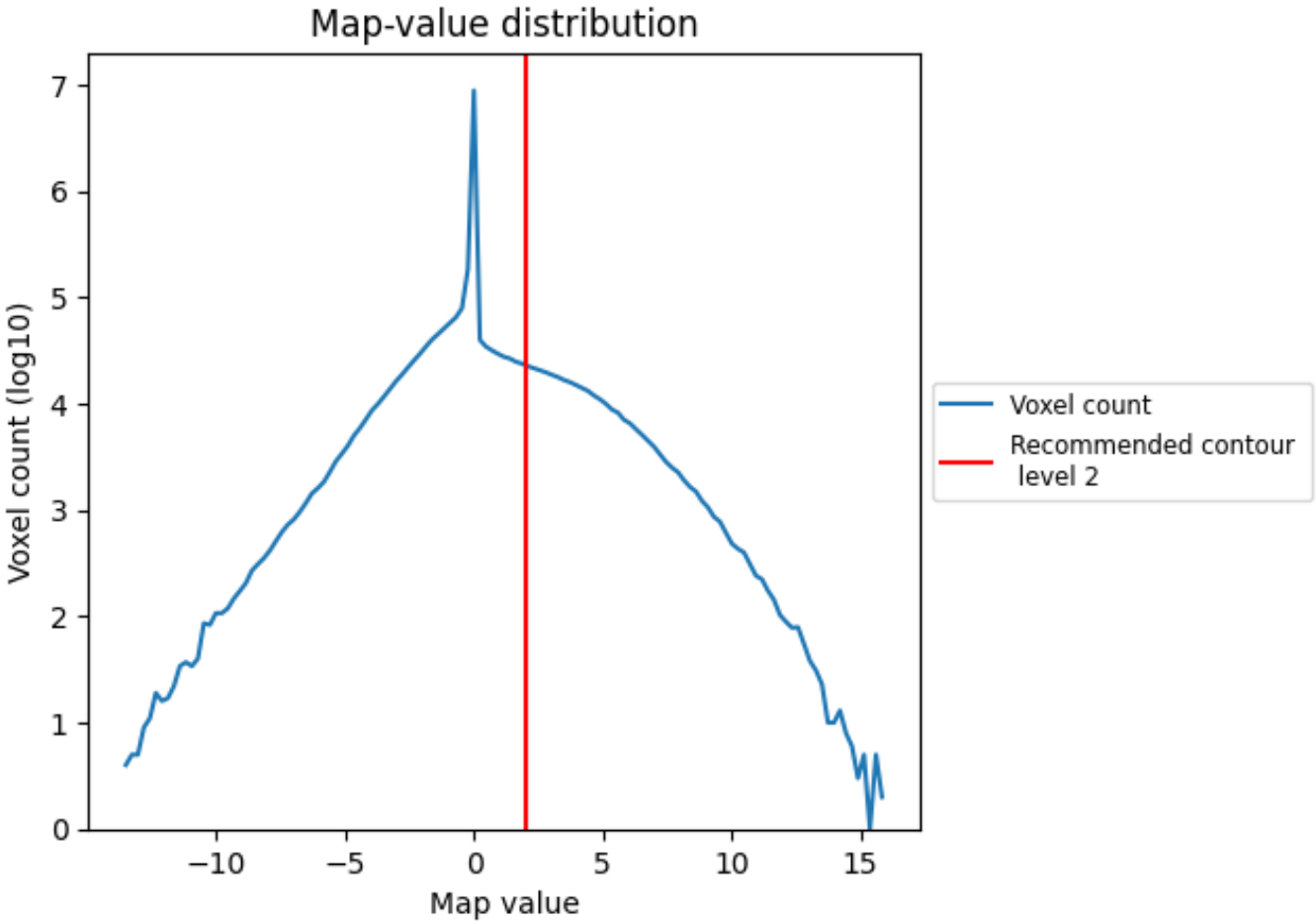
6.6 Mask visualisation (i)

