



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 14, 2023 – 10:53 PM EDT

PDB ID : 4V99
Title : The Crystallographic Structure of Panicum Mosaic Virus
Authors : Makino, D.L.; Larson, S.B.; McPherson, A.
Deposited on : 2012-07-04
Resolution : 2.90 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.35.1
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

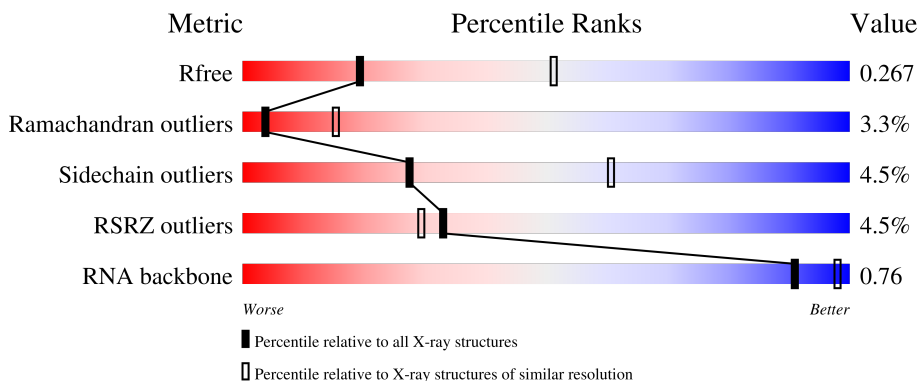
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1957 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)
RNA backbone	3102	1007 (3.16-2.64)

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

Mol	Chain	Length	Quality of chain
1	A1	242	
1	A4	242	
1	A5	242	
1	A6	242	
1	AA	242	

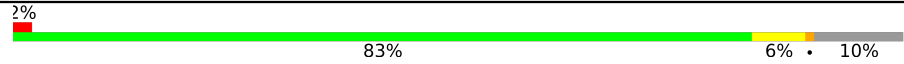




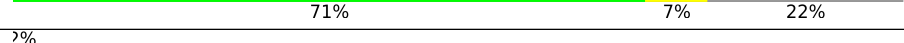


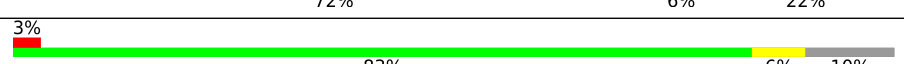
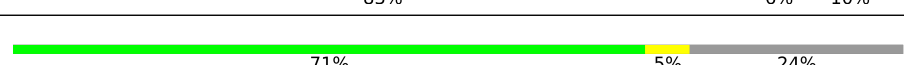


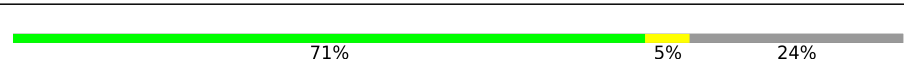


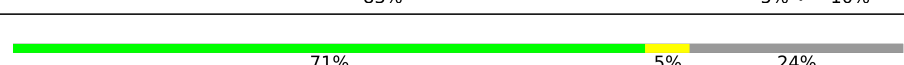


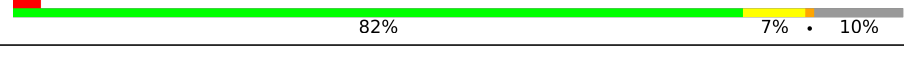


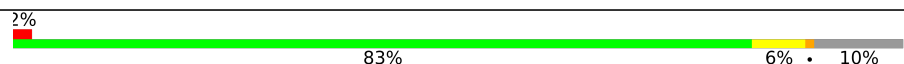
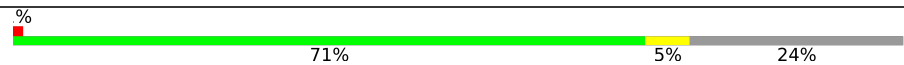

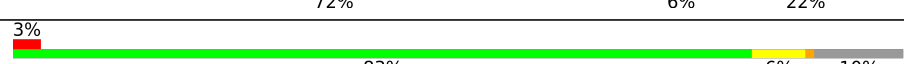
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Mol	Chain	Length	Quality of chain
1	AB	242	% 71% 6% • 22%
1	AC	242	3% 83% 6% • 10%
1	AF	242	72% • 24%
1	AG	242	71% 7% 22%
1	AH	242	3% 83% 7% 10%
1	AK	242	70% 5% • 24%
1	AL	242	% 71% 7% 22%
1	AM	242	2% 83% 6% • 10%
1	AP	242	70% 6% 24%
1	AQ	242	% 71% 7% 22%
1	AR	242	2% 83% 5% • 10%
1	AU	242	71% 5% 24%
1	AV	242	% 72% 6% 22%
1	AW	242	3% 83% 6% 10%
1	AZ	242	71% 5% 24%
1	Aa	242	72% 6% 22%
1	Ab	242	2% 83% 5% • 10%
1	Ae	242	71% 5% 24%
1	Af	242	% 71% 7% • 22%
1	Ag	242	2% 83% 6% • 10%
1	Aj	242	71% 5% 24%
1	Ak	242	71% 7% 22%
1	Al	242	2% 83% 6% • 10%
1	Ao	242	% 71% 5% 24%
1	Ap	242	71% 7% • 22%

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Mol	Chain	Length	Quality of chain
1	Aq	242	
1	At	242	
1	Au	242	
1	Av	242	
1	Ay	242	
1	Az	242	
1	B1	242	
1	B4	242	
1	B5	242	
1	B6	242	
1	BA	242	
1	BB	242	
1	BC	242	
1	BF	242	
1	BG	242	
1	BH	242	
1	BK	242	
1	BL	242	
1	BM	242	
1	BP	242	
1	BQ	242	
1	BR	242	
1	BU	242	
1	BV	242	
1	BW	242	






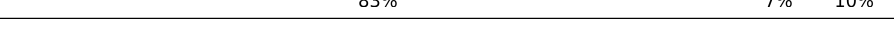



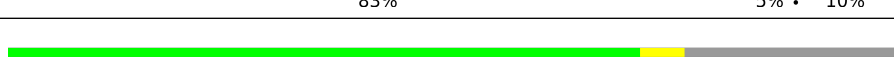

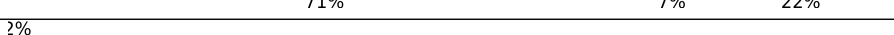




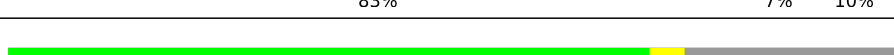
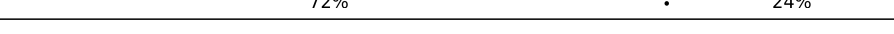




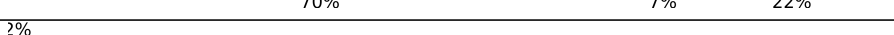




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Mol	Chain	Length	Quality of chain
1	BZ	242	71% 5% 24%
1	Ba	242	72% 6% 22%
1	Bb	242	2% 82% 7% 10%
1	Be	242	71% 5% 24%
1	Bf	242	71% 7% 22%
1	Bg	242	3% 82% 7% 10%
1	Bj	242	71% 5% 24%
1	Bk	242	72% 6% 22%
1	Bl	242	3% 83% 6% 10%
1	Bo	242	71% 5% 24%
1	Bp	242	70% 8% 22%
1	Bq	242	2% 82% 7% 10%
1	Bt	242	72% 24%
1	Bu	242	72% 6% 22%
1	Bv	242	3% 83% 6% 10%
1	By	242	69% 7% 24%
1	Bz	242	71% 7% 22%
1	C1	242	2% 83% 6% 10%
1	C4	242	71% 5% 24%
1	C5	242	71% 7% 22%
1	C6	242	2% 83% 7% 10%
1	CA	242	71% 5% 24%
1	CB	242	71% 7% 22%
1	CC	242	3% 82% 7% 10%
1	CF	242	71% 5% 24%



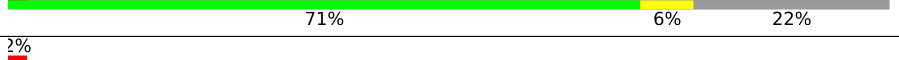
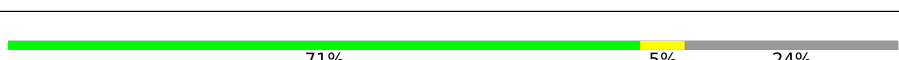



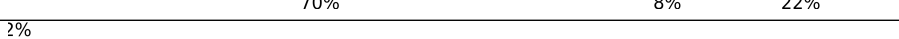
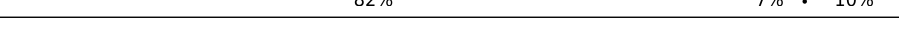



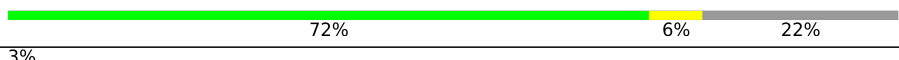
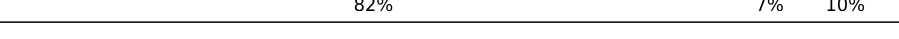






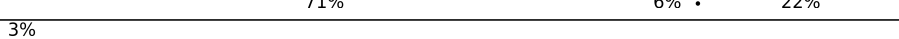




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Mol	Chain	Length	Quality of chain
1	CG	242	
1	CH	242	
1	CK	242	
1	CL	242	
1	CM	242	
1	CP	242	
1	CQ	242	
1	CR	242	
1	CU	242	
1	CV	242	
1	CW	242	
1	CZ	242	
1	Ca	242	
1	Cb	242	
1	Cc	242	
1	Cd	242	
1	Ce	242	
1	Cf	242	
1	Cg	242	
1	Cj	242	
1	Ck	242	
1	Cl	242	
1	Co	242	
1	Cp	242	
1	Cq	242	
1	Ct	242	
1	Cu	242	


























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Mol	Chain	Length	Quality of chain
1	Cv	242	 4% 83% 6% • 10%
1	Cy	242	 71% 5% 24%
1	Cz	242	 2% 71% 6% 22%
1	D1	242	 2% 82% 7% • 10%
1	D4	242	 71% 5% 24%
1	D5	242	 72% 6% 22%
1	D6	242	 3% 83% 6% • 10%
1	DA	242	 71% 5% 24%
1	DB	242	 70% 8% 22%
1	DC	242	 2% 82% 7% • 10%
1	DF	242	 72% • 24%
1	DG	242	 71% 7% 22%
1	DH	242	 2% 83% 6% • 10%
1	DK	242	 71% 5% • 24%
1	DL	242	 72% 6% 22%
1	DM	242	 3% 82% 7% 10%
1	DP	242	 72% 5% 24%
1	DQ	242	 71% 7% 22%
1	DR	242	 2% 83% 6% 10%
1	DU	242	 71% 5% 24%
1	DV	242	 71% 7% 22%
1	DW	242	 4% 83% 6% • 10%
1	DZ	242	 71% 5% 24%
1	Da	242	 71% 6% • 22%
1	Db	242	 3% 83% 6% • 10%





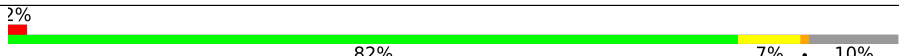


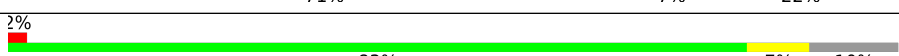
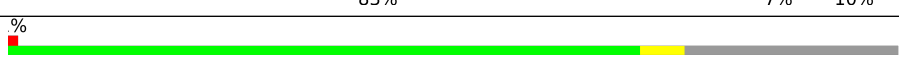

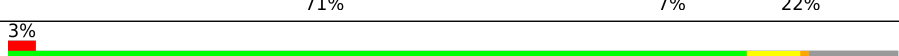
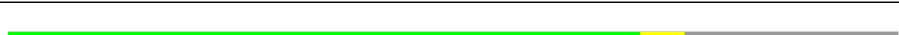

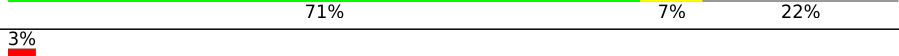
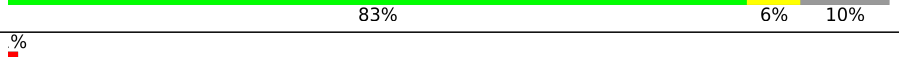


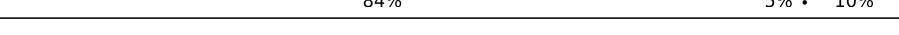

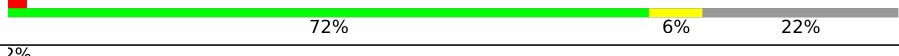


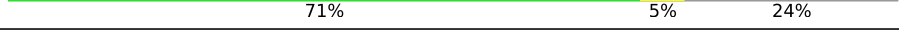


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Mol	Chain	Length	Quality of chain
1	De	242	 71% 5% 24%
1	Df	242	 72% 6% 22%
1	Dg	242	 2% 83% 6% 10%
1	Dj	242	 70% 6% 24%
1	Dk	242	 73% 5% 22%
1	Dl	242	 2% 83% 6% 10%
1	Do	242	 72% 24%
1	Dp	242	 71% 7% 22%
1	Dq	242	 3% 82% 7% 10%
1	Dt	242	 71% 5% 24%
1	Du	242	 72% 6% 22%
1	Dv	242	 2% 83% 6% 10%
1	Dy	242	 70% 5% 24%
1	Dz	242	 71% 7% 22%
1	E1	242	 2% 83% 6% 10%
1	E4	242	 71% 5% 24%
1	E5	242	 72% 6% 22%
1	E6	242	 2% 83% 6% 10%
1	EA	242	 71% 5% 24%
1	EB	242	 70% 8% 22%
1	EC	242	 2% 82% 7% 10%
1	EF	242	 72% 24%
1	EG	242	 72% 6% 22%
1	EH	242	 3% 83% 6% 10%
1	EK	242	 72% 24%

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Mol	Chain	Length	Quality of chain
1	EL	242	
1	EM	242	
1	EP	242	
1	EQ	242	
1	ER	242	
1	EU	242	
1	EV	242	
1	EW	242	
1	EZ	242	
1	Ea	242	
1	Eb	242	
1	Ee	242	
1	Ef	242	
1	Eg	242	
1	Ej	242	
1	Ek	242	
1	El	242	
1	Eo	242	
1	Ep	242	
1	Eq	242	
1	Et	242	
1	Eu	242	
1	Ev	242	
1	Ey	242	
1	Ez	242	

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Mol	Chain	Length	Quality of chain
1	F1	242	4% 84% 5% 10%
1	F4	242	73% 5% 24%
1	F5	242	73% 5% 22%
1	F6	242	4% 83% 6% 10%
1	FA	242	73% 5% 24%
1	FB	242	74% 5% 22%
1	FC	242	4% 84% 5% 10%
1	FF	242	72% 5% 24%
1	FG	242	74% 5% 22%
1	FH	242	2% 84% 5% 10%
1	FK	242	73% 5% 24%
1	FL	242	2% 73% 5% 22%
1	FM	242	2% 83% 5% 10%
1	FP	242	72% 5% 24%
1	FQ	242	73% 5% 22%
1	FR	242	4% 84% 5% 10%
1	FU	242	71% 5% 24%
1	FV	242	73% 5% 22%
1	FW	242	3% 82% 7% 10%
1	FZ	242	72% 5% 24%
1	Fa	242	2% 73% 5% 22%
1	Fb	242	3% 84% 5% 10%
1	Fe	242	5% 73% 5% 24%
1	Ff	242	6% 73% 5% 22%
1	Fg	242	8% 84% 5% 10%

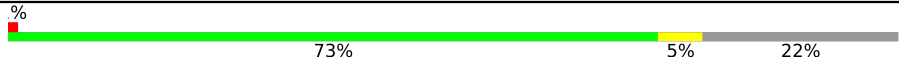

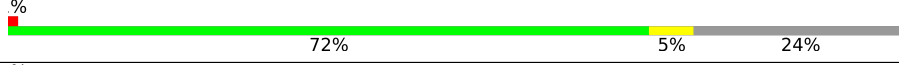

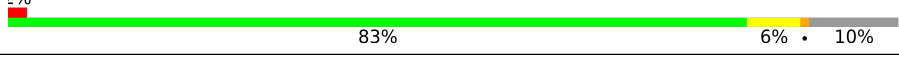
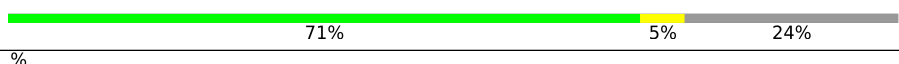
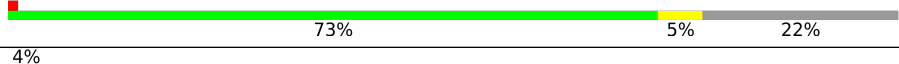

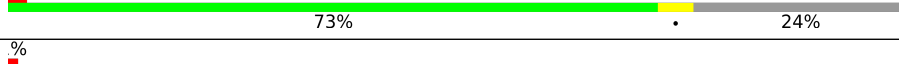


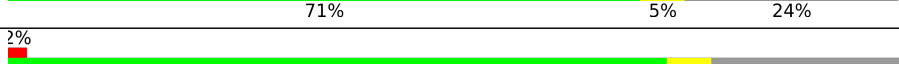
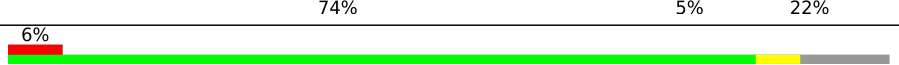
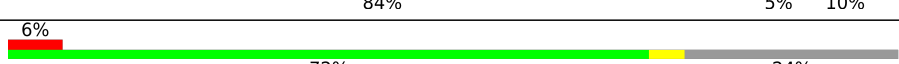

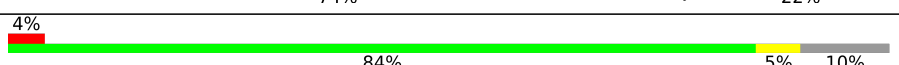
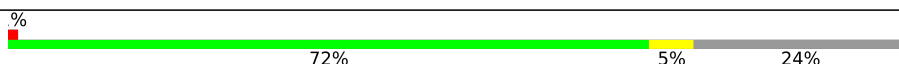
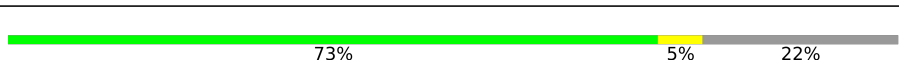
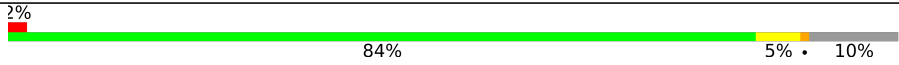


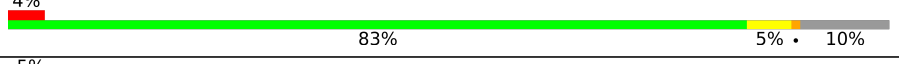
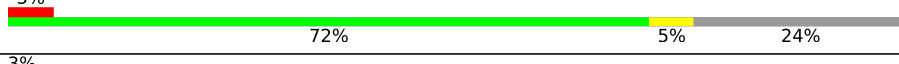


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Mol	Chain	Length	Quality of chain
1	Fj	242	% 71% 5% 24%
1	Fk	242	3% 74% 22%
1	Fl	242	3% 84% 5% 10%
1	Fo	242	2% 73% 24%
1	Fp	242	74% 22%
1	Fq	242	2% 83% 6% 10%
1	Ft	242	71% 5% 24%
1	Fu	242	73% 5% 22%
1	Fv	242	2% 84% 5% 10%
1	Fy	242	73% 24%
1	Fz	242	2% 74% 22%
1	G1	242	4% 84% 5% 10%
1	G4	242	2% 73% 24%
1	G5	242	4% 73% 5% 22%
1	G6	242	5% 84% 5% 10%
1	GA	242	73% 24%
1	GB	242	73% 5% 22%
1	GC	242	4% 84% 5% 10%
1	GF	242	72% 5% 24%
1	GG	242	73% 5% 22%
1	GH	242	2% 84% 5% 10%
1	GK	242	3% 71% 5% 24%
1	GL	242	4% 73% 5% 22%
1	GM	242	3% 84% 5% 10%
1	GP	242	72% 24%

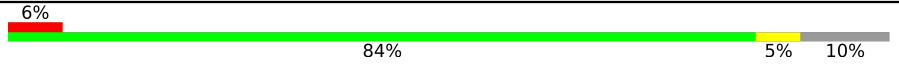
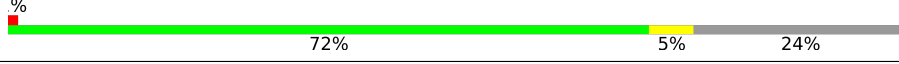
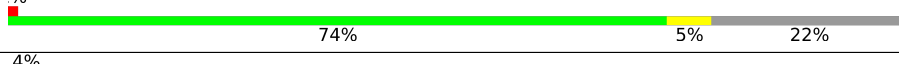


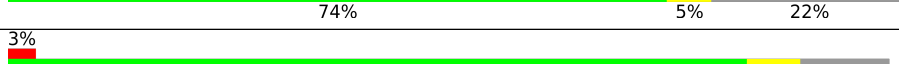
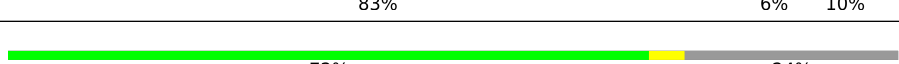
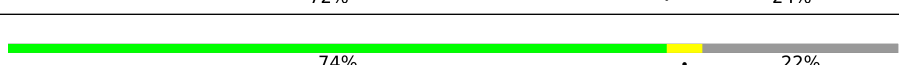
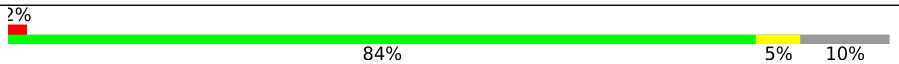


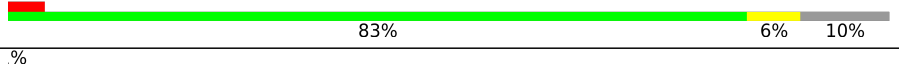
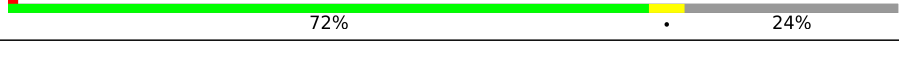

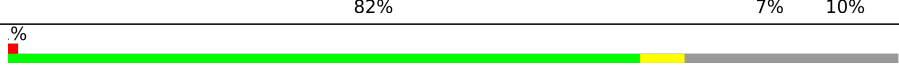










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Mol	Chain	Length	Quality of chain
1	GQ	242	
1	GR	242	
1	GU	242	
1	GV	242	
1	GW	242	
1	GZ	242	
1	Ga	242	
1	Gb	242	
1	Ge	242	
1	Gf	242	
1	Gg	242	
1	Gj	242	
1	Gk	242	
1	Gl	242	
1	Go	242	
1	Gp	242	
1	Gq	242	
1	Gt	242	
1	Gu	242	
1	Gv	242	
1	Gy	242	
1	Gz	242	
1	H1	242	
1	H4	242	
1	H5	242	

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Mol	Chain	Length	Quality of chain
1	H6	242	
1	HA	242	
1	HB	242	
1	HC	242	
1	HF	242	
1	HG	242	
1	HH	242	
1	HK	242	
1	HL	242	
1	HM	242	
1	HP	242	
1	HQ	242	
1	HR	242	
1	HU	242	
1	HV	242	
1	HW	242	
1	HZ	242	
1	Ha	242	
1	Hb	242	
1	He	242	
1	Hf	242	
1	Hg	242	
1	Hj	242	
1	Hk	242	
1	Hl	242	













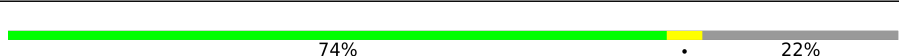
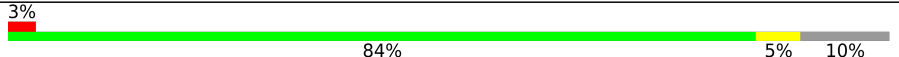
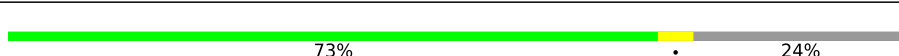

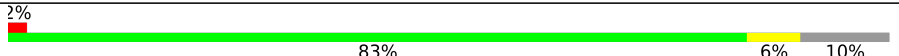
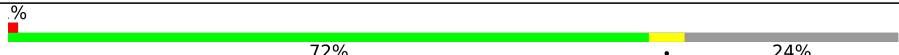
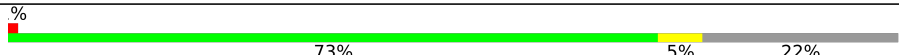
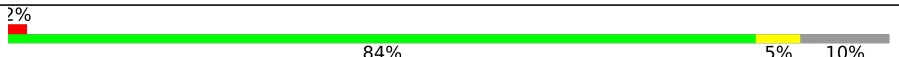
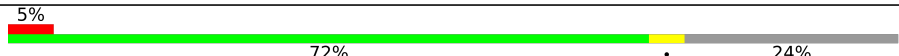



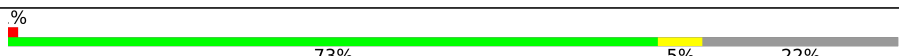
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Mol	Chain	Length	Quality of chain
1	Ho	242	72% 24%
1	Hp	242	74% 22%
1	Hq	242	84% 10%
1	Ht	242	72% 24%
1	Hu	242	74% 22%
1	Hv	242	83% 10%
1	Hy	242	73% 24%
1	Hz	242	74% 22%
1	I1	242	84% 10%
1	I4	242	71% 24%
1	I5	242	73% 22%
1	I6	242	83% 10%
1	IA	242	72% 24%
1	IB	242	74% 22%
1	IC	242	83% 10%
1	IF	242	73% 24%
1	IG	242	74% 22%
1	IH	242	84% 10%
1	IK	242	72% 24%
1	IL	242	73% 22%
1	IM	242	84% 10%
1	IP	242	72% 24%
1	IQ	242	74% 22%
1	IR	242	83% 10%
1	IU	242	72% 24%

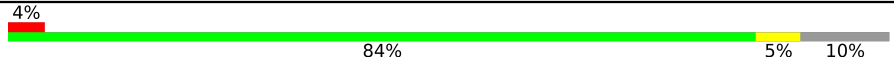

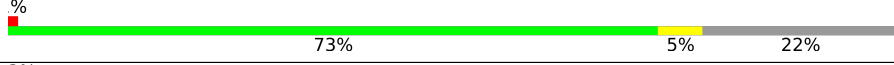

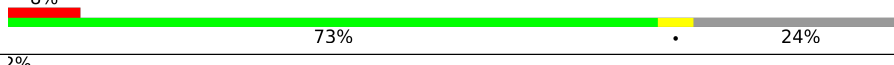
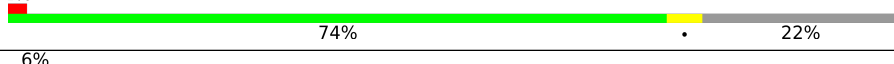
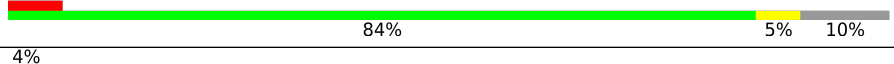

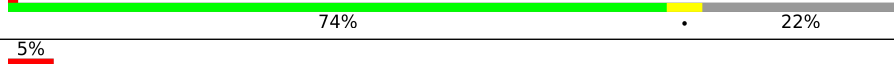


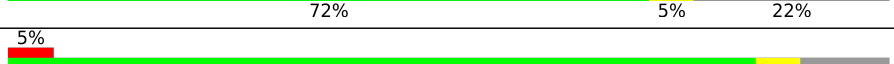
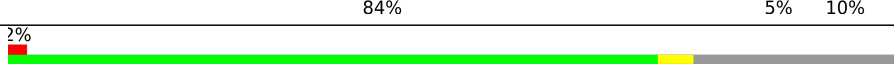
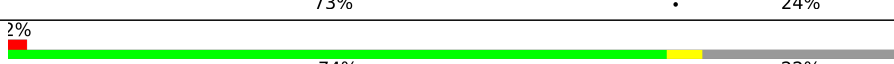

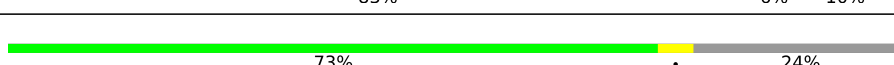
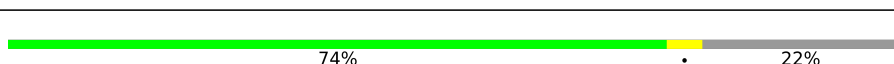
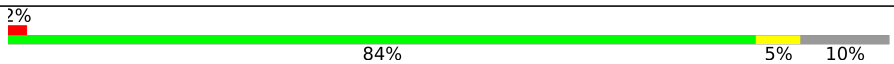
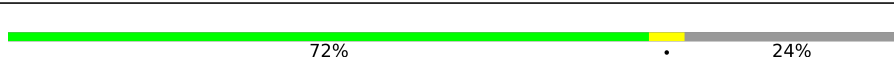


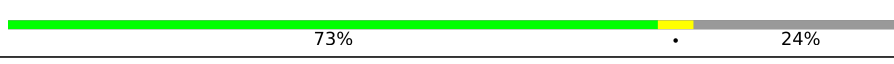
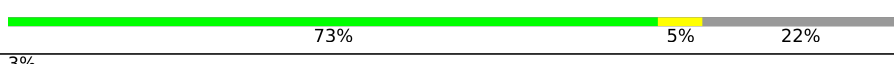


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Mol	Chain	Length	Quality of chain
1	IV	242	
1	IW	242	
1	IZ	242	
1	Ia	242	
1	Ib	242	
1	Ie	242	
1	If	242	
1	Ig	242	
1	Ij	242	
1	Ik	242	
1	Il	242	
1	Io	242	
1	Ip	242	
1	Iq	242	
1	It	242	
1	Iu	242	
1	Iv	242	
1	Iy	242	
1	Iz	242	
1	J1	242	
1	J4	242	
1	J5	242	
1	J6	242	
1	JA	242	
1	JB	242	

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Mol	Chain	Length	Quality of chain
1	JC	242	 4% 84% 5% 10%
1	JF	242	 % 72% 24%
1	JG	242	 % 73% 5% 22%
1	JH	242	 3% 83% 5% 10%
1	JK	242	 8% 73% 24%
1	JL	242	 2% 74% 22%
1	JM	242	 6% 84% 5% 10%
1	JP	242	 4% 72% 24%
1	JQ	242	 % 74% 22%
1	JR	242	 5% 84% 5% 10%
1	JU	242	 2% 73% 24%
1	JV	242	 72% 5% 22%
1	JW	242	 5% 84% 5% 10%
1	JZ	242	 2% 73% 24%
1	Ja	242	 2% 74% 22%
1	Jb	242	 3% 83% 6% 10%
1	Je	242	 73% 5% 24%
1	Jf	242	 74% 22%
1	Jg	242	 2% 84% 5% 10%
1	Jj	242	 72% 5% 24%
1	JK	242	 73% 5% 22%
1	Jl	242	 2% 84% 5% 10%
1	Jo	242	 73% 5% 24%
1	Jp	242	 73% 5% 22%
1	Jq	242	 3% 84% 5% 10%

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Mol	Chain	Length	Quality of chain
1	Jt	242	71% 5% 24%
1	Ju	242	2% 74% 22%
1	Jv	242	2% 84% 5% 10%
1	Jy	242	2% 71% 5% 24%
1	Jz	242	2% 72% 6% 22%
2	A2	17	82% 71% 29%
2	A7	17	100% 71% 29%
2	AD	17	88% 71% 29%
2	AI	17	94% 71% 29%
2	AN	17	94% 71% 29%
2	AS	17	71% 71% 29%
2	AX	17	76% 71% 29%
2	Ac	17	88% 76% 24%
2	Ah	17	94% 76% 24%
2	Am	17	94% 76% 24%
2	Ar	17	88% 76% 24%
2	Aw	17	100% 76% 24%
2	B2	17	94% 71% 29%
2	B7	17	88% 71% 29%
2	BD	17	100% 71% 29%
2	BI	17	94% 71% 29%
2	BN	17	65% 71% 29%
2	BS	17	88% 71% 29%
2	BX	17	94% 71% 29%
2	Bc	17	82% 76% 24%

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Mol	Chain	Length	Quality of chain
2	Bh	17	94% 76% 24%
2	Bm	17	94% 76% 24%
2	Br	17	94% 76% 24%
2	Bw	17	94% 76% 24%
2	C2	17	76% 71% 29%
2	C7	17	82% 71% 29%
2	CD	17	94% 71% 29%
2	CI	17	94% 71% 29%
2	CN	17	94% 71% 29%
2	CS	17	76% 71% 29%
2	CX	17	94% 71% 29%
2	Cc	17	94% 76% 24%
2	Ch	17	65% 76% 24%
2	Cm	17	100% 76% 24%
2	Cr	17	82% 76% 24%
2	Cw	17	88% 76% 24%
2	D2	17	100% 71% 29%
2	D7	17	88% 71% 29%
2	DD	17	94% 71% 29%
2	DI	17	76% 71% 29%
2	DN	17	100% 71% 29%
2	DS	17	82% 71% 29%
2	DX	17	100% 71% 29%
2	Dc	17	88% 76% 24%
2	Dh	17	100% 76% 24%

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Mol	Chain	Length	Quality of chain
2	Dm	17	82% 76% 24%
2	Dr	17	100% 76% 24%
2	Dw	17	88% 76% 24%
2	E2	17	94% 71% 29%
2	E7	17	88% 71% 29%
2	ED	17	88% 71% 29%
2	EI	17	82% 71% 29%
2	EN	17	88% 71% 29%
2	ES	17	88% 71% 29%
2	EX	17	88% 71% 29%
2	Ec	17	82% 76% 24%
2	Eh	17	94% 76% 24%
2	Em	17	76% 76% 24%
2	Er	17	100% 76% 24%
2	Ew	17	100% 76% 24%
2	F2	17	100% 71% 29%
2	F7	17	88% 71% 29%
2	FD	17	76% 71% 29%
2	FI	17	88% 71% 29%
2	FN	17	100% 71% 29%
2	FS	17	76% 71% 29%
2	FX	17	94% 71% 29%
2	Fc	17	100% 76% 24%
2	Fh	17	76% 76% 24%
2	Fm	17	100% 76% 24%

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Mol	Chain	Length	Quality of chain
2	Fr	17	94% 76% 24%
2	Fw	17	88% 76% 24%
2	G2	17	94% 71% 29%
2	G7	17	88% 71% 29%
2	GD	17	100% 71% 29%
2	GI	17	100% 71% 29%
2	GN	17	100% 71% 29%
2	GS	17	100% 71% 29%
2	GX	17	71% 71% 29%
2	Gc	17	76% 76% 24%
2	Gh	17	100% 76% 24%
2	Gm	17	100% 76% 24%
2	Gr	17	82% 76% 24%
2	Gw	17	94% 76% 24%
2	H2	17	100% 71% 29%
2	H7	17	100% 71% 29%
2	HD	17	88% 71% 29%
2	HI	17	94% 71% 29%
2	HN	17	100% 71% 29%
2	HS	17	88% 71% 29%
2	HX	17	65% 71% 29%
2	Hc	17	65% 76% 24%
2	Hh	17	94% 76% 24%
2	Hm	17	88% 76% 24%
2	Hr	17	94% 76% 24%

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Mol	Chain	Length	Quality of chain
2	Hw	17	94% 76% 24%
2	I2	17	82% 71% 29%
2	I7	17	88% 71% 29%
2	ID	17	100% 71% 29%
2	II	17	100% 71% 29%
2	IN	17	82% 71% 29%
2	IS	17	100% 71% 29%
2	IX	17	94% 71% 29%
2	Ic	17	82% 76% 24%
2	Ih	17	100% 76% 24%
2	Im	17	82% 76% 24%
2	Ir	17	94% 76% 24%
2	Iw	17	94% 76% 24%
2	J2	17	100% 71% 29%
2	J7	17	100% 71% 29%
2	JD	17	71% 71% 29%
2	JI	17	94% 71% 29%
2	JN	17	88% 71% 29%
2	JS	17	94% 71% 29%
2	JX	17	100% 71% 29%
2	Jc	17	100% 76% 24%
2	Jh	17	76% 76% 24%
2	Jm	17	88% 76% 24%
2	Jr	17	100% 76% 24%
2	Jw	17	76% 76% 24%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 588120 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Capsid protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	AA	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0
1	AB	189	Total 1451	C 915	N 253	O 278	S 5	0	0	0
1	AC	217	Total 1674	C 1049	N 304	O 316	S 5	0	0	0
1	AF	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0
1	AG	189	Total 1451	C 915	N 253	O 278	S 5	0	0	0
1	AH	217	Total 1674	C 1049	N 304	O 316	S 5	0	0	0
1	AK	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0
1	AL	189	Total 1451	C 915	N 253	O 278	S 5	0	0	0
1	AM	217	Total 1674	C 1049	N 304	O 316	S 5	0	0	0
1	AP	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0
1	AQ	189	Total 1451	C 915	N 253	O 278	S 5	0	0	0
1	AR	217	Total 1674	C 1049	N 304	O 316	S 5	0	0	0
1	AU	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0
1	AV	189	Total 1451	C 915	N 253	O 278	S 5	0	0	0
1	AW	217	Total 1674	C 1049	N 304	O 316	S 5	0	0	0
1	AZ	185	Total 1426	C 901	N 248	O 273	S 4	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Aa	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Ab	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ae	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Af	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Ag	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Aj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ak	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Al	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ao	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ap	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Aq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	At	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Au	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Av	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ay	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Az	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	A1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	A4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	A5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	A6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	BB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	BC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	BG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	BH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	BL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	BM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	BQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	BR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	BV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	BW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	BZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ba	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Bb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Be	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Bf	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Bg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Bj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Bk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Bl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Bo	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Bp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Bq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Bt	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Bu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Bv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	By	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Bz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	B1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	B4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	B5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	B6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	CB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	CC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	CG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	CH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	CL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	CM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	CQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	CR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	CV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	CW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	CZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ca	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Cb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ce	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Cf	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Cg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Cj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ck	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Cl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Co	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Cp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Cq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ct	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Cu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Cv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Cy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Cz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	C1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	C4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	C5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	C6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	DB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	DG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	DL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	DQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	DV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	DZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Da	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Db	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	De	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Df	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Dg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Dj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Dk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	DI	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Do	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Dp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Dq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Dt	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Du	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Dv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Dy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Dz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	D1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	D4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	D5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	D6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	EB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	EC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	EG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	EH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	EL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	EM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	EQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	ER	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	EV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	EW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	EZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ea	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Eb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ee	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ef	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Eg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ej	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ek	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	El	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Eo	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ep	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Eq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Et	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Eu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Ev	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ey	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ez	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	E1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	E4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	E5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	E6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	FB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	FC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	FG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	FH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	FL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	FM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	FQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	FR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	FV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	FW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	FZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Fa	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Fb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Fe	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ff	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Fg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Fj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Fk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Fl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Fo	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Fp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Fq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ft	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Fu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Fv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Fy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Fz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	F1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	F4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	F5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	F6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	GB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	GC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	GG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	GH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	GL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	GM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	GQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	GR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	GV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	GW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	GZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ga	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Gb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ge	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Gf	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Gg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Gj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Gk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Gl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Go	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Gp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Gq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Gt	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Gu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Gv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Gy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Gz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	G1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	G4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	G5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	G6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	HB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	HC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	HG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	HH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	HL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	HM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	HQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	HR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	HV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	HW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	HZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ha	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Hb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	He	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Hf	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Hg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Hj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Hk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Hl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ho	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Hp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Hq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ht	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Hu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Hv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Hy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Hz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	H1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	H4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	H5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	H6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	IB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	IC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	IG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	IH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	IL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	IM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	IQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	IR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	IV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	IW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	IZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ia	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Ib	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ie	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	If	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Ig	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Ij	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ik	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Il	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Io	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ip	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Iq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	It	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Iu	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Iv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Iy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Iz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	I1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	I4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	I5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	I6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JA	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	JB	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	JC	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JF	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	JG	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	JH	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JK	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	JL	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	JM	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JP	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	JQ	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	JR	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JU	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	JV	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	JW	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	JZ	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Ja	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Jb	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Je	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Jf	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Jg	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Jj	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Jk	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Jl	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Jo	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Jp	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Jq	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Jt	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ju	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	Jv	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	Jy	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	Jz	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	J1	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			
1	J4	185	Total	C	N	O	S	0	0	0
			1426	901	248	273	4			
1	J5	189	Total	C	N	O	S	0	0	0
			1451	915	253	278	5			
1	J6	217	Total	C	N	O	S	0	0	0
			1674	1049	304	316	5			

- Molecule 2 is a RNA chain called 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AD	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	AI	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	AN	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	AS	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	AX	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	Ac	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	Ah	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	Am	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	Ar	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	Aw	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			
2	A2	17	Total	C	N	O	P	0	0	0
			349	157	46	129	17			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	A7	17	349	157	46	129	17	0	0	0
2	BD	17	349	157	46	129	17	0	0	0
2	BI	17	349	157	46	129	17	0	0	0
2	BN	17	349	157	46	129	17	0	0	0
2	BS	17	349	157	46	129	17	0	0	0
2	BX	17	349	157	46	129	17	0	0	0
2	Bc	17	349	157	46	129	17	0	0	0
2	Bh	17	349	157	46	129	17	0	0	0
2	Bm	17	349	157	46	129	17	0	0	0
2	Br	17	349	157	46	129	17	0	0	0
2	Bw	17	349	157	46	129	17	0	0	0
2	B2	17	349	157	46	129	17	0	0	0
2	B7	17	349	157	46	129	17	0	0	0
2	CD	17	349	157	46	129	17	0	0	0
2	CI	17	349	157	46	129	17	0	0	0
2	CN	17	349	157	46	129	17	0	0	0
2	CS	17	349	157	46	129	17	0	0	0
2	CX	17	349	157	46	129	17	0	0	0
2	Cc	17	349	157	46	129	17	0	0	0
2	Ch	17	349	157	46	129	17	0	0	0
2	Cm	17	349	157	46	129	17	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Cr	17	349	157	46	129	17	0	0	0
2	Cw	17	349	157	46	129	17	0	0	0
2	C2	17	349	157	46	129	17	0	0	0
2	C7	17	349	157	46	129	17	0	0	0
2	DD	17	349	157	46	129	17	0	0	0
2	DI	17	349	157	46	129	17	0	0	0
2	DN	17	349	157	46	129	17	0	0	0
2	DS	17	349	157	46	129	17	0	0	0
2	DX	17	349	157	46	129	17	0	0	0
2	Dc	17	349	157	46	129	17	0	0	0
2	Dh	17	349	157	46	129	17	0	0	0
2	Dm	17	349	157	46	129	17	0	0	0
2	Dr	17	349	157	46	129	17	0	0	0
2	Dw	17	349	157	46	129	17	0	0	0
2	D2	17	349	157	46	129	17	0	0	0
2	D7	17	349	157	46	129	17	0	0	0
2	ED	17	349	157	46	129	17	0	0	0
2	EI	17	349	157	46	129	17	0	0	0
2	EN	17	349	157	46	129	17	0	0	0
2	ES	17	349	157	46	129	17	0	0	0
2	EX	17	349	157	46	129	17	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Ec	17	349	157	46	129	17	0	0	0
2	Eh	17	349	157	46	129	17	0	0	0
2	Em	17	349	157	46	129	17	0	0	0
2	Er	17	349	157	46	129	17	0	0	0
2	Ew	17	349	157	46	129	17	0	0	0
2	E2	17	349	157	46	129	17	0	0	0
2	E7	17	349	157	46	129	17	0	0	0
2	FD	17	349	157	46	129	17	0	0	0
2	FI	17	349	157	46	129	17	0	0	0
2	FN	17	349	157	46	129	17	0	0	0
2	FS	17	349	157	46	129	17	0	0	0
2	FX	17	349	157	46	129	17	0	0	0
2	Fc	17	349	157	46	129	17	0	0	0
2	Fh	17	349	157	46	129	17	0	0	0
2	Fm	17	349	157	46	129	17	0	0	0
2	Fr	17	349	157	46	129	17	0	0	0
2	Fw	17	349	157	46	129	17	0	0	0
2	F2	17	349	157	46	129	17	0	0	0
2	F7	17	349	157	46	129	17	0	0	0
2	GD	17	349	157	46	129	17	0	0	0
2	GI	17	349	157	46	129	17	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	GN	17	349	157	46	129	17	0	0	0
2	GS	17	349	157	46	129	17	0	0	0
2	GX	17	349	157	46	129	17	0	0	0
2	Gc	17	349	157	46	129	17	0	0	0
2	Gh	17	349	157	46	129	17	0	0	0
2	Gm	17	349	157	46	129	17	0	0	0
2	Gr	17	349	157	46	129	17	0	0	0
2	Gw	17	349	157	46	129	17	0	0	0
2	G2	17	349	157	46	129	17	0	0	0
2	G7	17	349	157	46	129	17	0	0	0
2	HD	17	349	157	46	129	17	0	0	0
2	HI	17	349	157	46	129	17	0	0	0
2	HN	17	349	157	46	129	17	0	0	0
2	HS	17	349	157	46	129	17	0	0	0
2	HX	17	349	157	46	129	17	0	0	0
2	Hc	17	349	157	46	129	17	0	0	0
2	Hh	17	349	157	46	129	17	0	0	0
2	Hm	17	349	157	46	129	17	0	0	0
2	Hr	17	349	157	46	129	17	0	0	0
2	Hw	17	349	157	46	129	17	0	0	0
2	H2	17	349	157	46	129	17	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	H7	17	349	157	46	129	17	0	0	0
2	ID	17	349	157	46	129	17	0	0	0
2	II	17	349	157	46	129	17	0	0	0
2	IN	17	349	157	46	129	17	0	0	0
2	IS	17	349	157	46	129	17	0	0	0
2	IX	17	349	157	46	129	17	0	0	0
2	Ic	17	349	157	46	129	17	0	0	0
2	Ih	17	349	157	46	129	17	0	0	0
2	Im	17	349	157	46	129	17	0	0	0
2	Ir	17	349	157	46	129	17	0	0	0
2	Iw	17	349	157	46	129	17	0	0	0
2	I2	17	349	157	46	129	17	0	0	0
2	I7	17	349	157	46	129	17	0	0	0
2	JD	17	349	157	46	129	17	0	0	0
2	JI	17	349	157	46	129	17	0	0	0
2	JN	17	349	157	46	129	17	0	0	0
2	JS	17	349	157	46	129	17	0	0	0
2	JX	17	349	157	46	129	17	0	0	0
2	Jc	17	349	157	46	129	17	0	0	0
2	Jh	17	349	157	46	129	17	0	0	0
2	Jm	17	349	157	46	129	17	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Jr	17	Total 349	C 157	N 46	O 129	P 17	0	0	0
2	Jw	17	Total 349	C 157	N 46	O 129	P 17	0	0	0
2	J2	17	Total 349	C 157	N 46	O 129	P 17	0	0	0
2	J7	17	Total 349	C 157	N 46	O 129	P 17	0	0	0