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

7 Map analysis

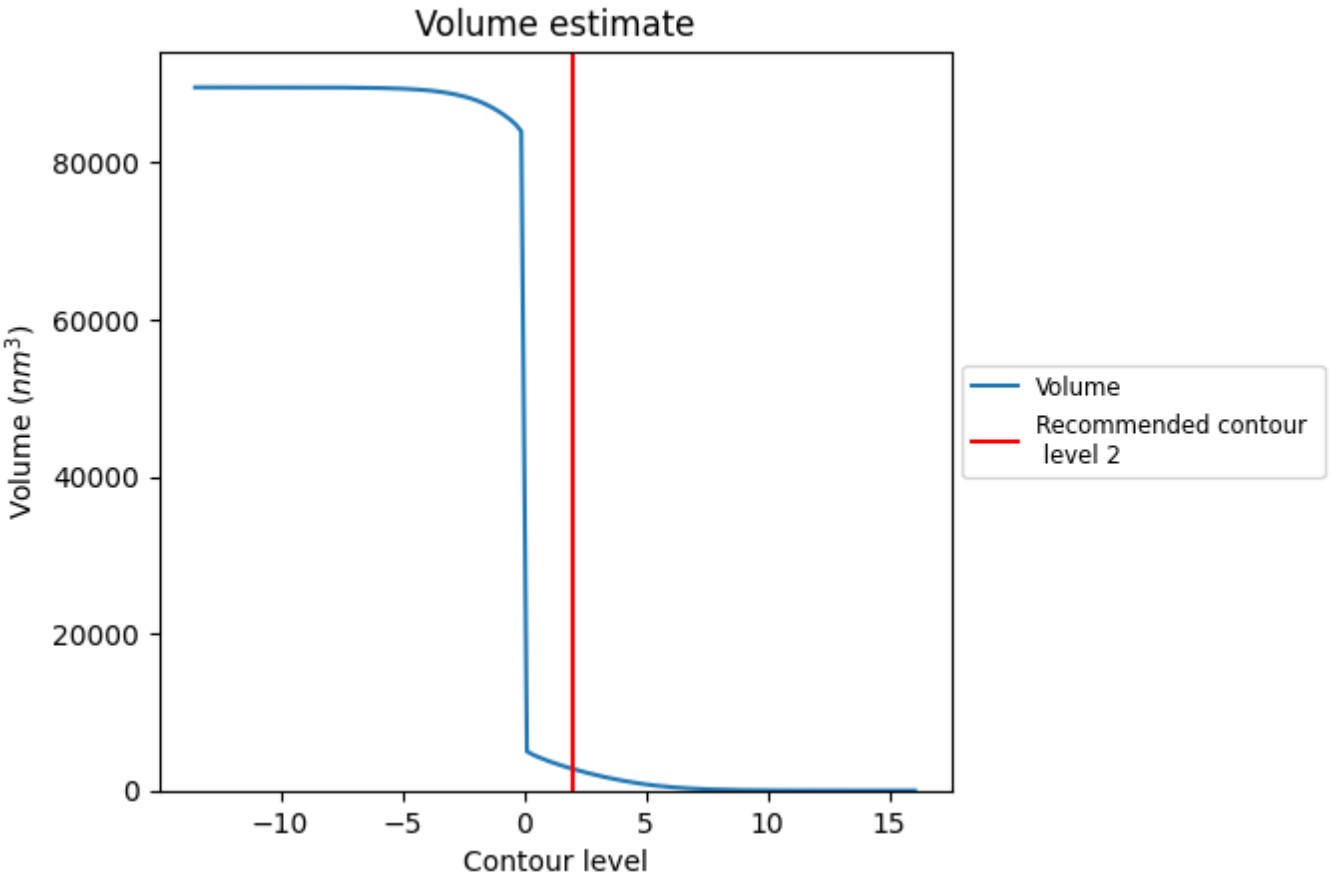
This section contains the results of statistical analysis of the map.

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.