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	AA	1	Total 1	Ca 1	0	0
3	AF	1	Total 1	Ca 1	0	0
3	AL	1	Total 1	Ca 1	0	0
3	AP	1	Total 1	Ca 1	0	0
3	AU	1	Total 1	Ca 1	0	0
3	AZ	1	Total 1	Ca 1	0	0
3	Af	1	Total 1	Ca 1	0	0
3	Aj	1	Total 1	Ca 1	0	0
3	Ao	1	Total 1	Ca 1	0	0
3	At	1	Total 1	Ca 1	0	0
3	A1	1	Total 1	Ca 1	0	0
3	A4	1	Total 1	Ca 1	0	0
3	BB	1	Total 1	Ca 1	0	0
3	BF	1	Total 1	Ca 1	0	0
3	BK	1	Total 1	Ca 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	BQ	1	Total Ca 1 1	0	0
3	BU	1	Total Ca 1 1	0	0
3	BZ	1	Total Ca 1 1	0	0
3	Be	1	Total Ca 1 1	0	0
3	Bk	1	Total Ca 1 1	0	0
3	Bo	1	Total Ca 1 1	0	0
3	Bt	1	Total Ca 1 1	0	0
3	By	1	Total Ca 1 1	0	0
3	B5	1	Total Ca 1 1	0	0
3	CA	1	Total Ca 1 1	0	0
3	CG	1	Total Ca 1 1	0	0
3	CK	1	Total Ca 1 1	0	0
3	CP	1	Total Ca 1 1	0	0
3	CU	1	Total Ca 1 1	0	0
3	CZ	1	Total Ca 1 1	0	0
3	Ce	1	Total Ca 1 1	0	0
3	Cj	1	Total Ca 1 1	0	0
3	Co	1	Total Ca 1 1	0	0
3	Ct	1	Total Ca 1 1	0	0
3	Cy	1	Total Ca 1 1	0	0
3	C4	1	Total Ca 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	DA	1	Total Ca 1 1	0	0
3	DF	1	Total Ca 1 1	0	0
3	DK	1	Total Ca 1 1	0	0
3	DP	1	Total Ca 1 1	0	0
3	DU	1	Total Ca 1 1	0	0
3	DZ	1	Total Ca 1 1	0	0
3	Df	1	Total Ca 1 1	0	0
3	Dj	1	Total Ca 1 1	0	0
3	Do	1	Total Ca 1 1	0	0
3	Dt	1	Total Ca 1 1	0	0
3	Dy	1	Total Ca 1 1	0	0
3	D4	1	Total Ca 1 1	0	0
3	EC	1	Total Ca 1 1	0	0
3	EF	1	Total Ca 1 1	0	0
3	EK	1	Total Ca 1 1	0	0
3	EP	1	Total Ca 1 1	0	0
3	EU	1	Total Ca 1 1	0	0
3	EZ	1	Total Ca 1 1	0	0
3	Ee	1	Total Ca 1 1	0	0
3	Ek	1	Total Ca 1 1	0	0
3	Eo	1	Total Ca 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	Et	1	Total Ca 1 1	0	0
3	Ey	1	Total Ca 1 1	0	0
3	E4	1	Total Ca 1 1	0	0
3	FA	1	Total Ca 1 1	0	0
3	FF	1	Total Ca 1 1	0	0
3	FK	1	Total Ca 1 1	0	0
3	FP	1	Total Ca 1 1	0	0
3	FU	1	Total Ca 1 1	0	0
3	FZ	1	Total Ca 1 1	0	0
3	Fe	1	Total Ca 1 1	0	0
3	Fk	1	Total Ca 1 1	0	0
3	Fo	1	Total Ca 1 1	0	0
3	Ft	1	Total Ca 1 1	0	0
3	F1	1	Total Ca 1 1	0	0
3	F4	1	Total Ca 1 1	0	0
3	GA	1	Total Ca 1 1	0	0
3	GF	1	Total Ca 1 1	0	0
3	GK	1	Total Ca 1 1	0	0
3	GP	1	Total Ca 1 1	0	0
3	GU	1	Total Ca 1 1	0	0
3	GZ	1	Total Ca 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	Ge	1	Total Ca 1 1	0	0
3	Gj	1	Total Ca 1 1	0	0
3	Go	1	Total Ca 1 1	0	0
3	Gt	1	Total Ca 1 1	0	0
3	G1	1	Total Ca 1 1	0	0
3	G4	1	Total Ca 1 1	0	0
3	HA	1	Total Ca 1 1	0	0
3	HF	1	Total Ca 1 1	0	0
3	HK	1	Total Ca 1 1	0	0
3	HP	1	Total Ca 1 1	0	0
3	HU	1	Total Ca 1 1	0	0
3	HZ	1	Total Ca 1 1	0	0
3	Hg	1	Total Ca 1 1	0	0
3	Hj	1	Total Ca 1 1	0	0
3	Ho	1	Total Ca 1 1	0	0
3	Ht	1	Total Ca 1 1	0	0
3	Hy	1	Total Ca 1 1	0	0
3	H4	1	Total Ca 1 1	0	0
3	IA	1	Total Ca 1 1	0	0
3	IF	1	Total Ca 1 1	0	0
3	IK	1	Total Ca 1 1	0	0

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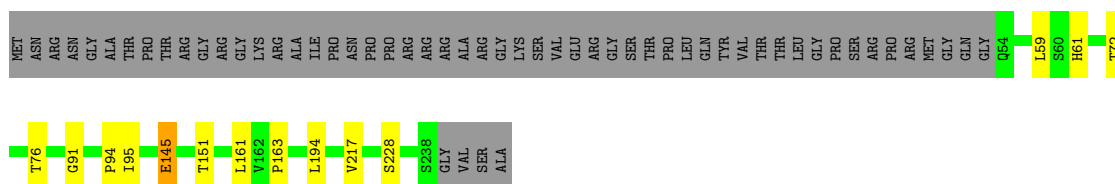
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3	IU	1	Total Ca 1 1	0	0
3	IZ	1	Total Ca 1 1	0	0
3	If	1	Total Ca 1 1	0	0
3	Ij	1	Total Ca 1 1	0	0
3	Io	1	Total Ca 1 1	0	0
3	It	1	Total Ca 1 1	0	0
3	Ii	1	Total Ca 1 1	0	0
3	I4	1	Total Ca 1 1	0	0
3	JA	1	Total Ca 1 1	0	0
3	JF	1	Total Ca 1 1	0	0
3	JL	1	Total Ca 1 1	0	0
3	JP	1	Total Ca 1 1	0	0
3	JU	1	Total Ca 1 1	0	0
3	JZ	1	Total Ca 1 1	0	0
3	Je	1	Total Ca 1 1	0	0
3	Jj	1	Total Ca 1 1	0	0
3	Jo	1	Total Ca 1 1	0	0
3	Jt	1	Total Ca 1 1	0	0
3	Jy	1	Total Ca 1 1	0	0
3	J4	1	Total Ca 1 1	0	0

3 Residue-property plots [i](#)


These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

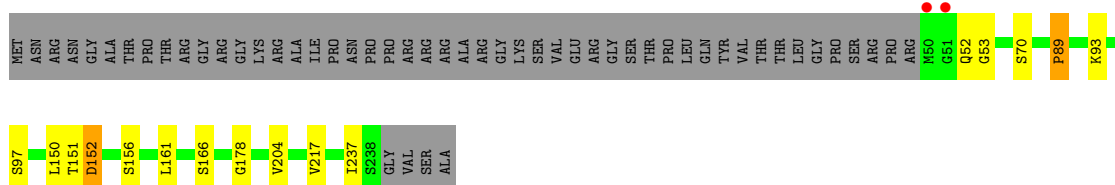
- Molecule 1: Capsid protein

Chain AA:  71% 5% 24%




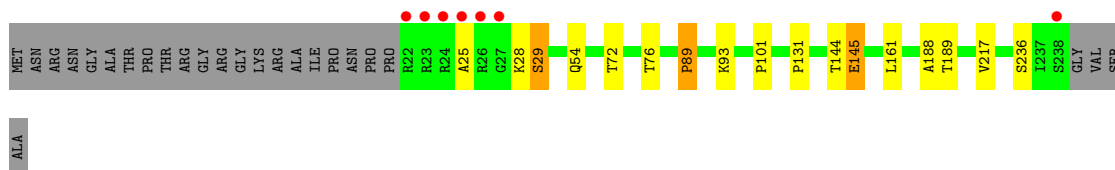
- Molecule 1: Capsid protein

Chain AB:  71% 6% 22%



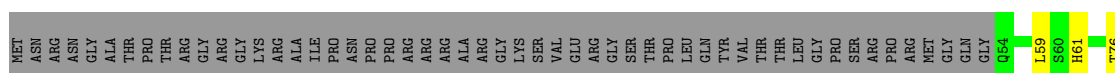
- Molecule 1: Capsid protein

Chain AC:  3% 83% 6% 10%



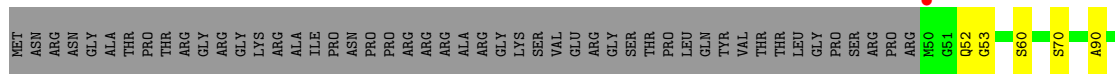
- Molecule 1: Capsid protein

Chain AF:  72% 24%

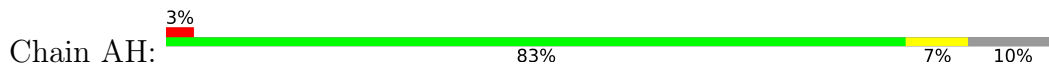




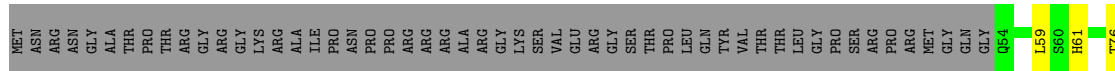
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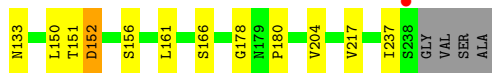
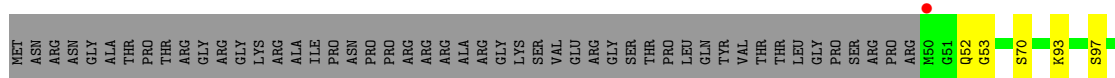
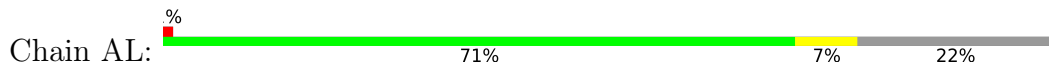
• Molecule 1: Capsid protein



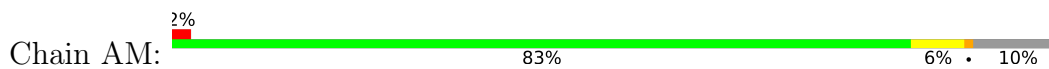
• Molecule 1: Capsid protein

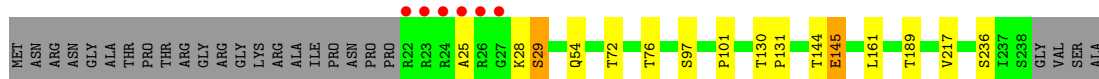


• Molecule 1: Capsid protein

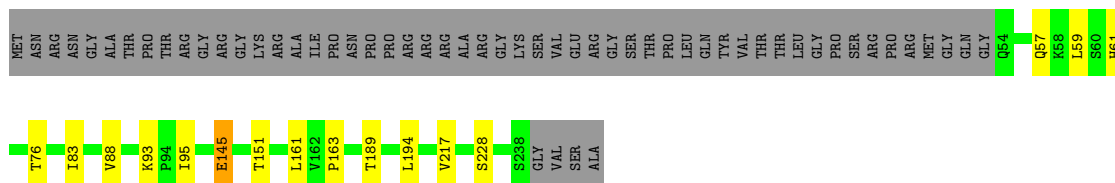


• Molecule 1: Capsid protein

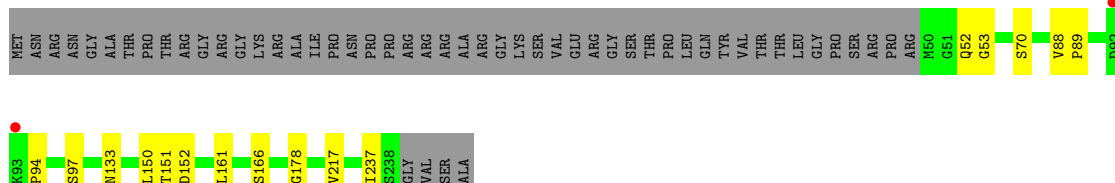




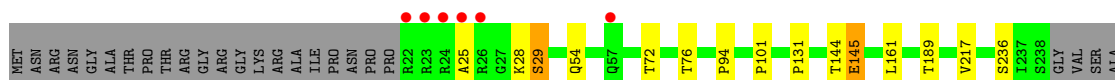
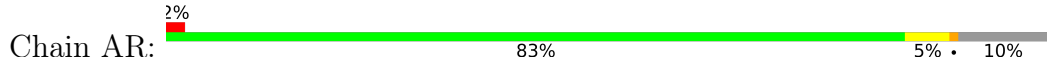
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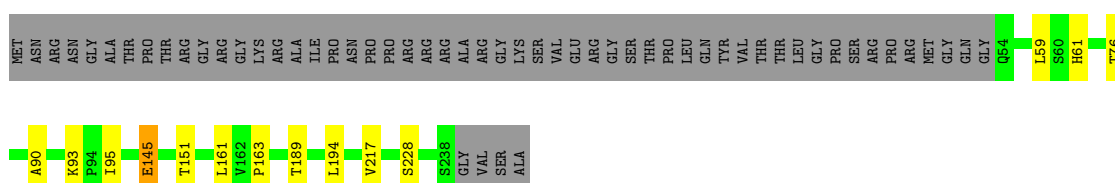
• Molecule 1: Capsid protein



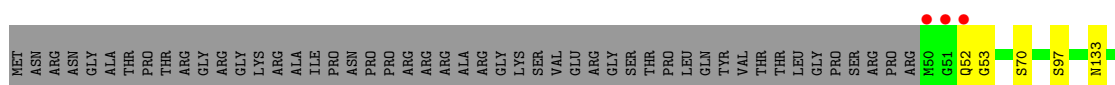
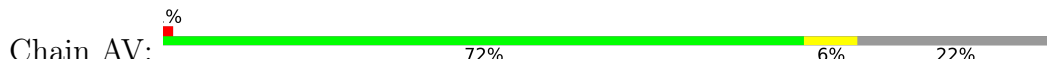
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

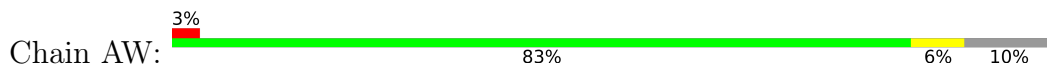


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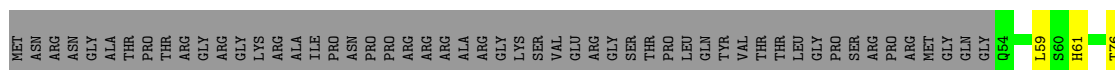




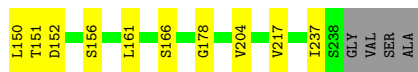
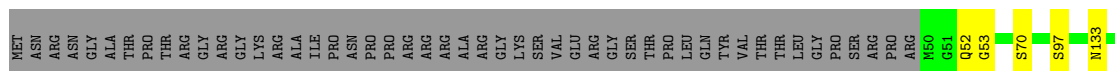
● Molecule 1: Capsid protein



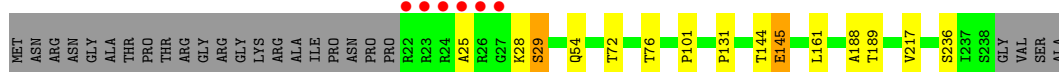
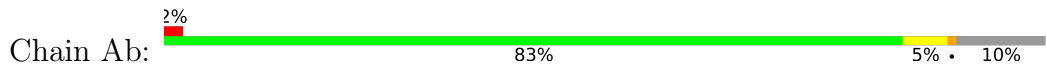
● Molecule 1: Capsid protein



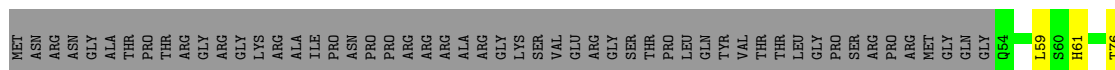
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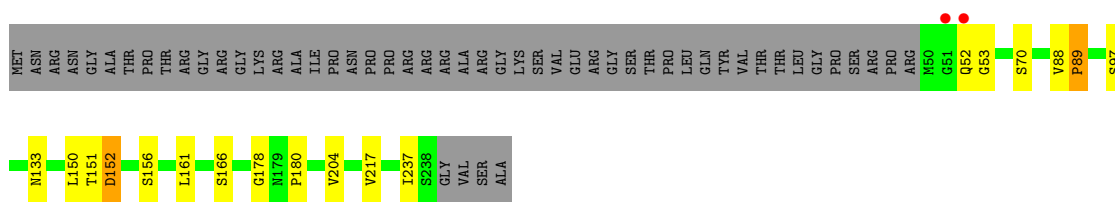
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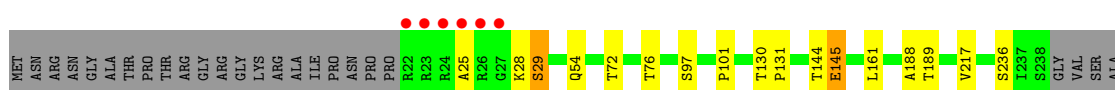
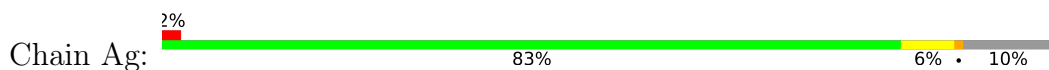
● Molecule 1: Capsid protein



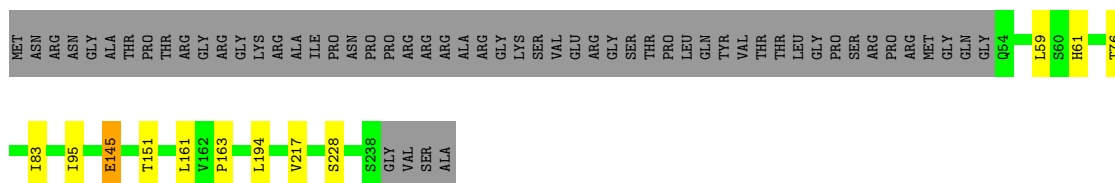
• Molecule 1: Capsid protein



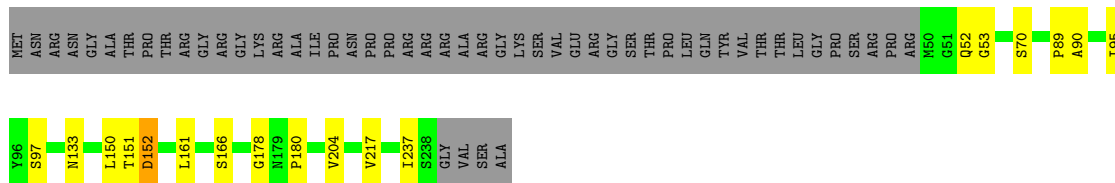
• Molecule 1: Capsid protein



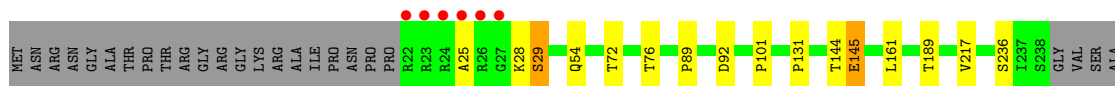
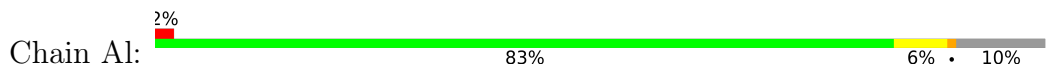
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

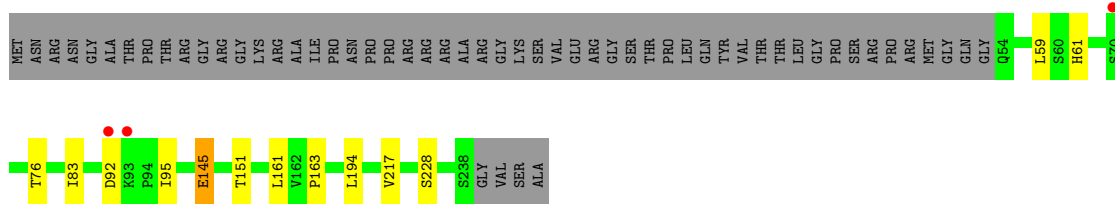


• Molecule 1: Capsid protein

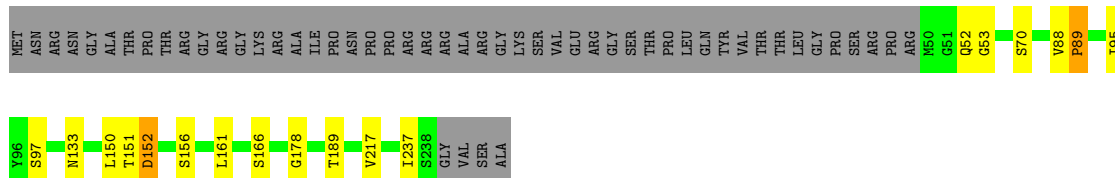


• Molecule 1: Capsid protein

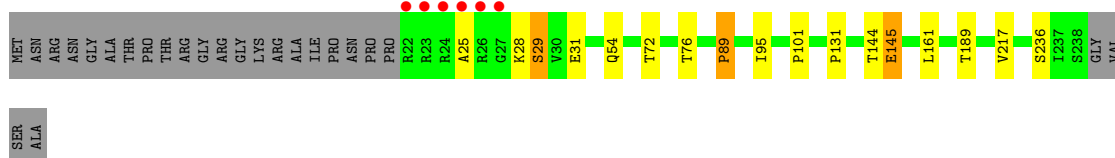
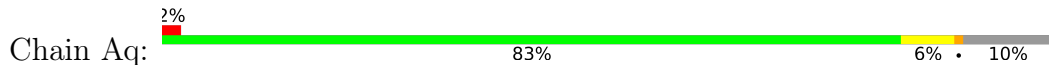




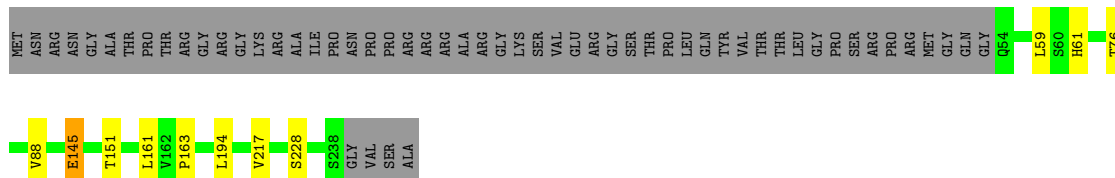
• Molecule 1: Capsid protein



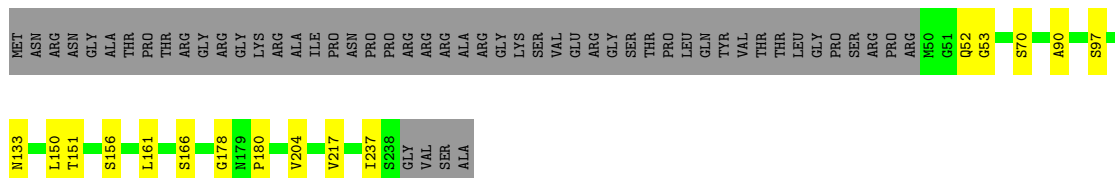
• Molecule 1: Capsid protein



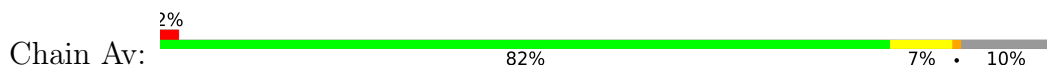
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

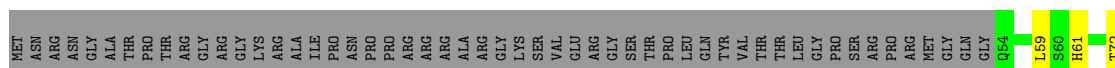


• Molecule 1: Capsid protein

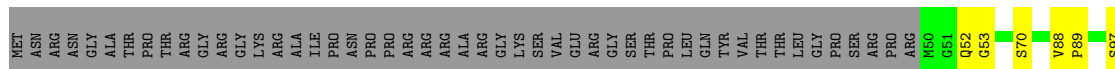


SER ALA

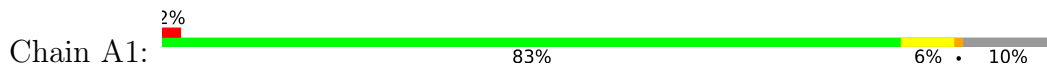
- Molecule 1: Capsid protein



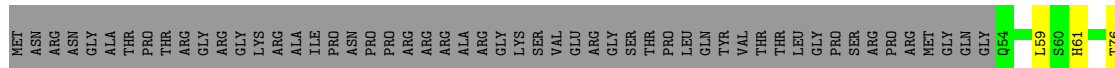
- Molecule 1: Capsid protein



- Molecule 1: Capsid protein

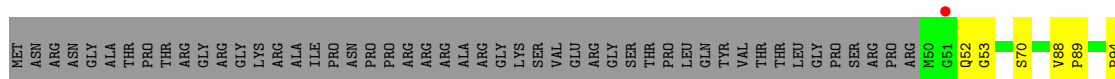


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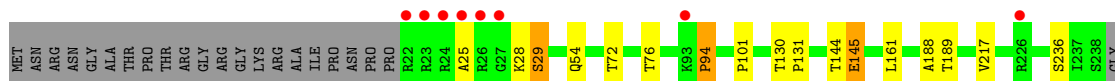
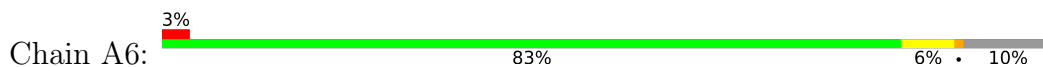


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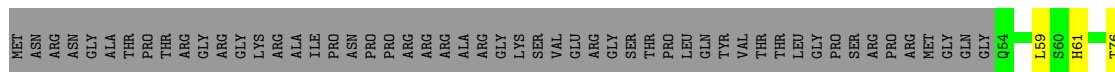




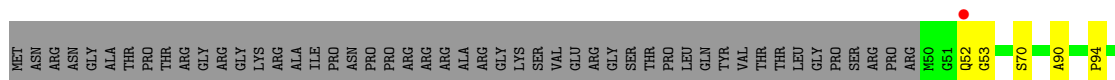
• Molecule 1: Capsid protein



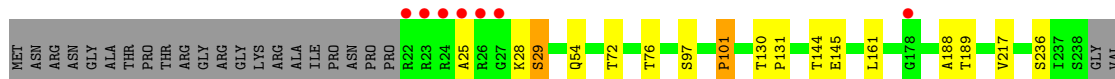
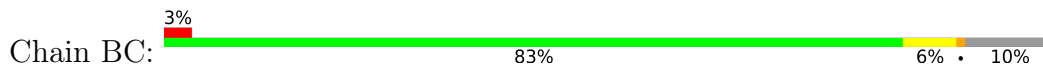
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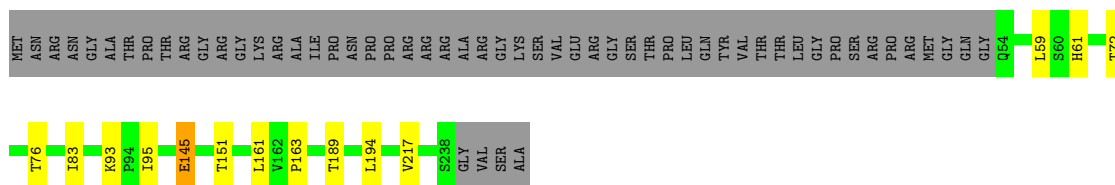
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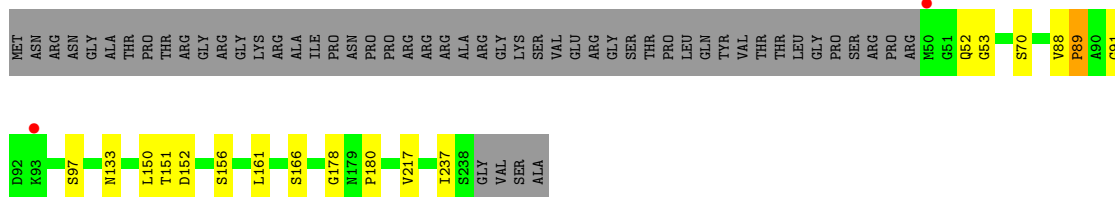
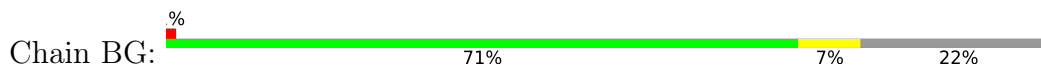
• Molecule 1: Capsid protein



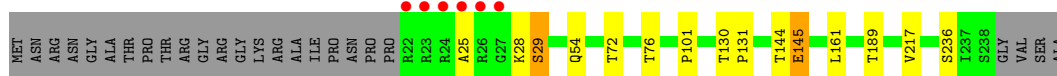
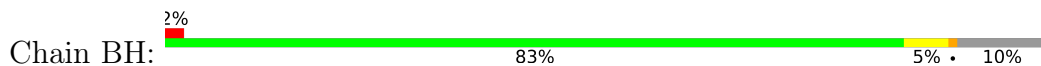
• Molecule 1: Capsid protein



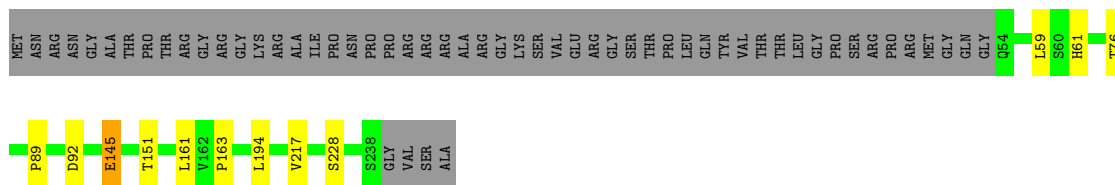
● Molecule 1: Capsid protein



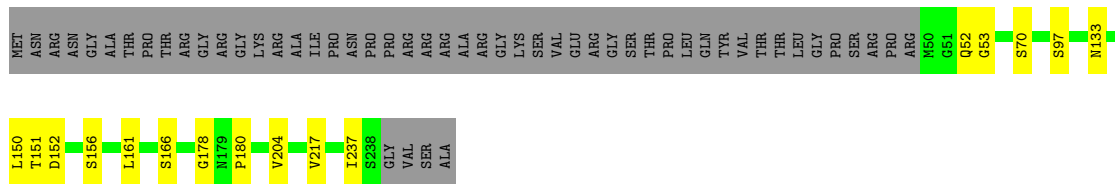
● Molecule 1: Capsid protein



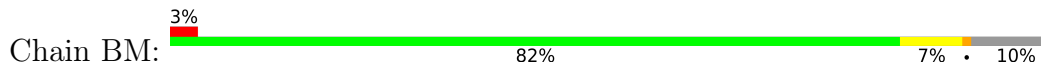
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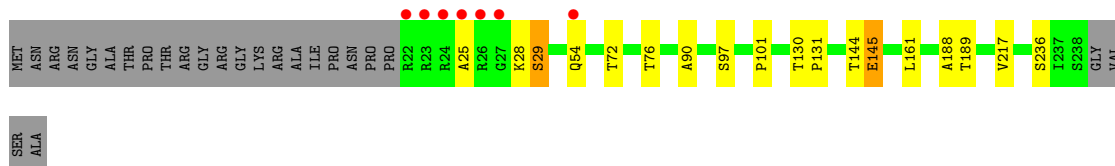


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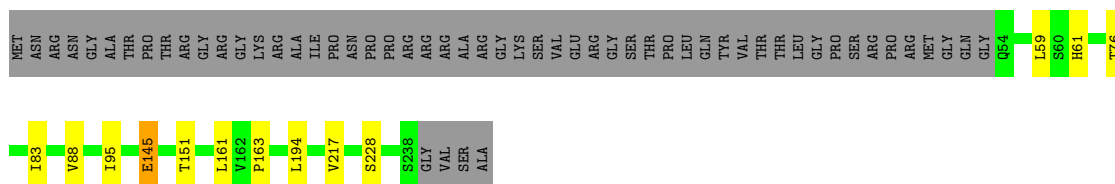


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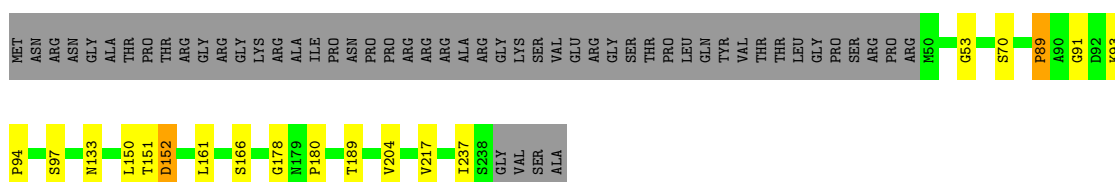




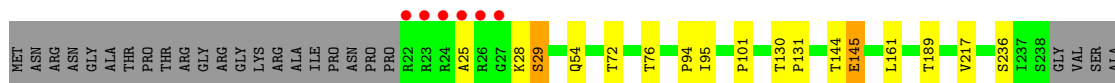
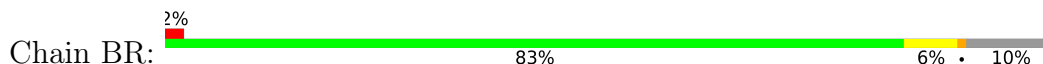
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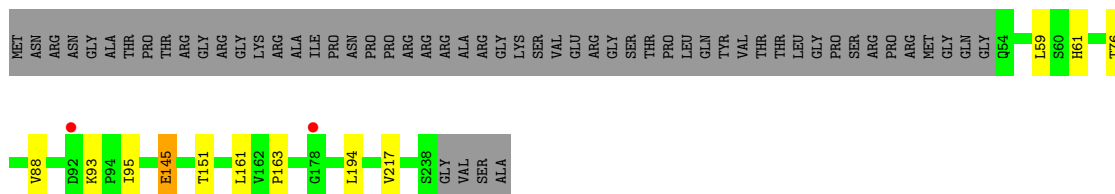
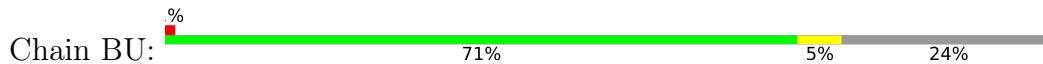
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● Molecule 1: Capsid protein

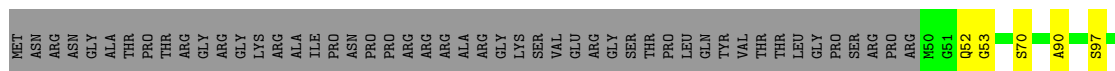


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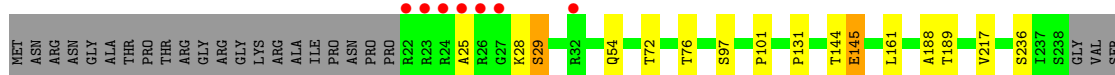
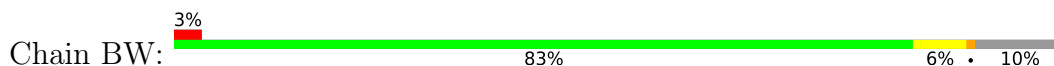


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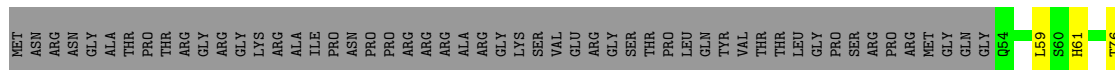




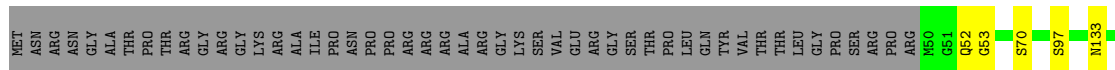
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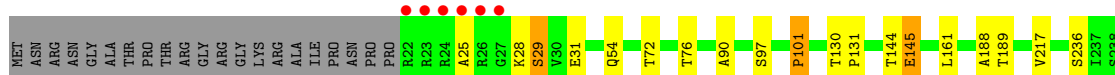
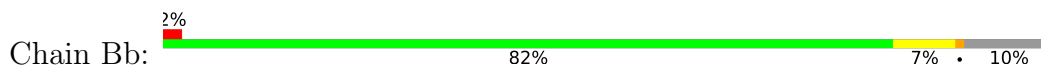
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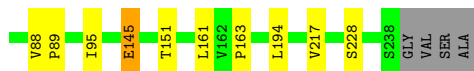
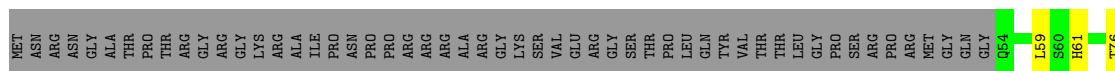


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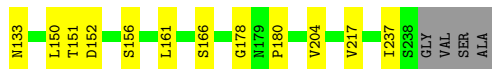
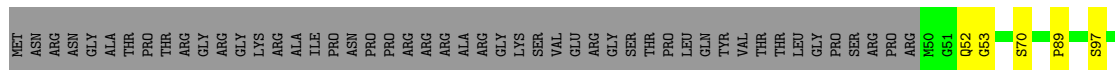


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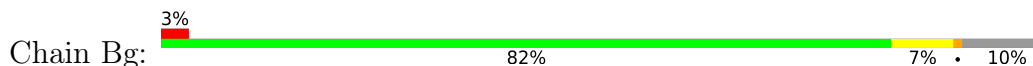




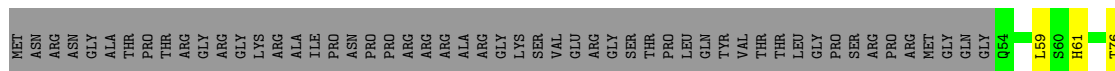
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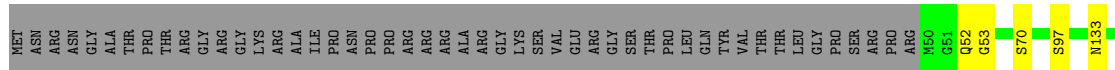
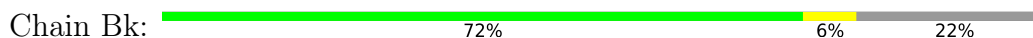
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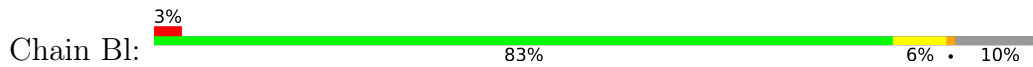
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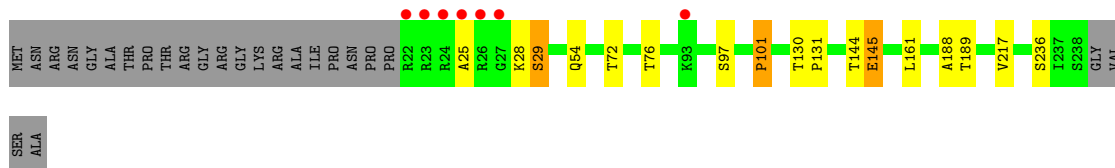


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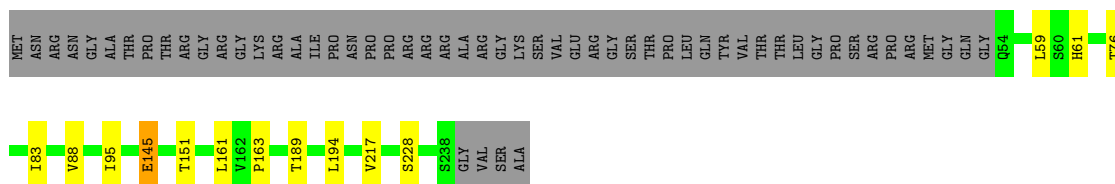


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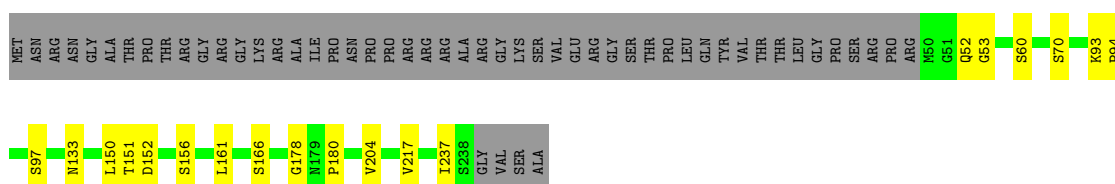




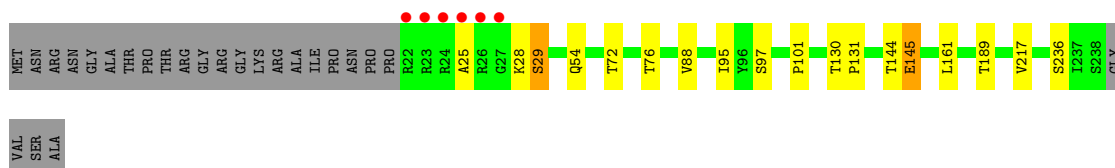
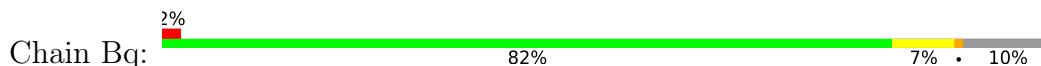
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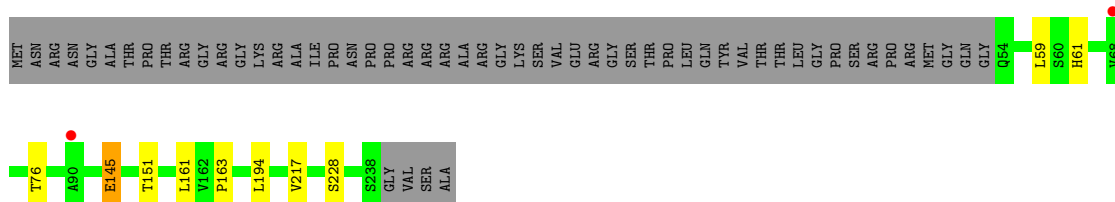
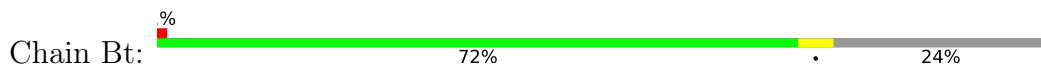
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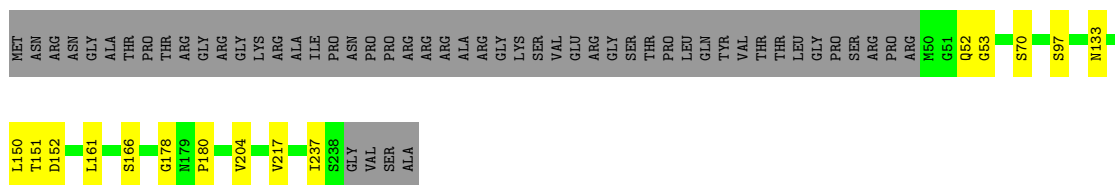
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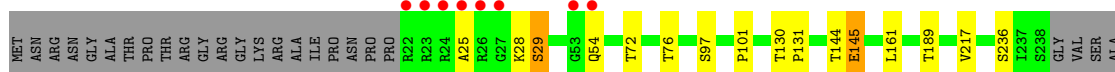
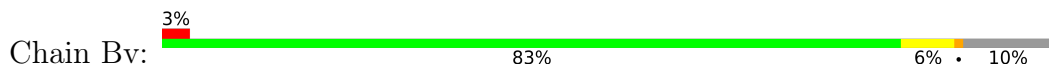
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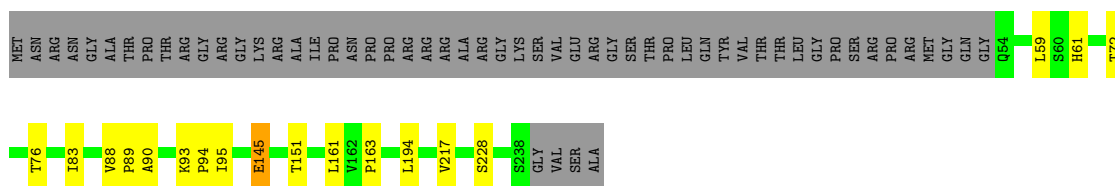
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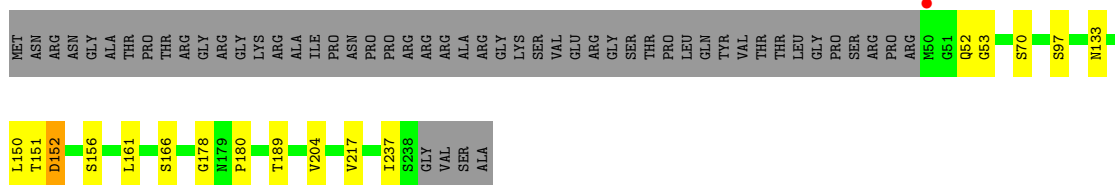
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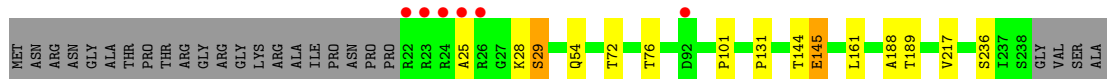
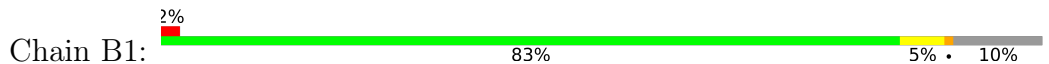
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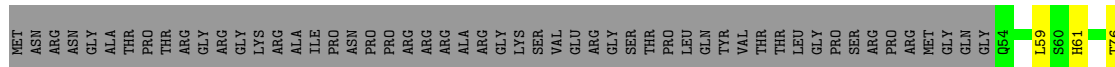
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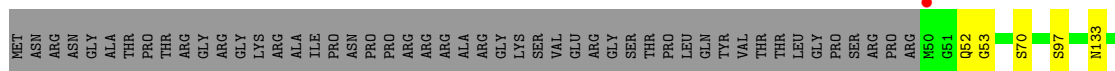
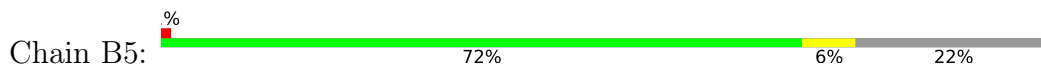


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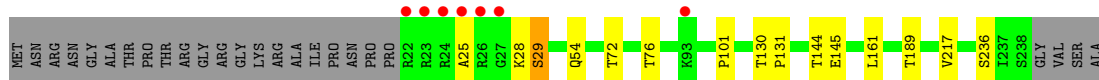
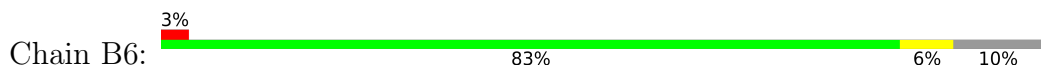