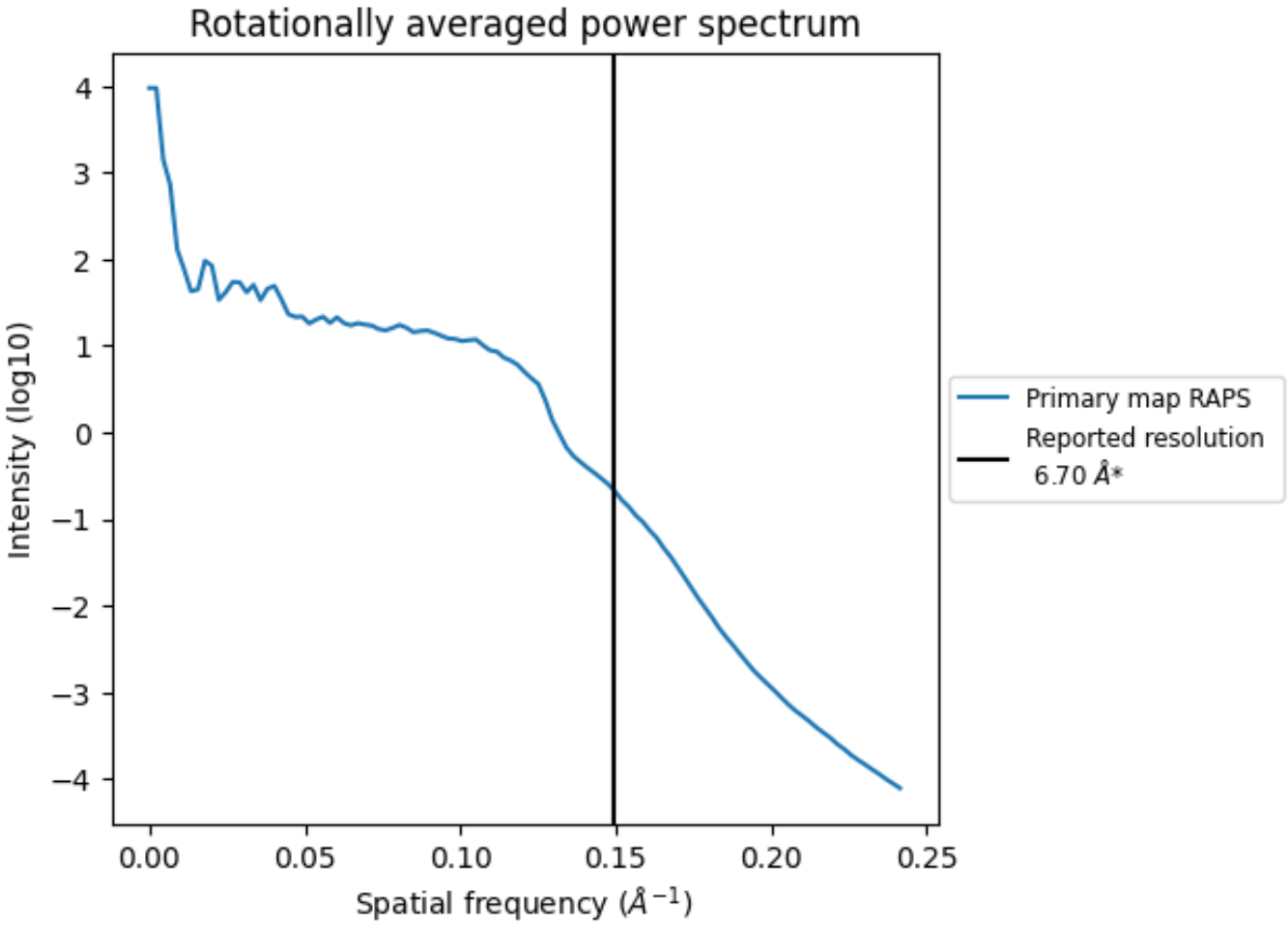
7.2 Volume estimate



The volume at the recommended contour level is 2760 nm^3; this corresponds to an approximate mass of 2494 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 0.149 Å^{-1}