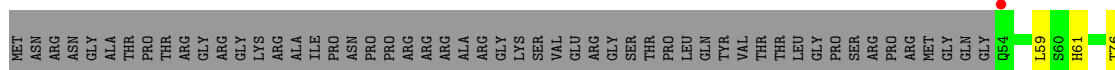
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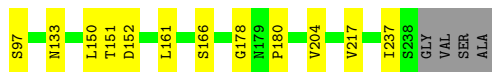
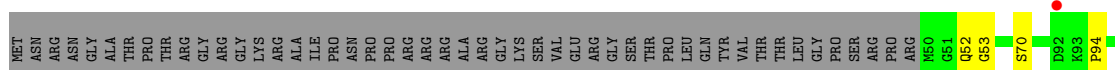
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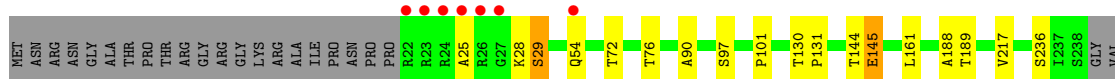
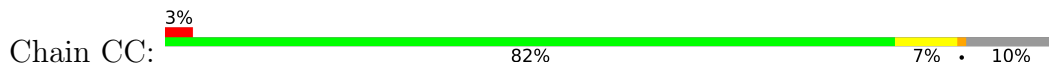
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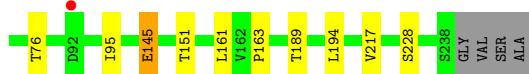
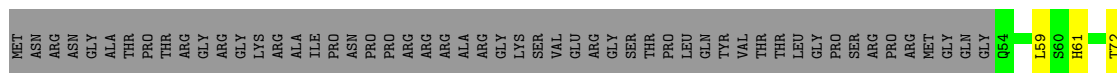


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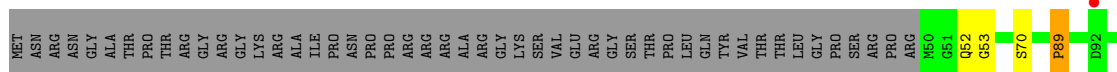


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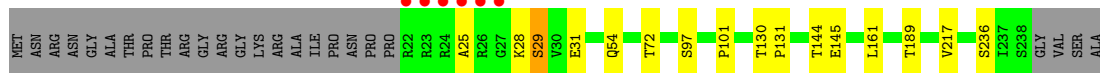
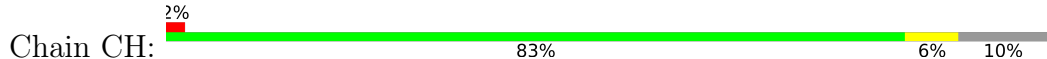
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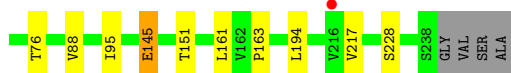
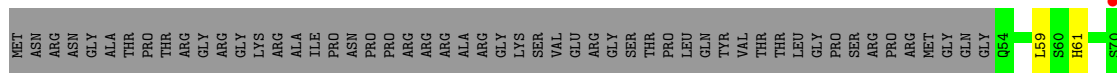
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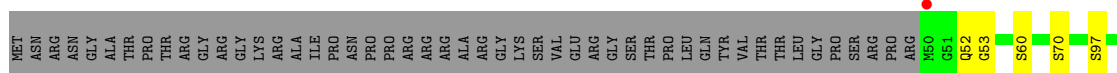
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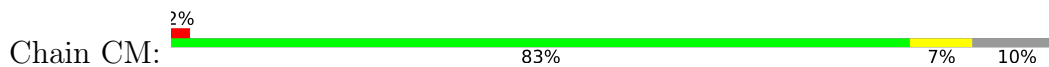


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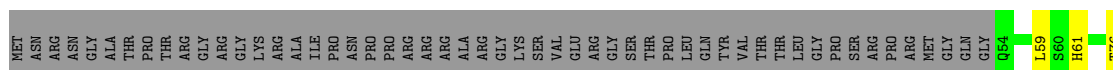




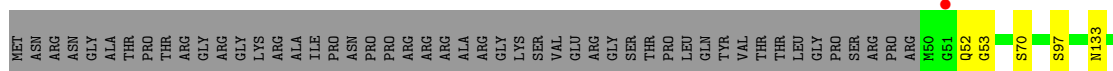
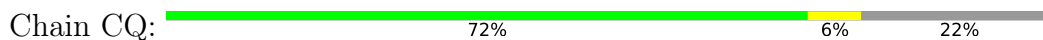
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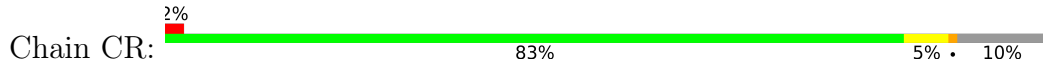
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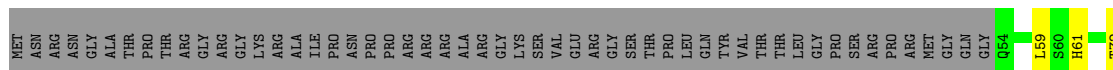
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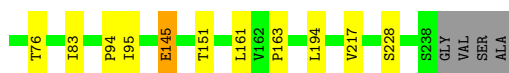


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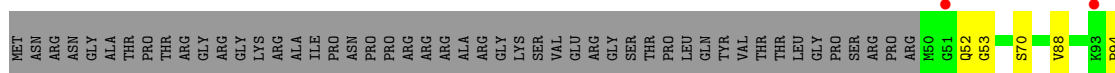
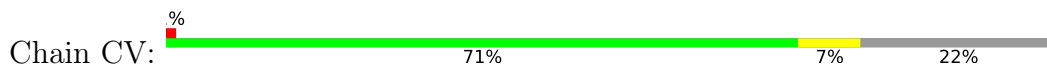


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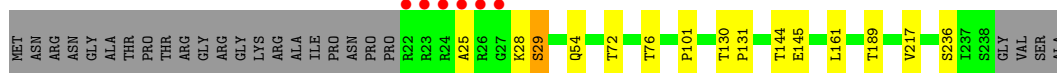
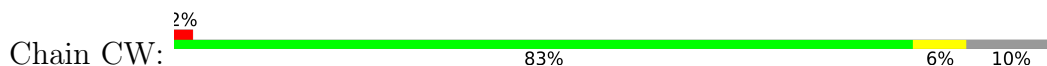




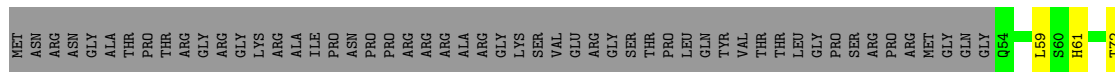
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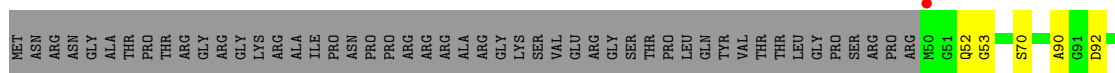
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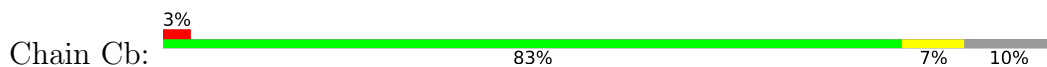
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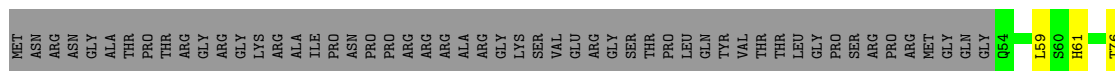


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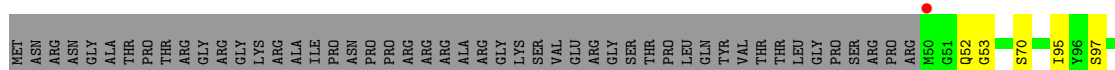


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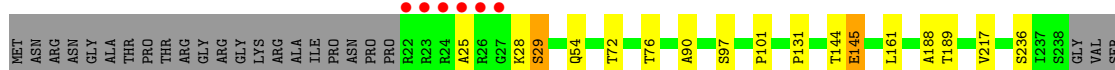
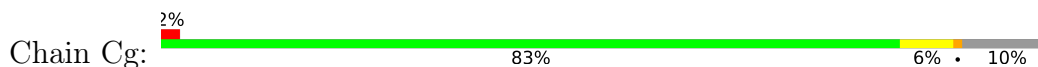
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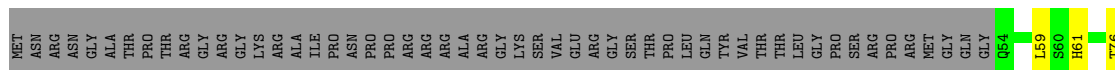


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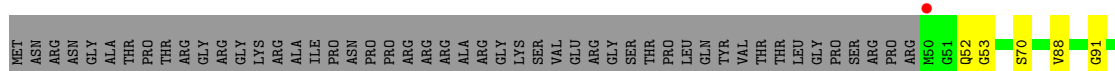


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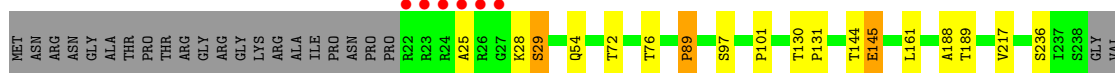
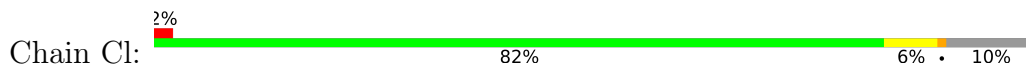


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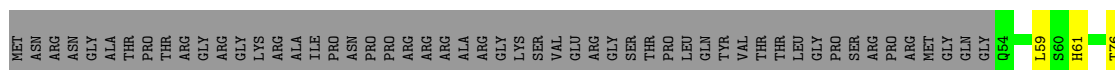




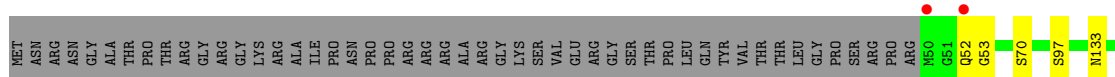
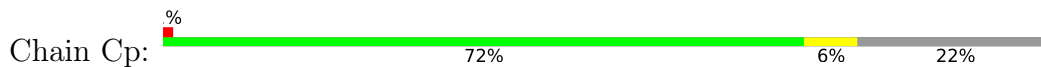
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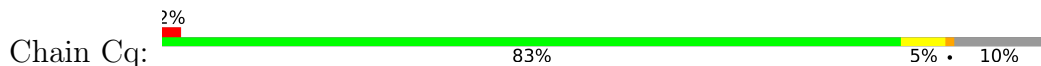
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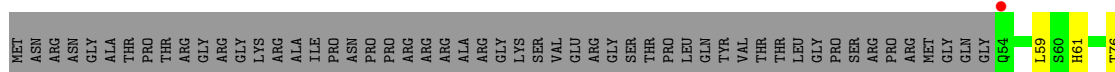
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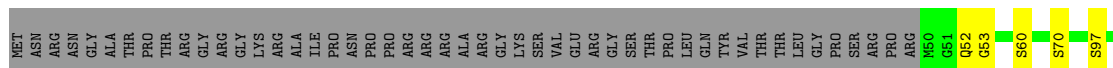


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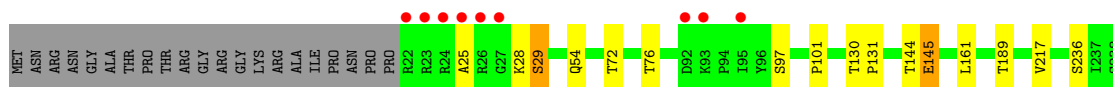
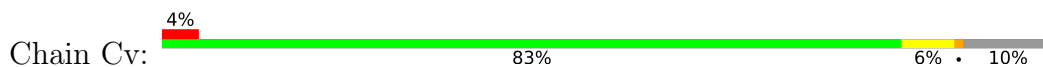




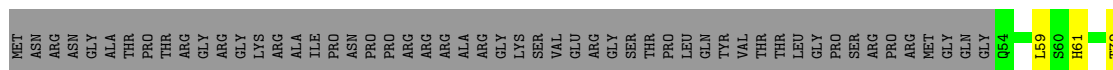
• Molecule 1: Capsid protein



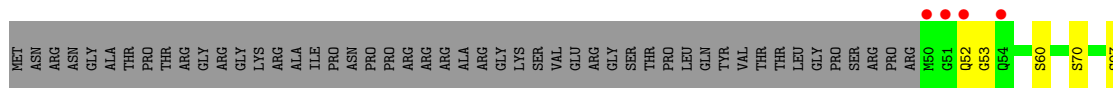
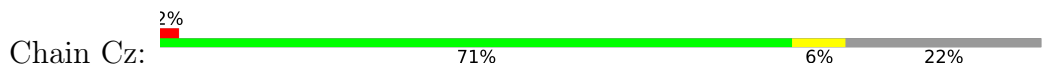
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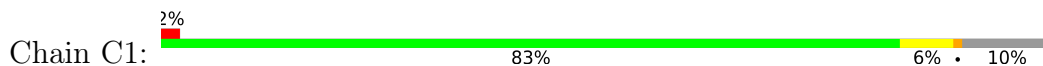
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• Molecule 1: Capsid protein

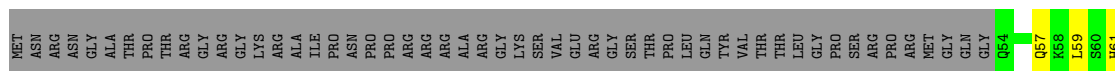


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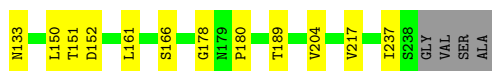
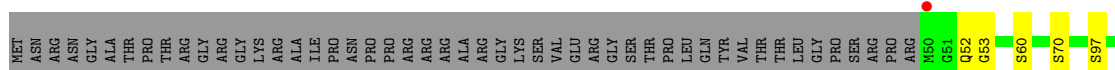




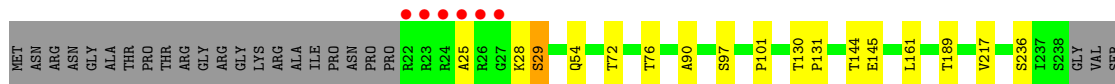
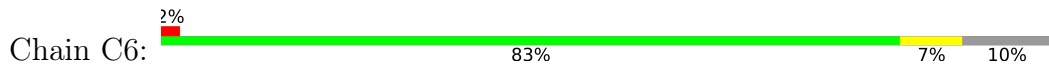
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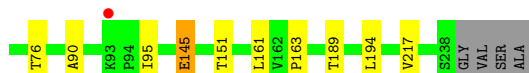
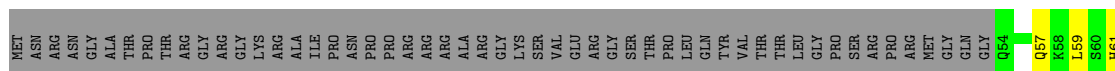
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• Molecule 1: Capsid protein

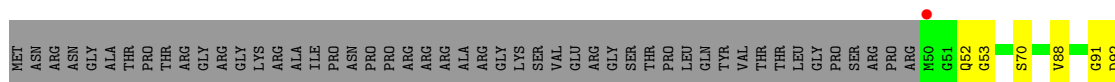


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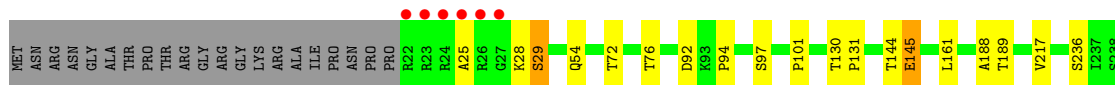
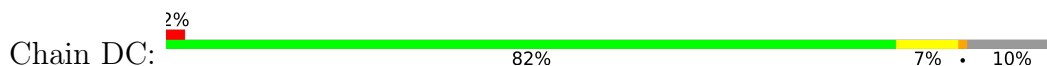


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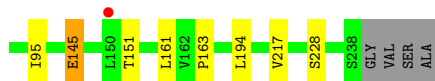
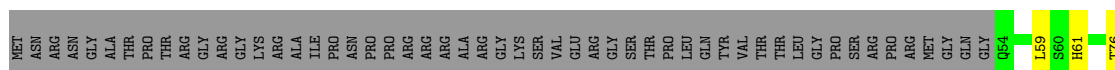




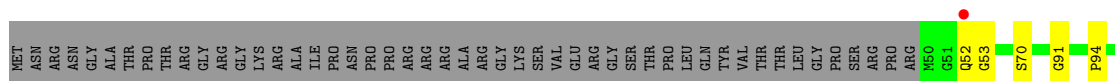
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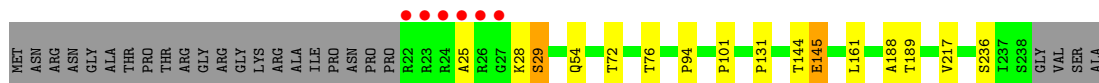
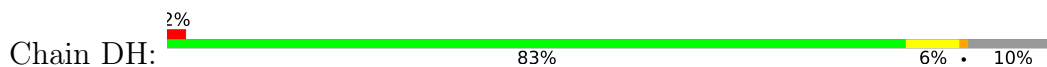
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● Molecule 1: Capsid protein

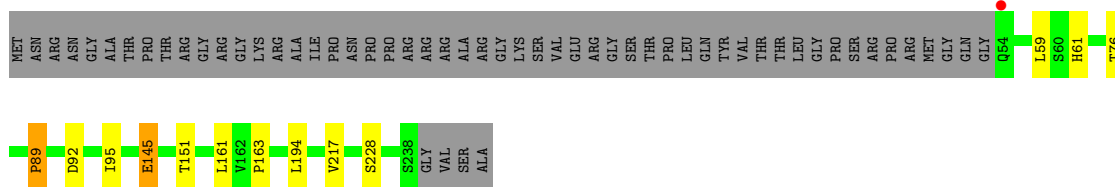


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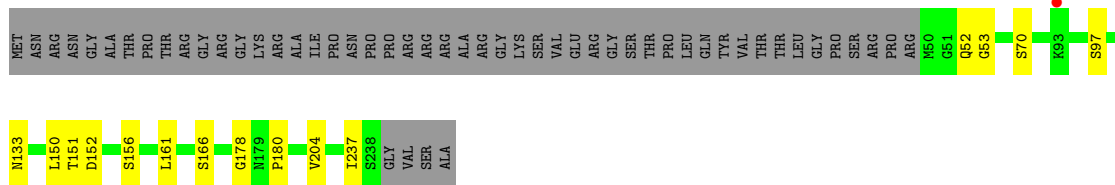


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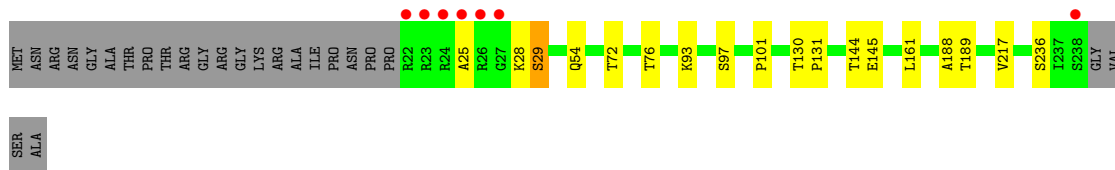
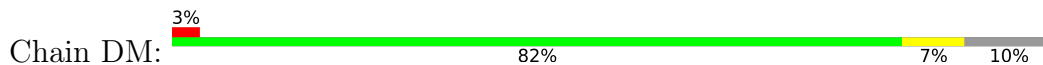




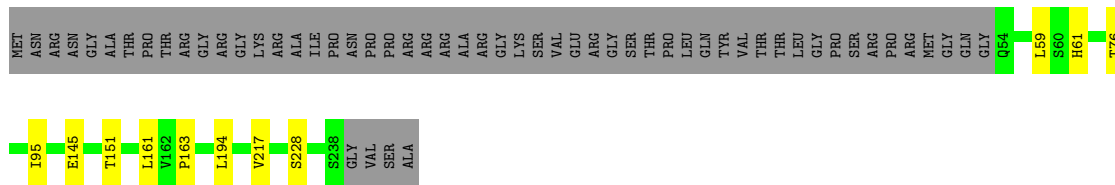
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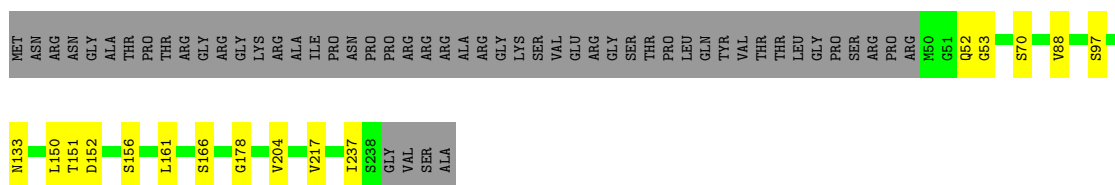
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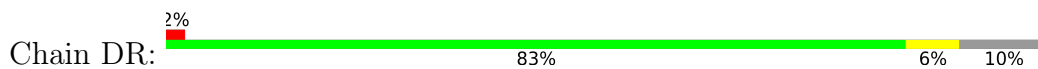
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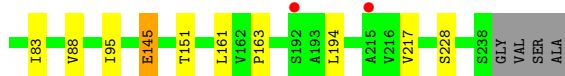
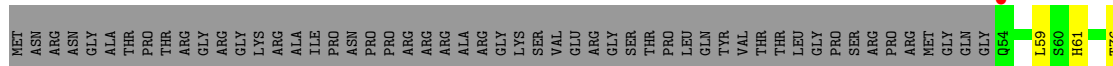
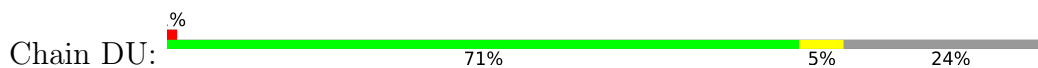
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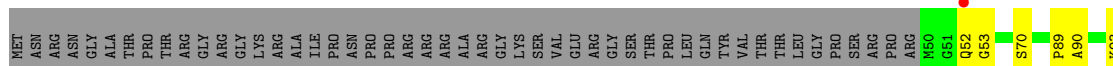
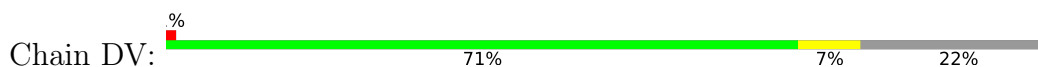
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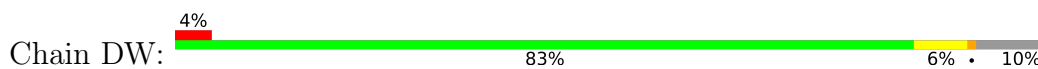
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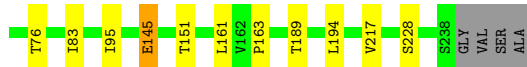
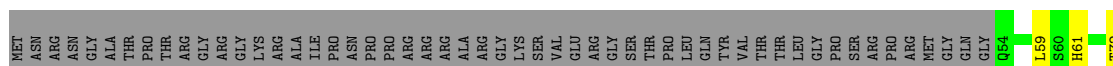
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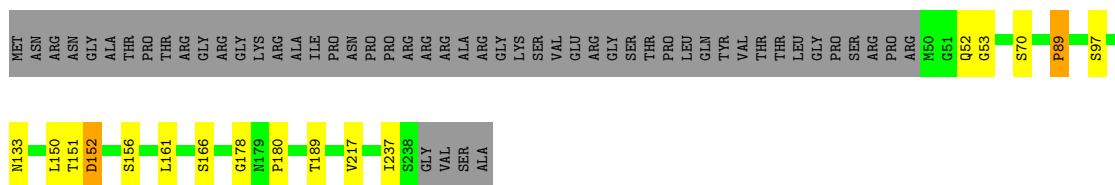