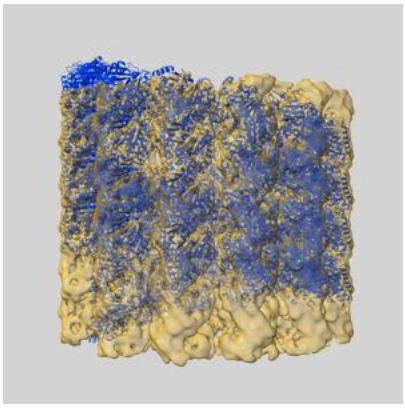
8 Fourier-Shell correlation

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

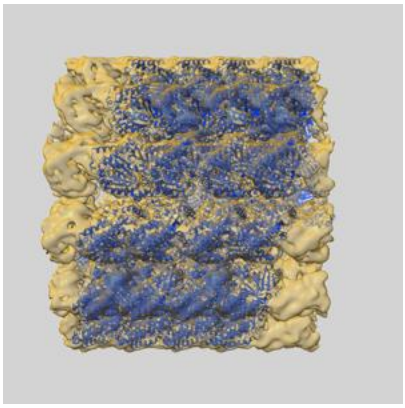
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-26019 and PDB model 7TNS. Per-residue inclusion information can be found in section 3 on page 13.

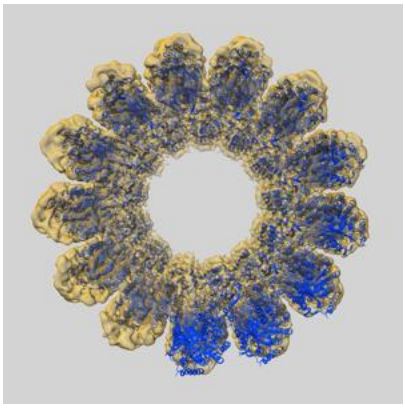
9.1 Map-model overlay



X



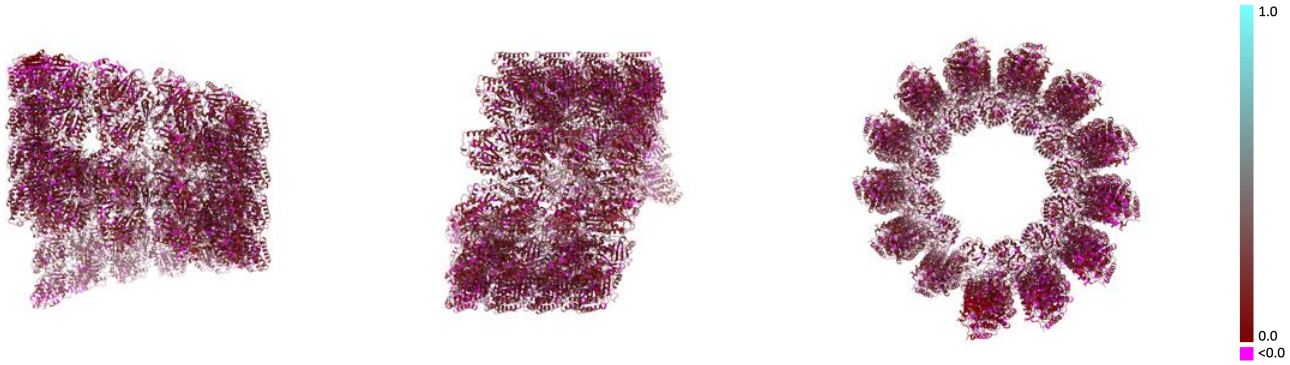
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.0 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.

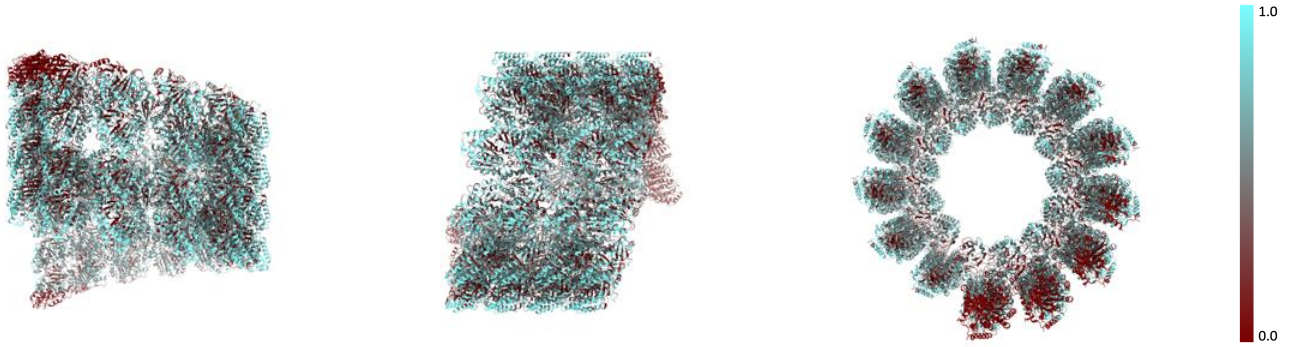
9.2 Q-score mapped to coordinate model (i)