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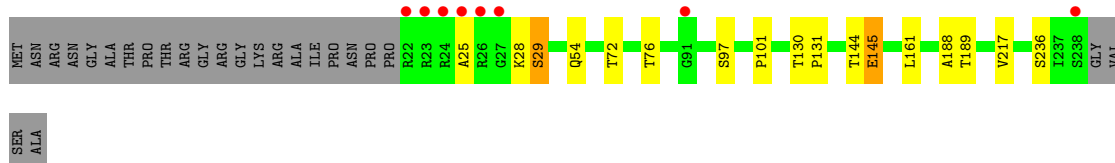
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Chain Da:  71% 6% 22%



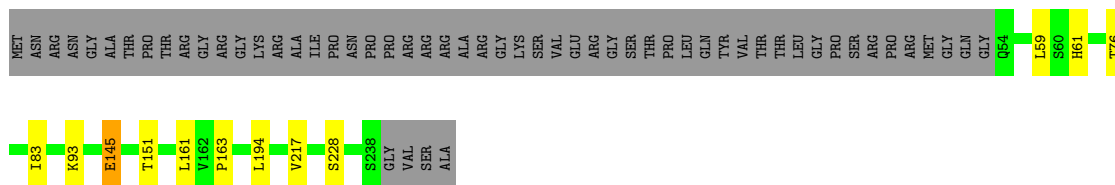
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Chain Db:  3% 83% 6% 10%



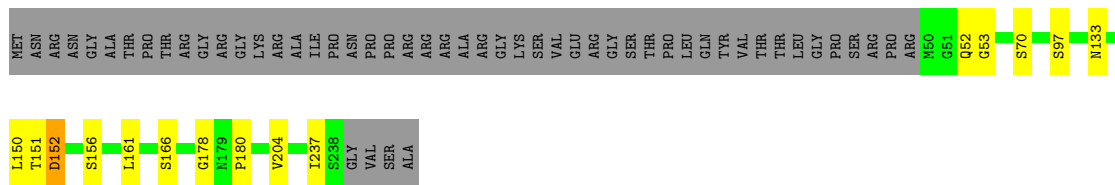
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Chain De:  71% 5% 24%




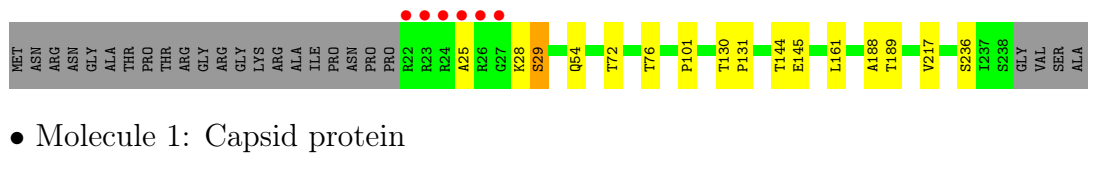
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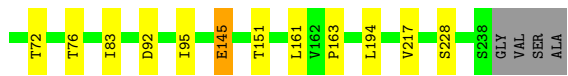
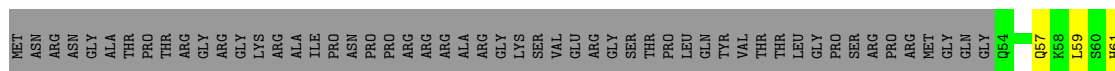
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Chain Dg:  2% 83% 6% 10%

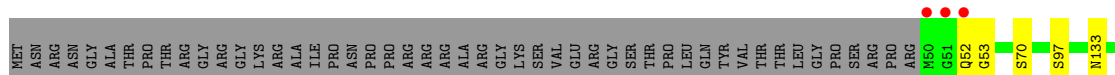
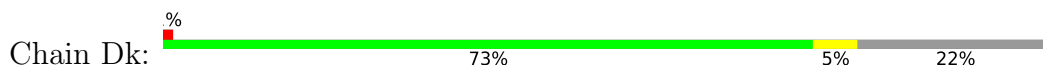


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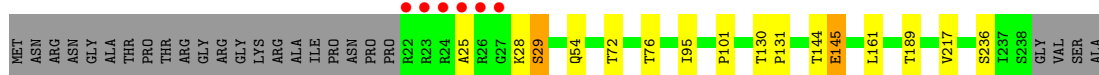
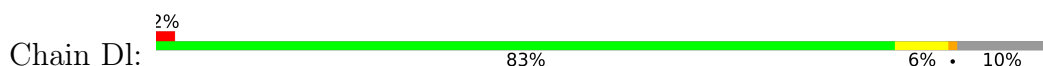
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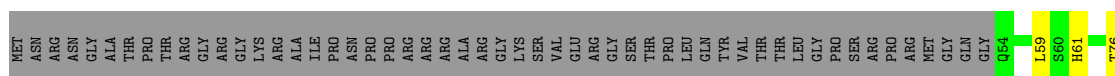
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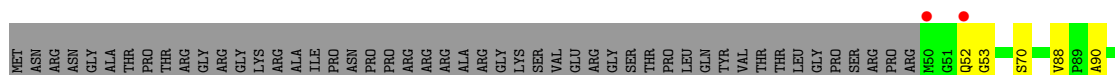
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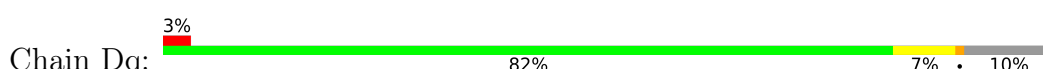
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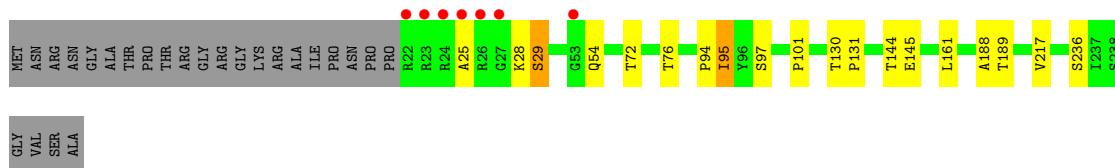


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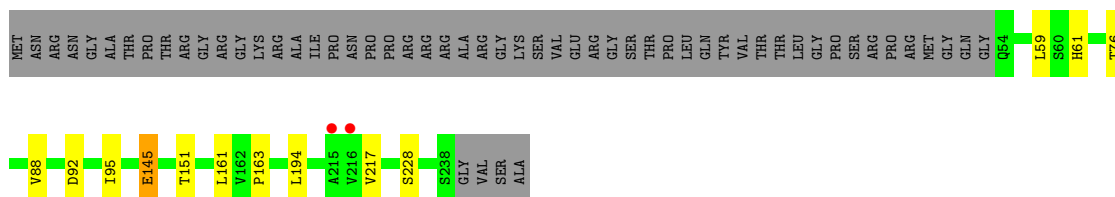
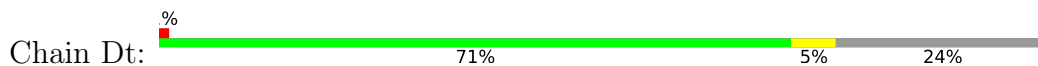


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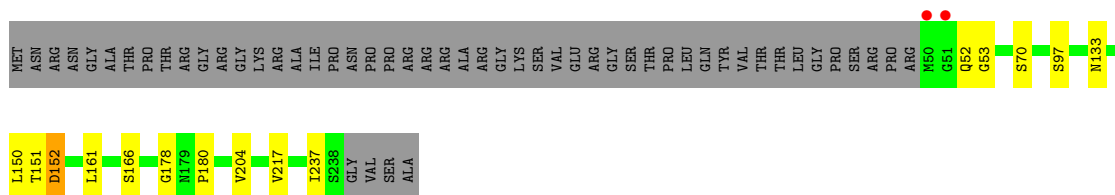
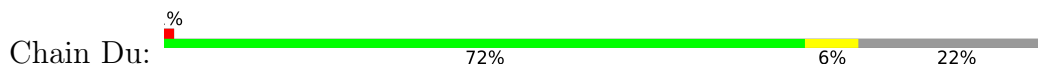




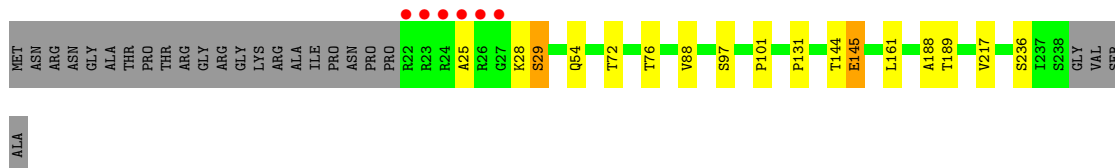
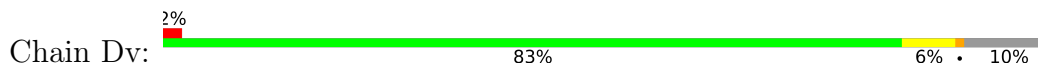
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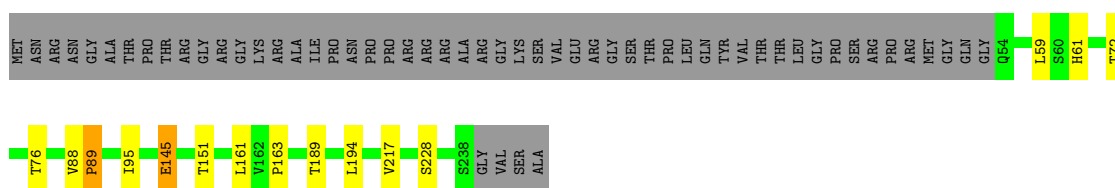
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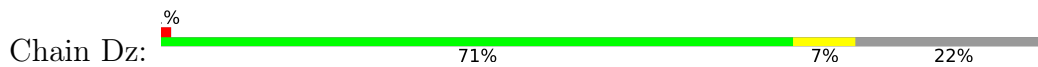
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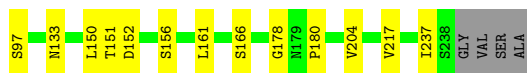
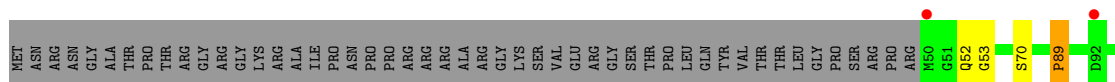


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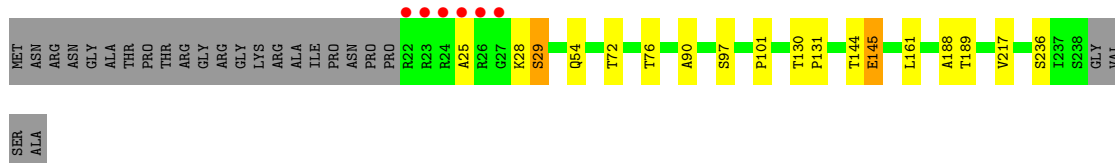
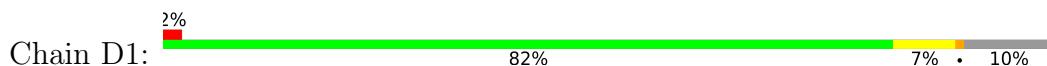


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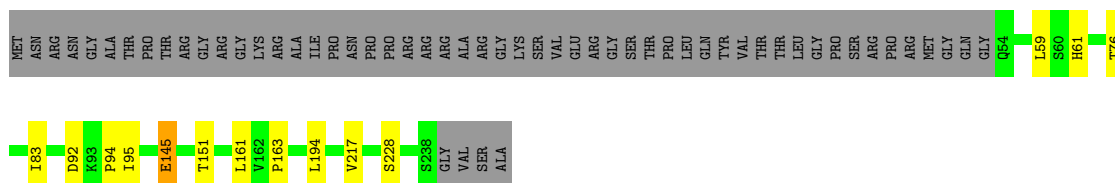




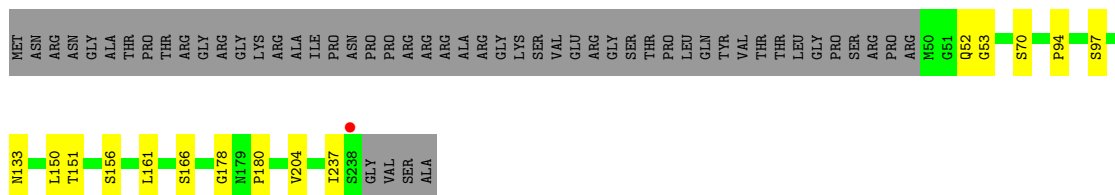
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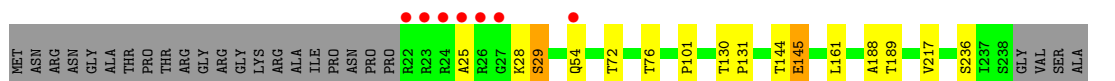
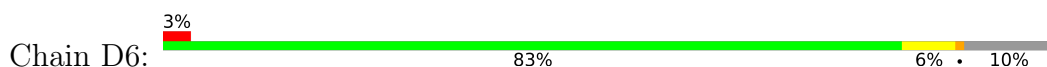
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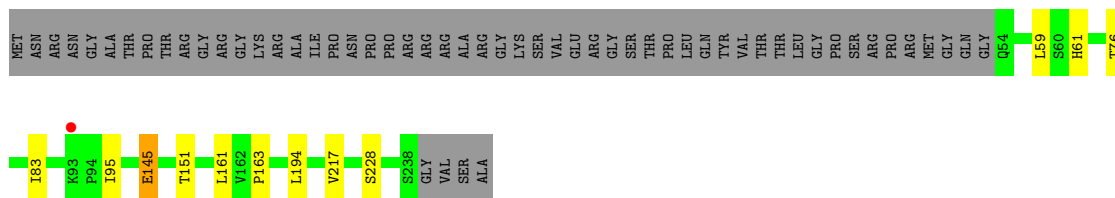


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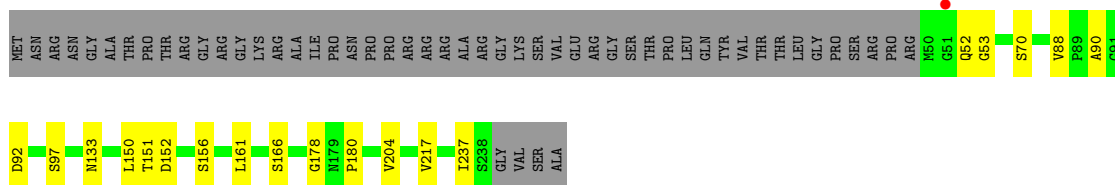


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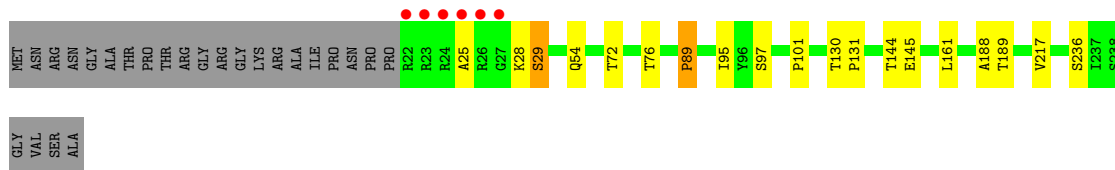
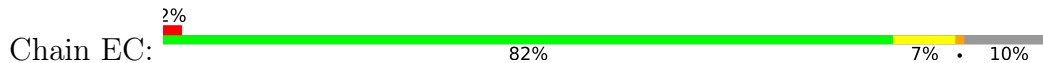




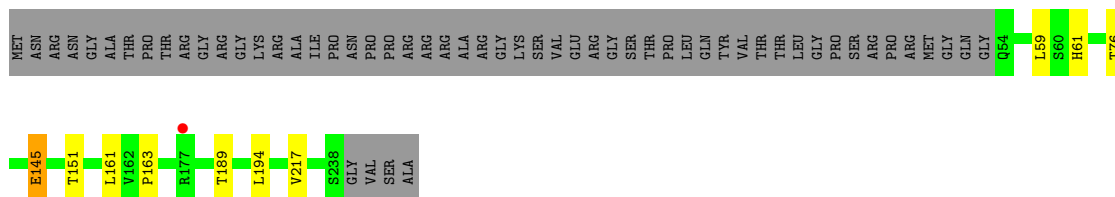
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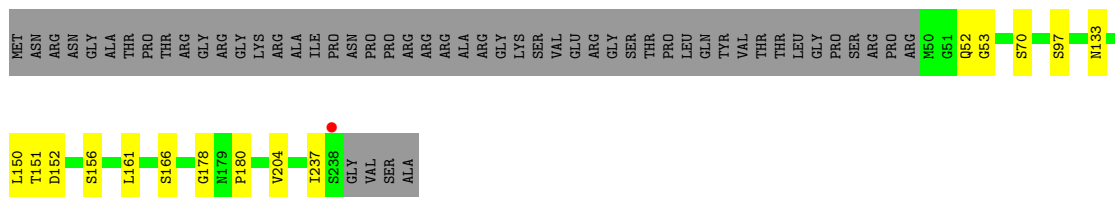
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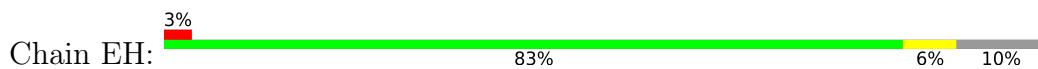
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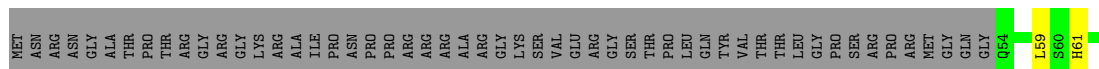
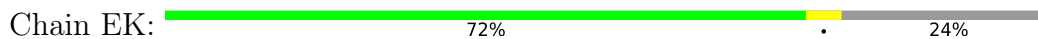
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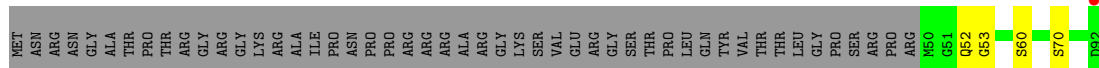
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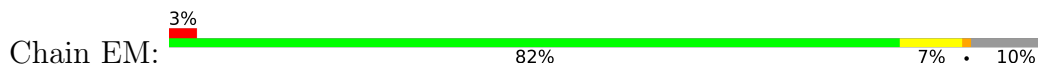
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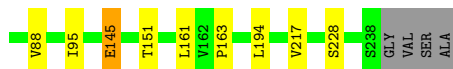
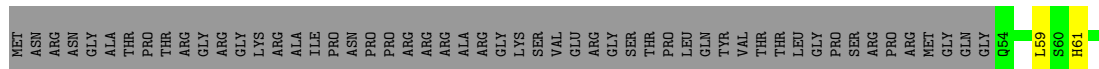
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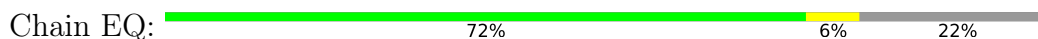
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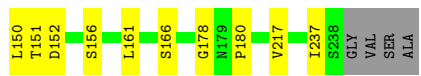
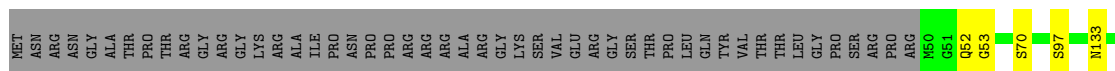


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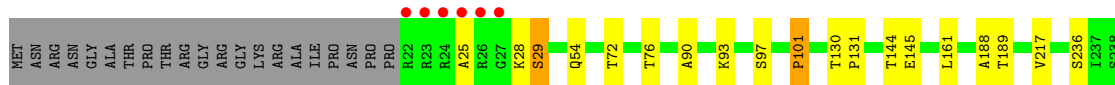
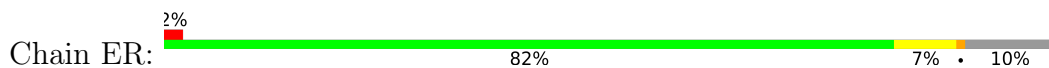


• Molecule 1: Capsid protein

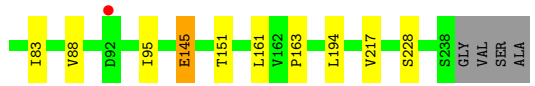
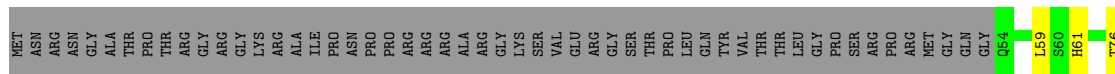




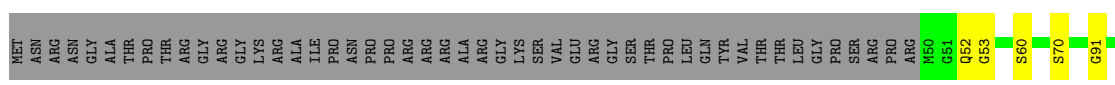
• Molecule 1: Capsid protein



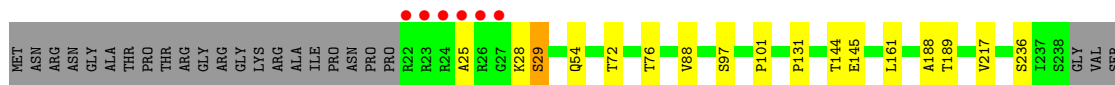
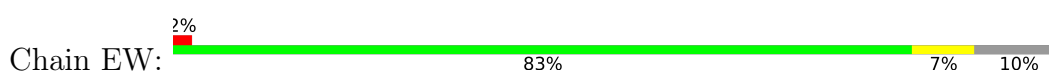
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

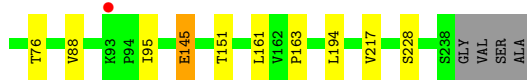
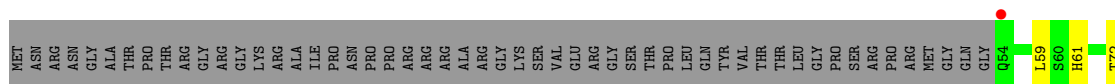


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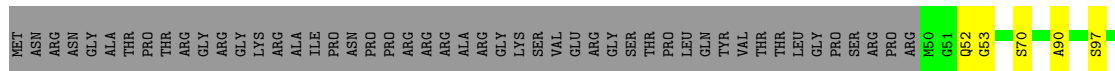


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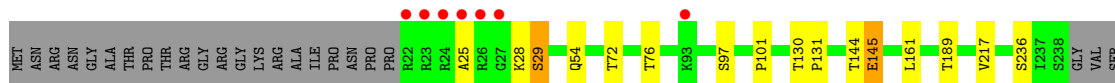
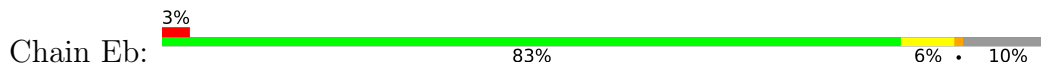