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.

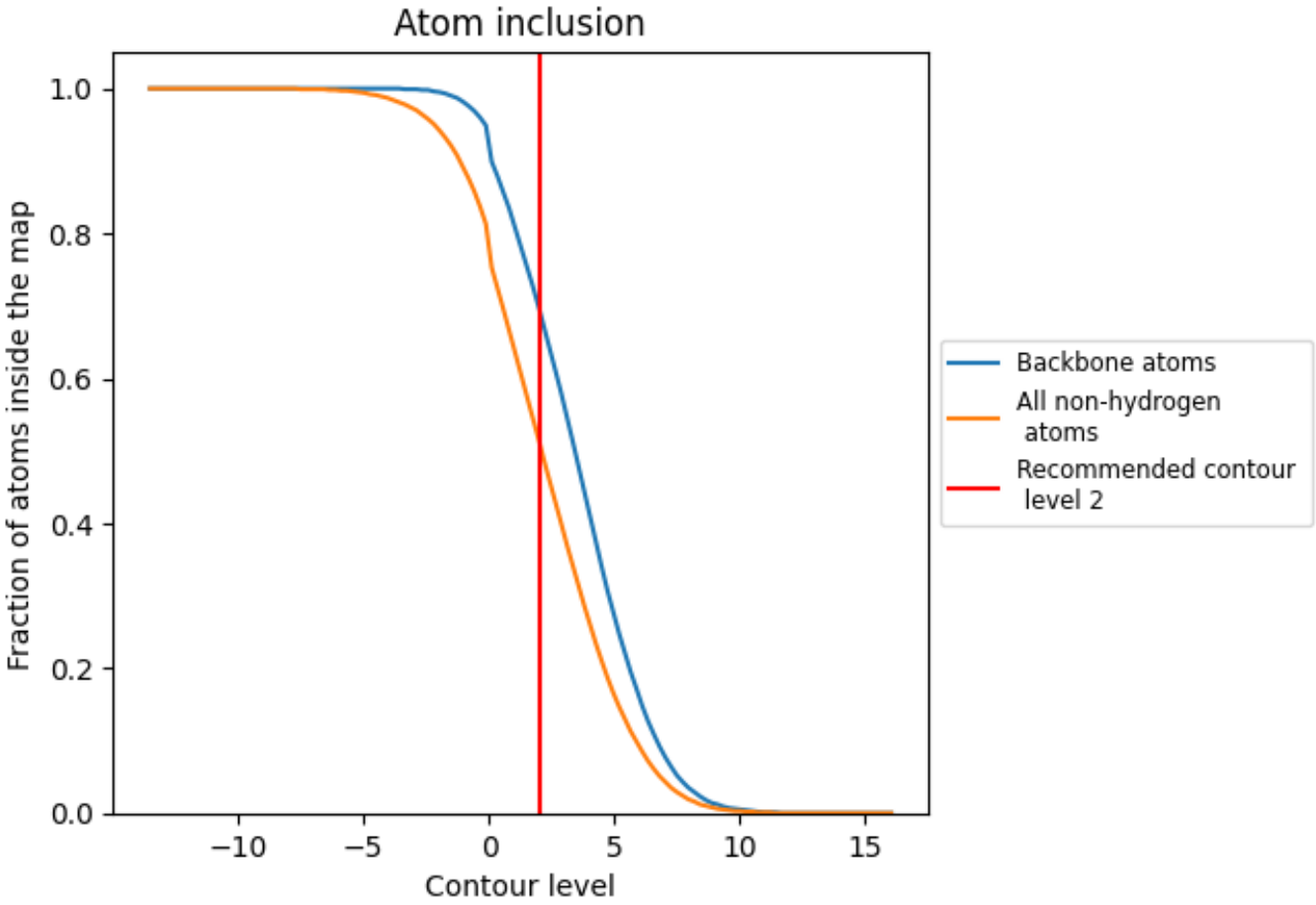
9.3 Atom inclusion mapped to coordinate model (i)