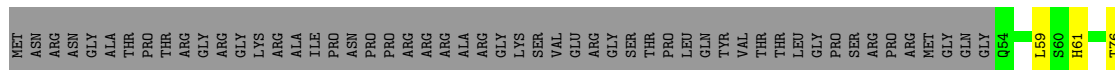
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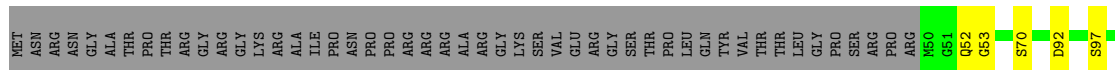
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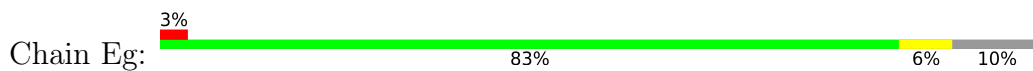
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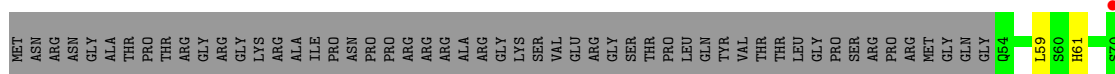
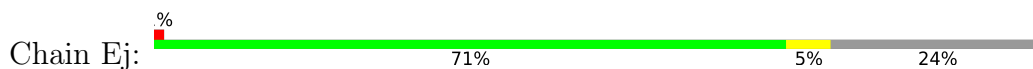
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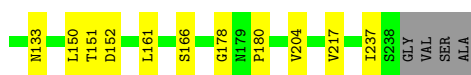
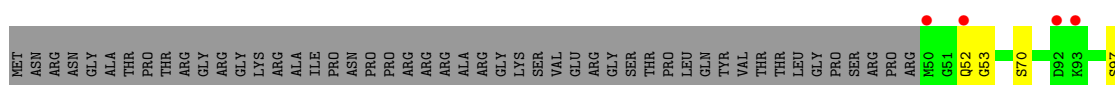
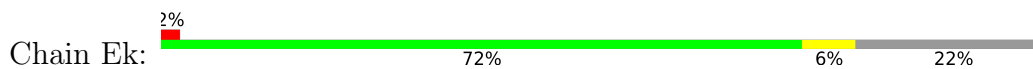
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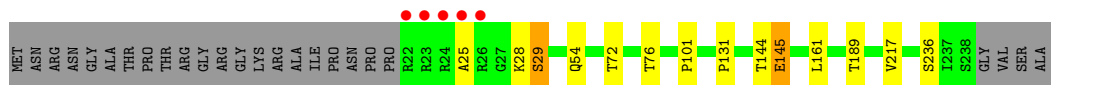
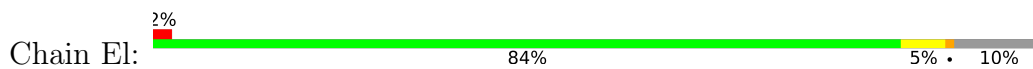
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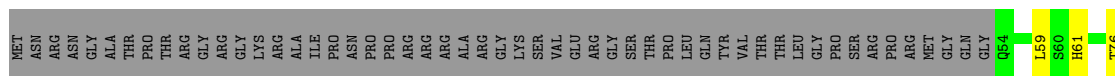
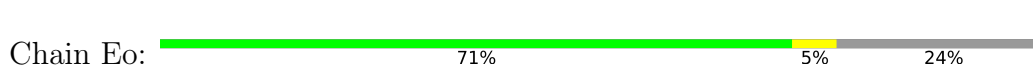
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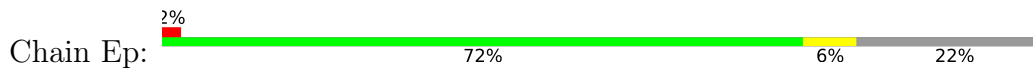
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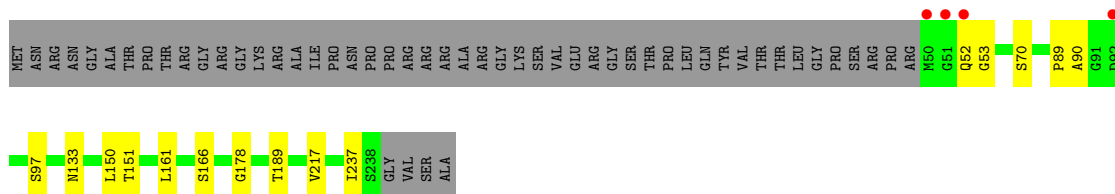


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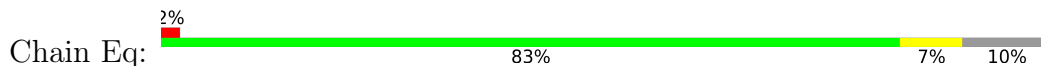


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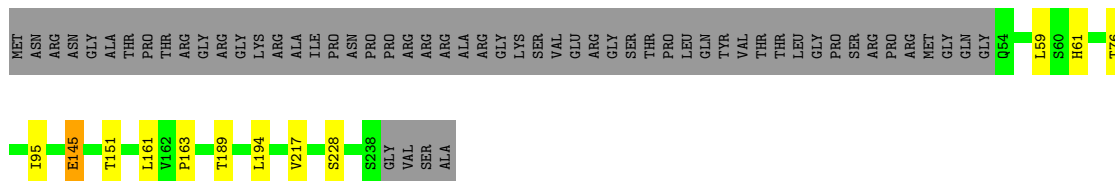




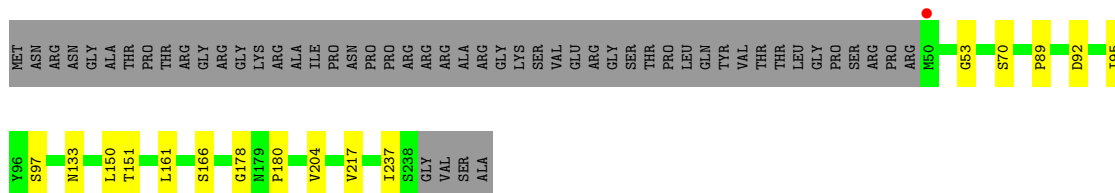
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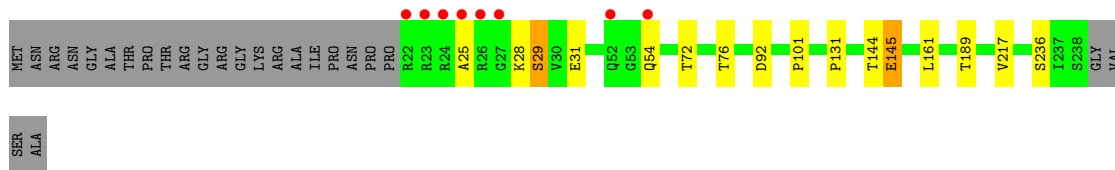
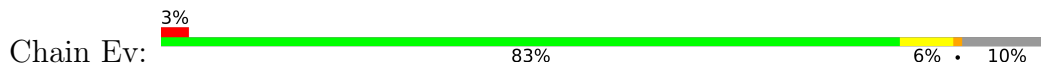
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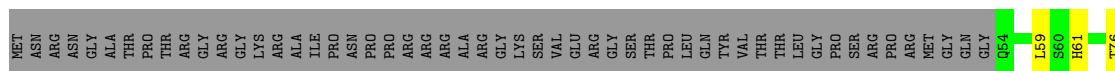


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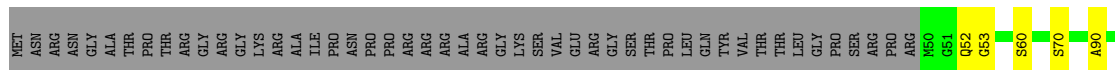


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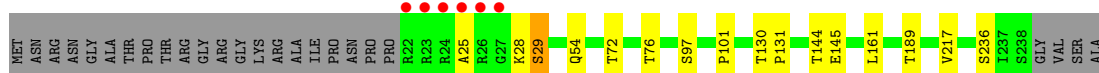
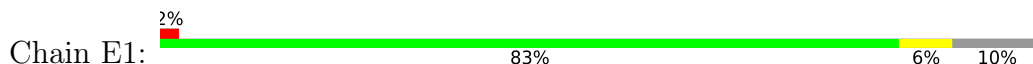




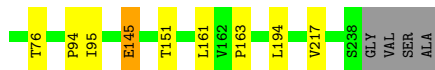
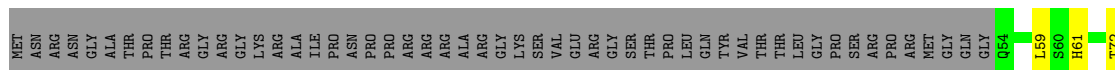
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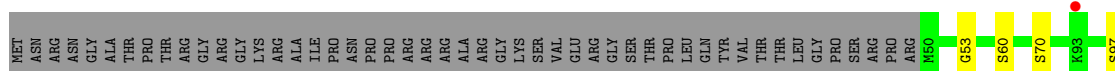
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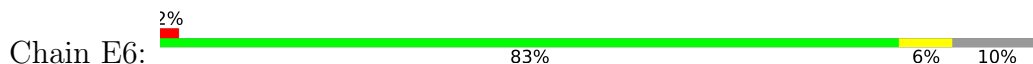
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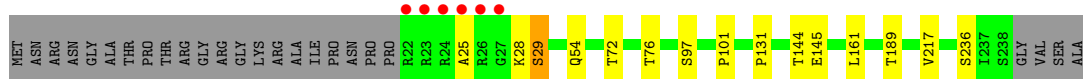


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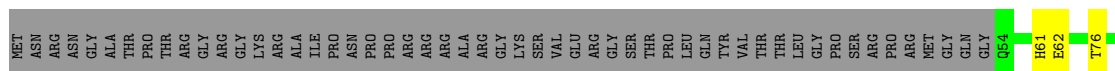


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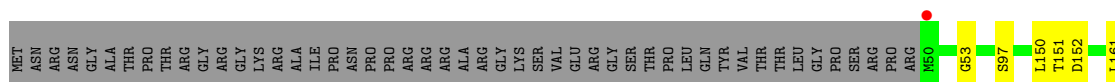
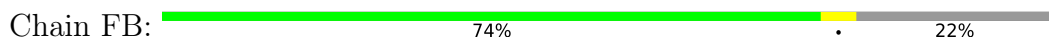




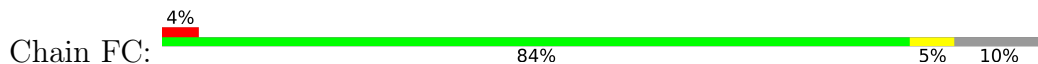
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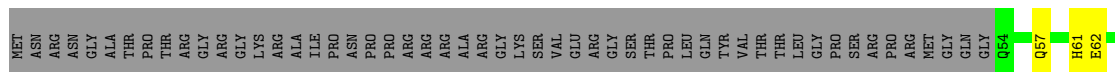
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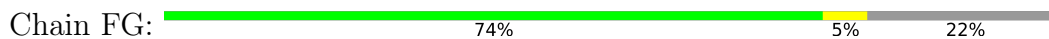
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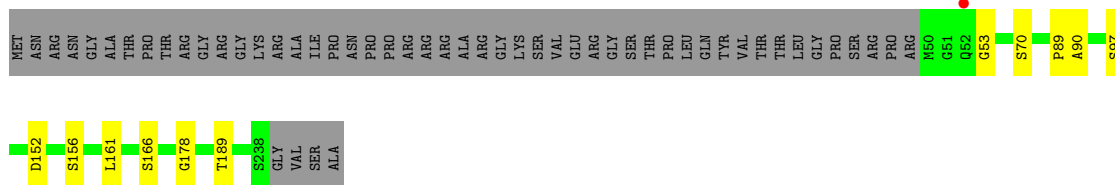


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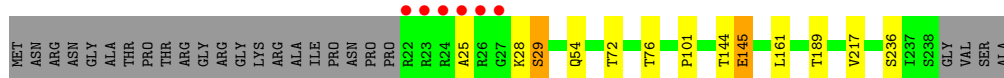
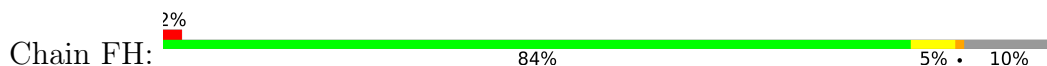


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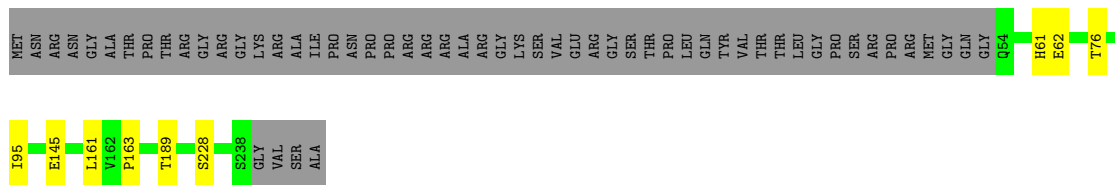




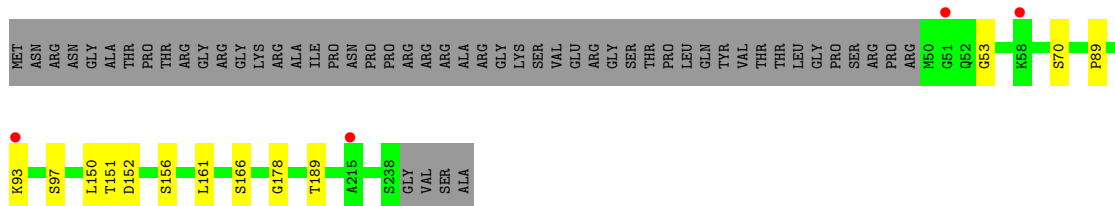
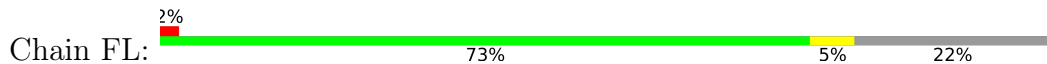
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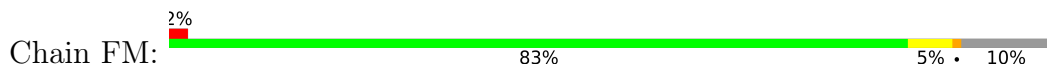
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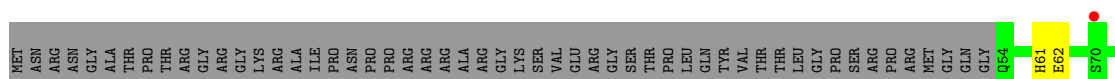
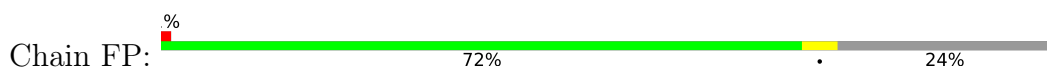
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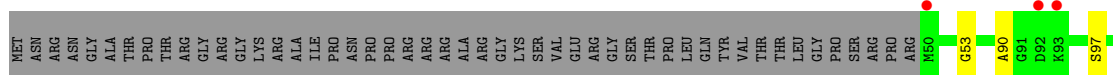
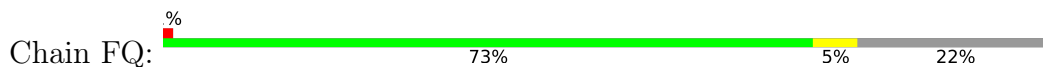


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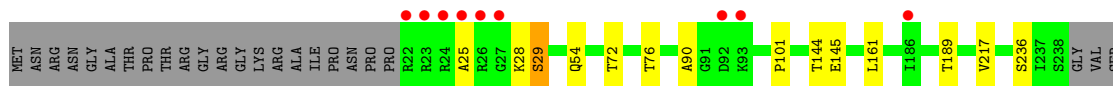
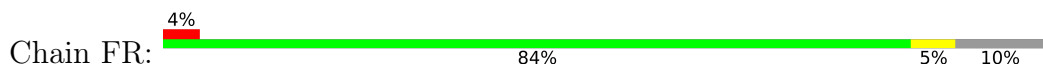




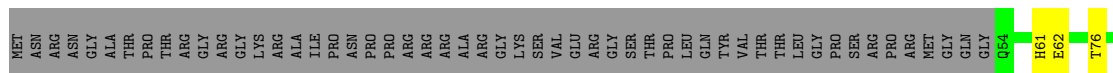
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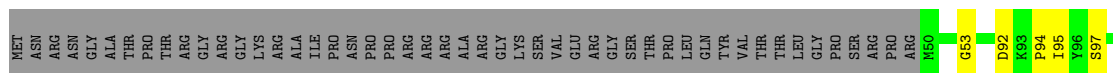
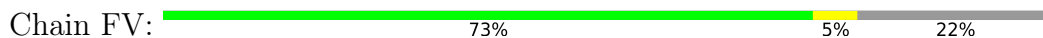
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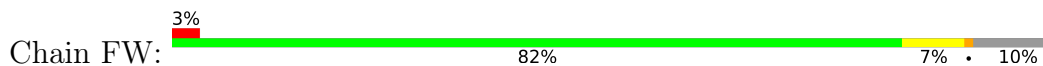
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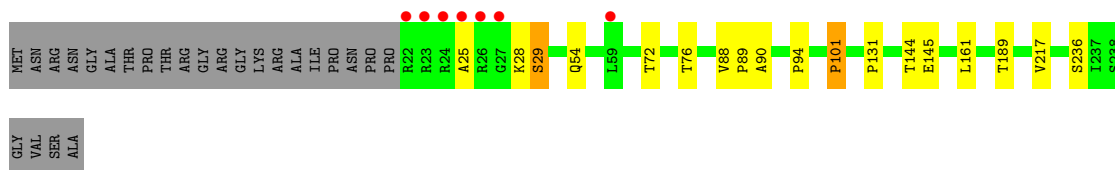


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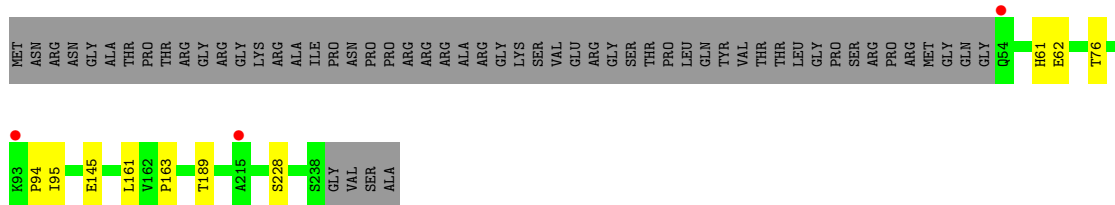
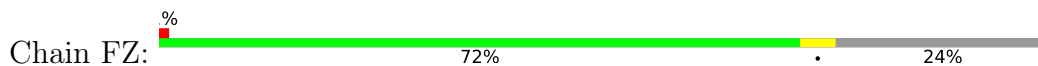


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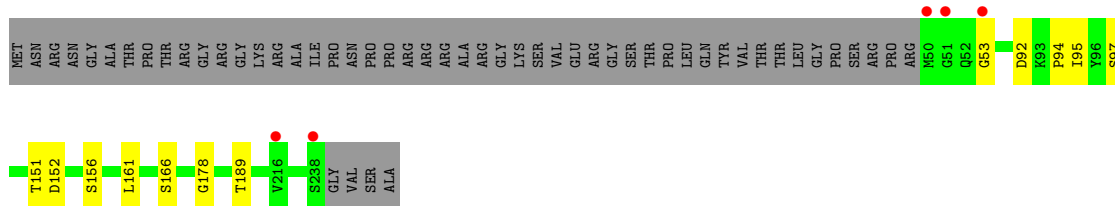
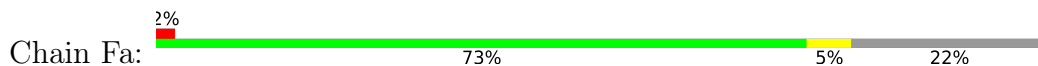




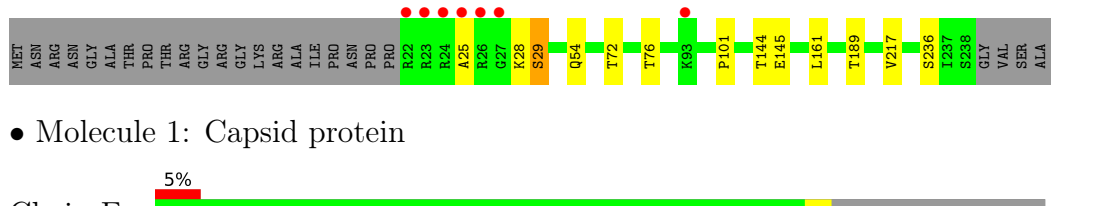
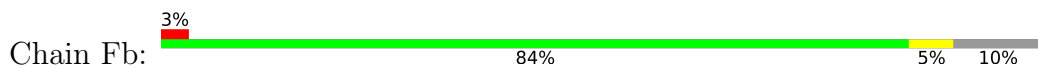
● Molecule 1: Capsid protein



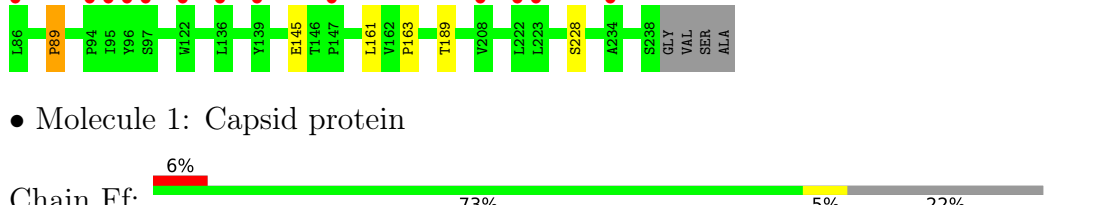
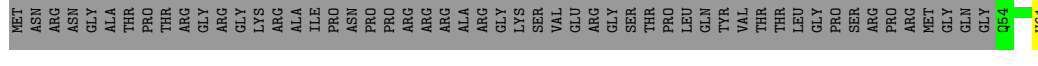
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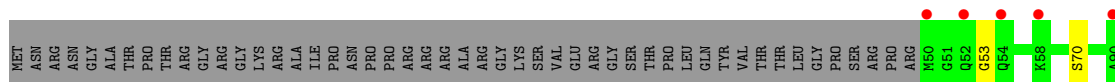


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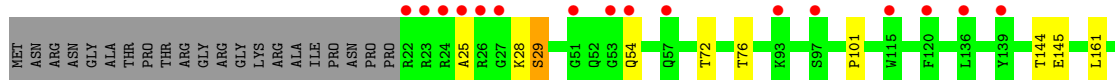
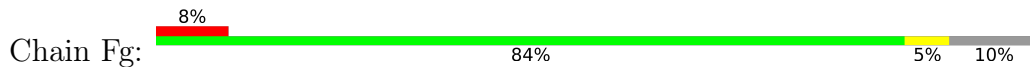


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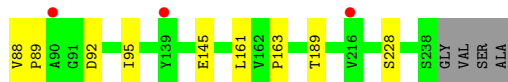
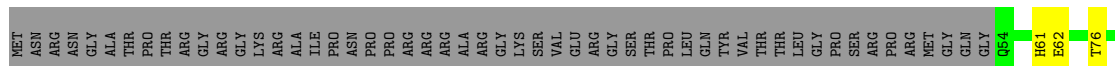
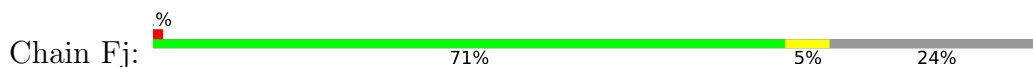