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 (2).

9.4 Atom inclusion (i)



At the recommended contour level, 70% of all backbone atoms, 52% 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 (2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5150	0.1180
0	0.2880	0.1450
1	0.3000	0.1410
10	0.3880	0.1250
11	0.3770	0.1420
12	0.3710	0.1570
13	0.3470	0.1610
14	0.2770	0.1400
15	0.3350	0.1650
16	0.2120	0.1180
17	0.3000	0.1450
18	0.0470	0.0790
19	0.1000	0.0800
2	0.3240	0.1350
20	0.0000	0.0600
21	0.1710	0.0210
22	0.3650	0.1020
23	0.3590	0.1330
3	0.3410	0.1590
4	0.3350	0.1460
5	0.3880	0.1640
6	0.3710	0.1390
7	0.3180	0.1220
8	0.3470	0.1410
9	0.3180	0.1130
A0	0.5410	0.1270
A1	0.5410	0.1220
A2	0.5450	0.1240
A3	0.3160	0.0720
A4	0.5640	0.1300
A5	0.5420	0.1250
A6	0.5610	0.1270
A7	0.4440	0.0970
A8	0.5680	0.1290
A9	0.5510	0.1270

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Chain	Atom inclusion	Q-score
B0	0.5640	0.1260
B1	0.4770	0.0940
B2	0.5620	0.1280
B3	0.5590	0.1210
B4	0.5620	0.1260
B5	0.5190	0.1020
B6	0.5520	0.1200
B7	0.5630	0.1200
B8	0.5570	0.1190
B9	0.5680	0.1170
C0	0.5670	0.1310
C1	0.5730	0.1230
C2	0.5620	0.1300
C3	0.5730	0.1200
C4	0.5620	0.1310
C5	0.5810	0.1280
C6	0.5520	0.1250
C7	0.5840	0.1230
C8	0.5470	0.1270
C9	0.5890	0.1300
D0	0.5540	0.1270
D1	0.5910	0.1260
D2	0.5270	0.1210
D3	0.5800	0.1270
D4	0.5520	0.1280
D5	0.5880	0.1260
D6	0.4660	0.1050
D7	0.5750	0.1290
D8	0.5500	0.1300
D9	0.5760	0.1250
E0	0.3190	0.0770
E1	0.5510	0.1200
E2	0.5540	0.1280
E3	0.5630	0.1200
E4	0.1930	0.0440
E5	0.5400	0.1200
E6	0.5510	0.1250
E7	0.5400	0.1200
E8	0.0500	0.0060
E9	0.5170	0.1160
F0	0.5540	0.1250
F1	0.5370	0.1200

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Chain	Atom inclusion	Q-score
a	0.4960	0.1230
b	0.4710	0.1120
c	0.4990	0.1250
d	0.5070	0.1220
e	0.5110	0.1290
f	0.5110	0.1280
g	0.5130	0.1210
h	0.5280	0.1240
i	0.5250	0.1290
j	0.5190	0.1320
k	0.5070	0.1260
l	0.5190	0.1290
m	0.5110	0.1300
n	0.5060	0.1300
o	0.4990	0.1310
p	0.4990	0.1290
q	0.4920	0.1250
r	0.4930	0.1310
s	0.4880	0.1280
t	0.4650	0.1220
u	0.4320	0.1110
v	0.4830	0.1240
w	0.3220	0.0780
x	0.4590	0.1250
y	0.3440	0.1120