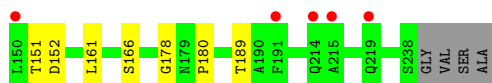
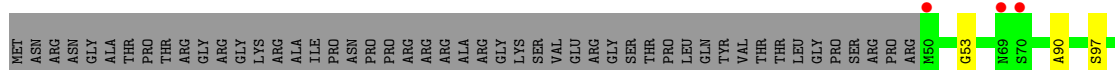
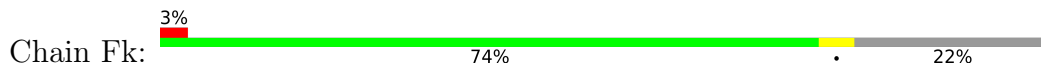
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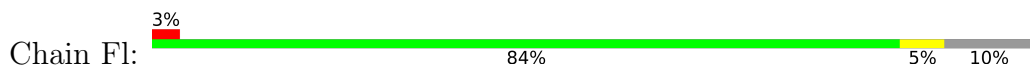
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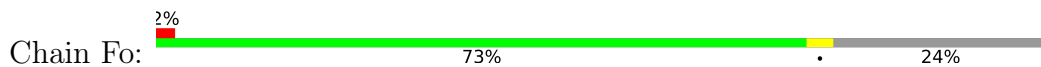
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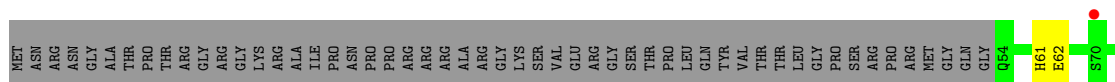


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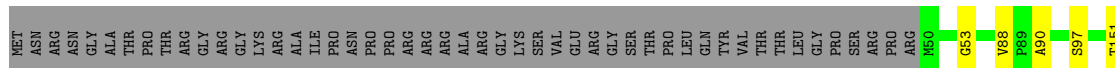
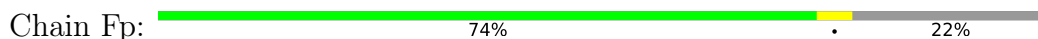


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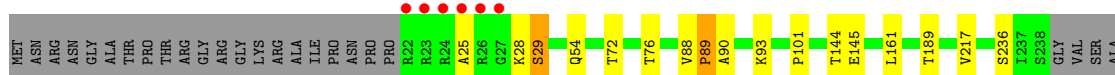
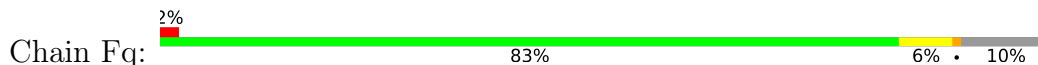




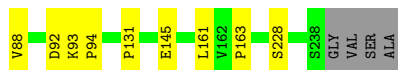
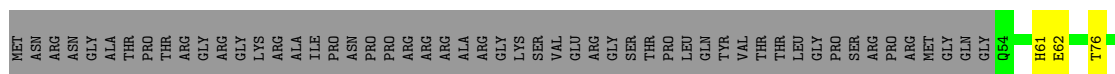
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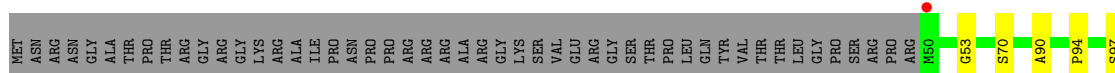
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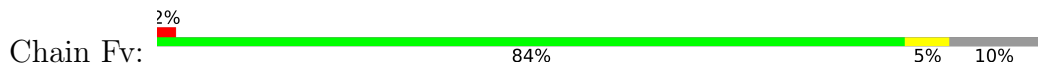
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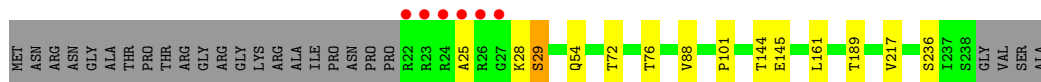


● Molecule 1: Capsid protein

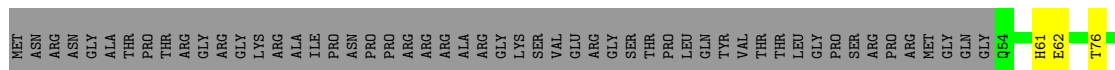


● Molecule 1: Capsid protein

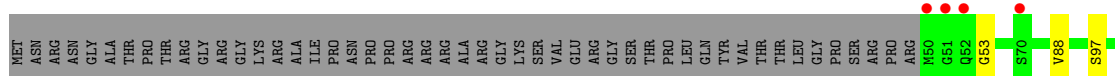
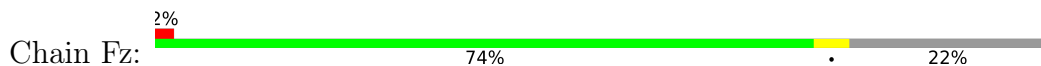




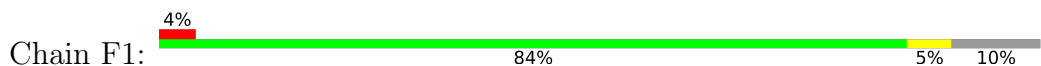
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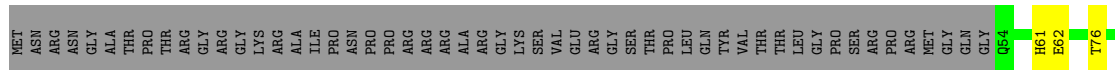
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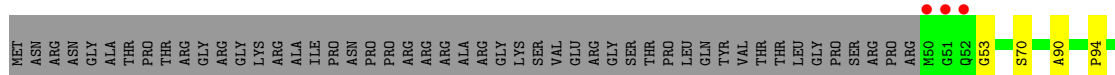
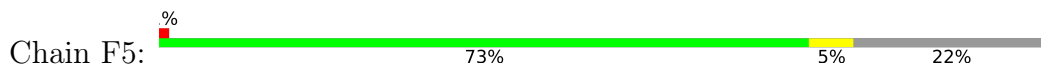
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

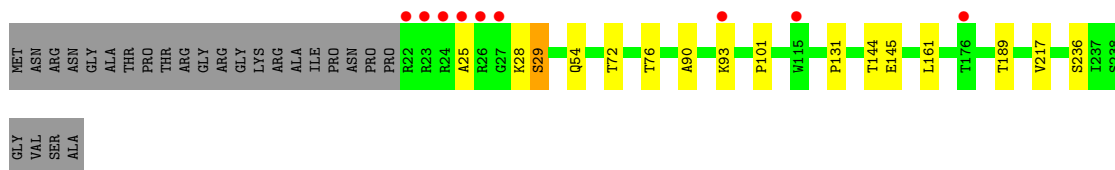
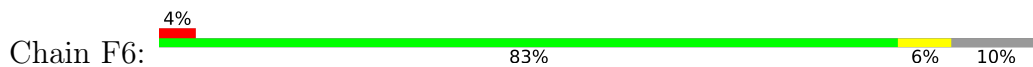


• Molecule 1: Capsid protein

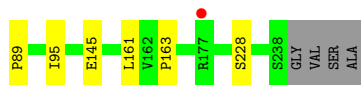
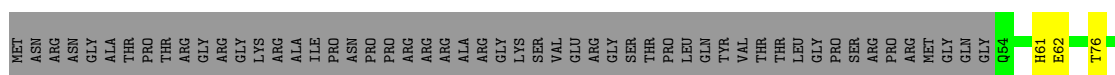




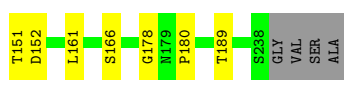
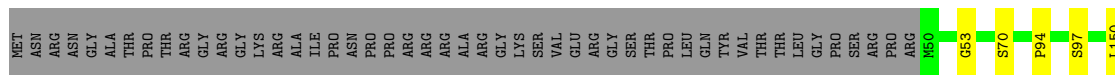
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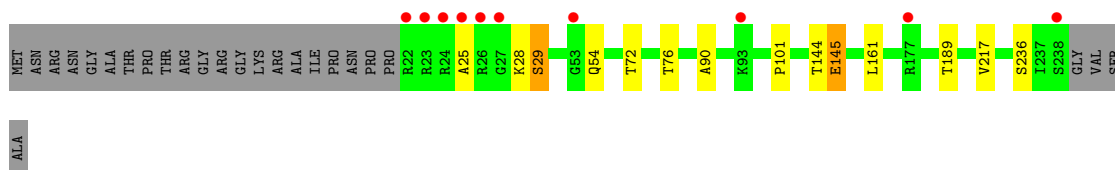
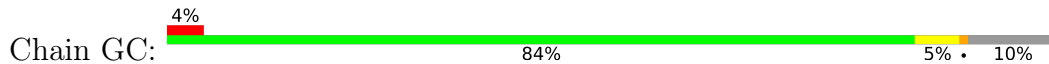
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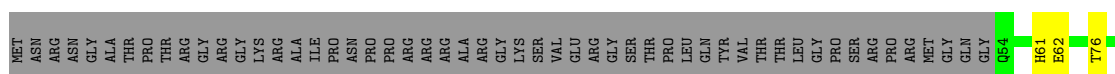
• Molecule 1: Capsid protein



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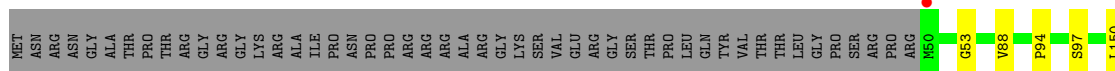
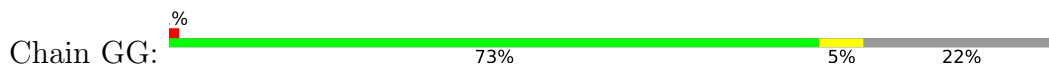


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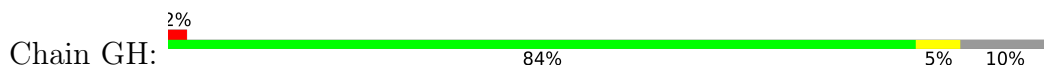




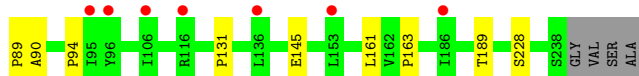
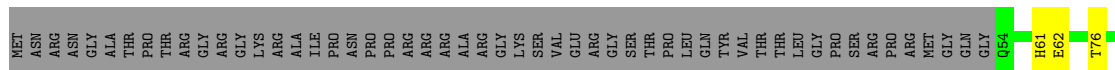
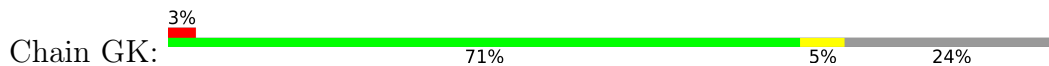
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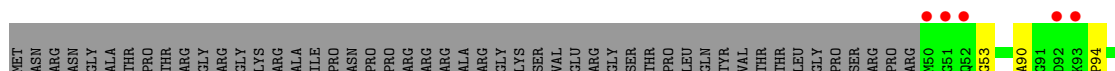
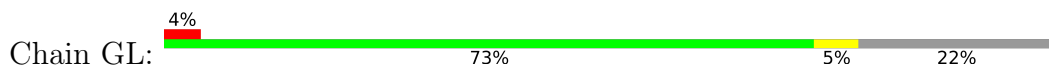
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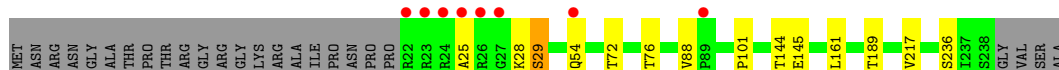
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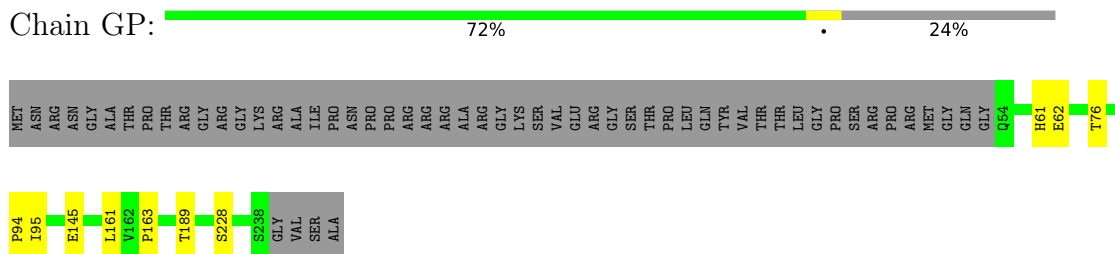
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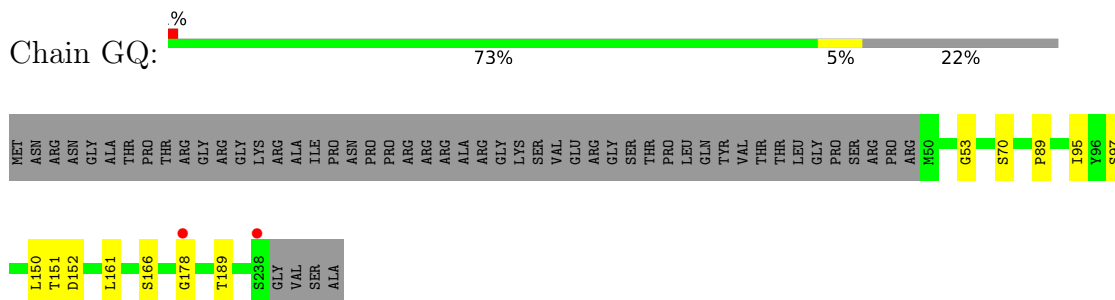
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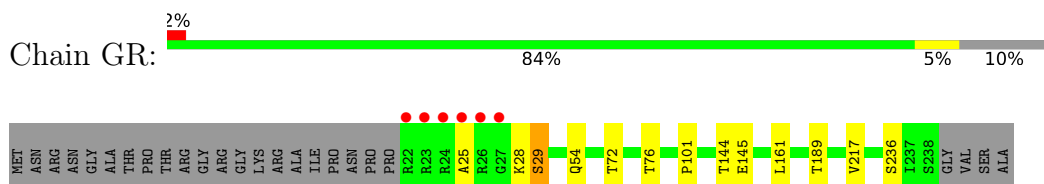
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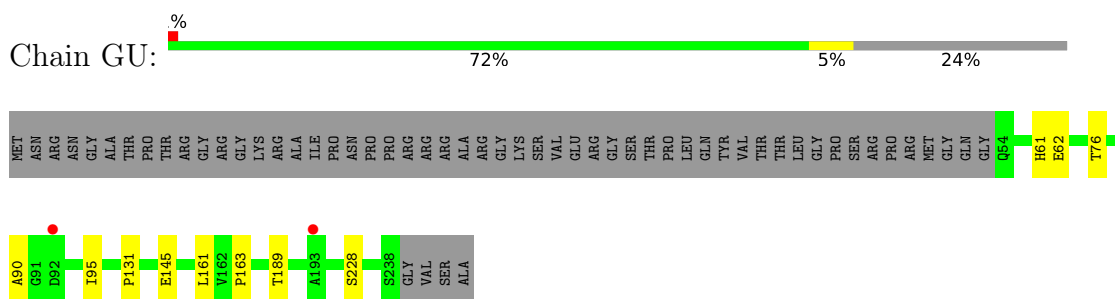
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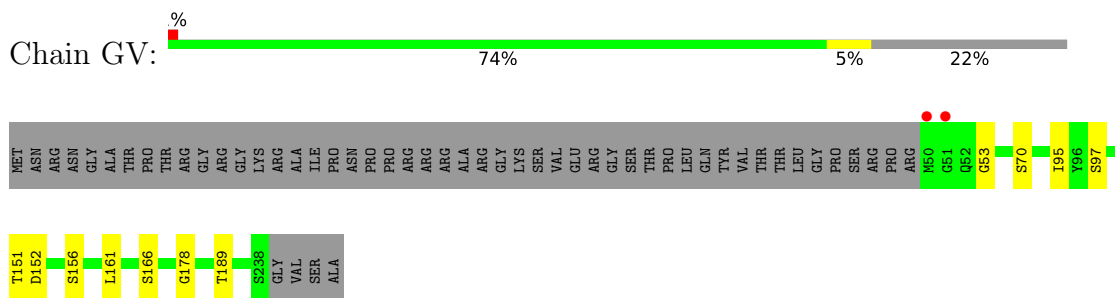
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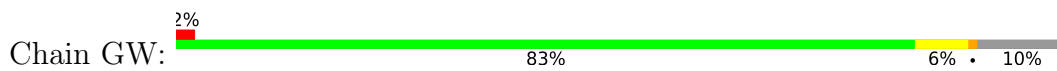
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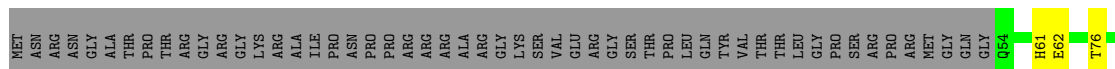
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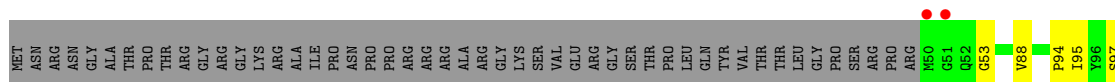
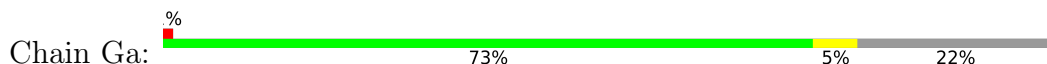
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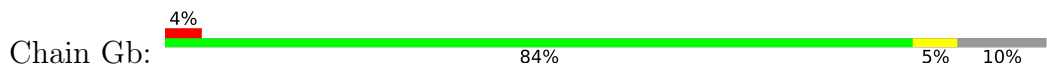
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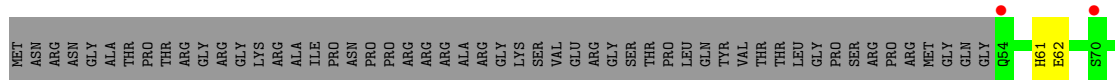
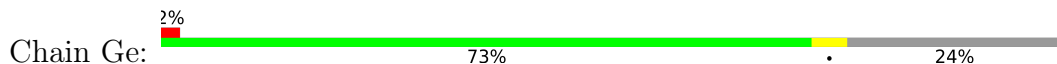
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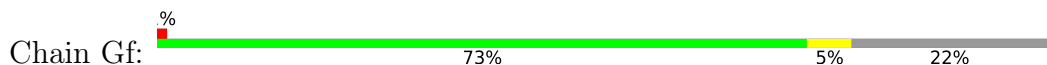
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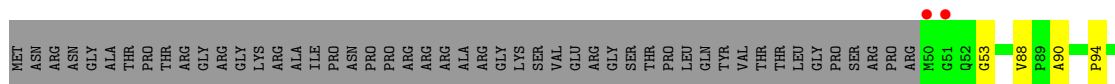


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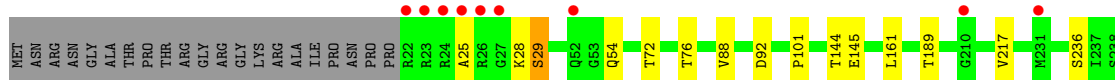
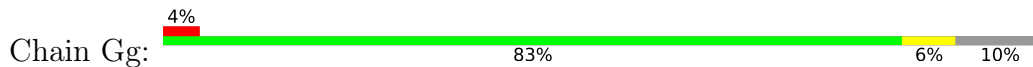


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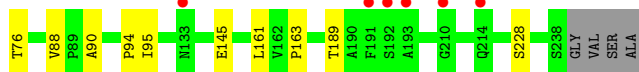
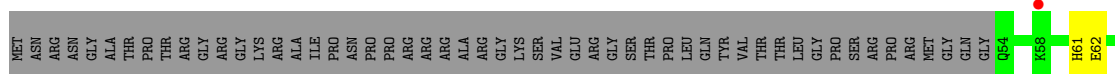
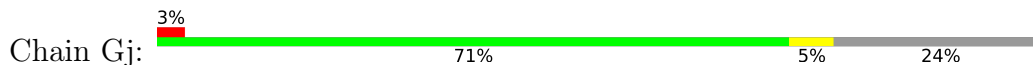




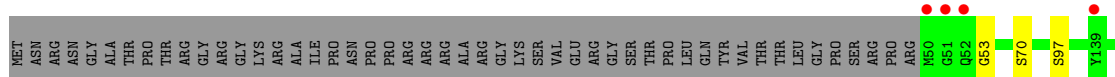
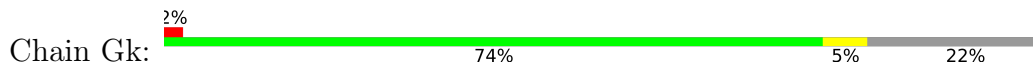
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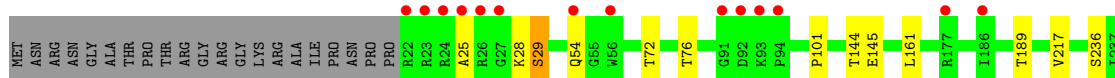
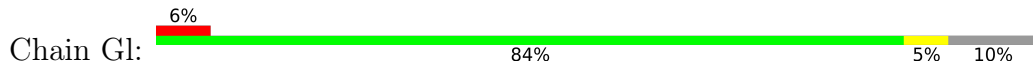
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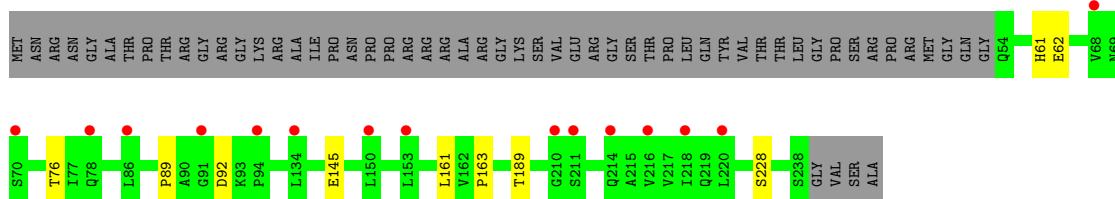
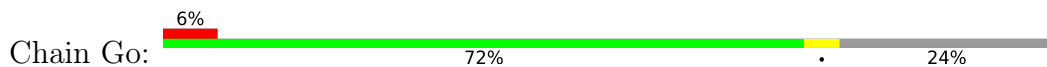
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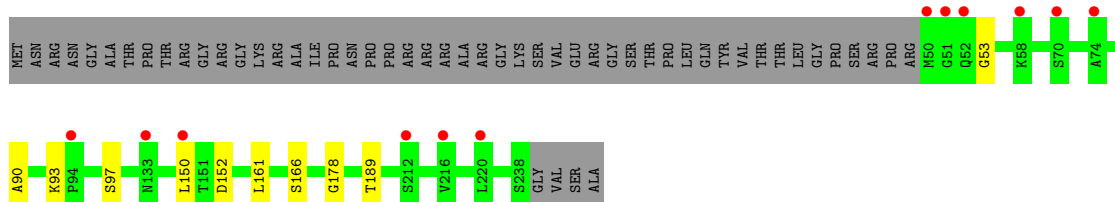
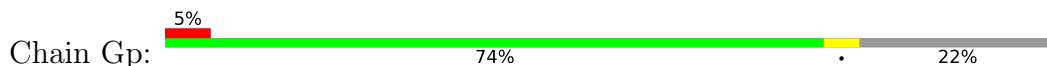
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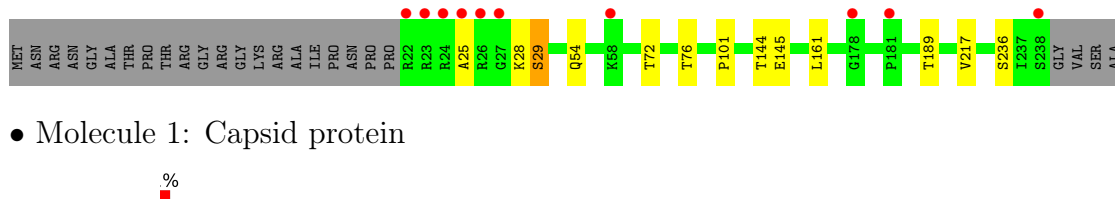
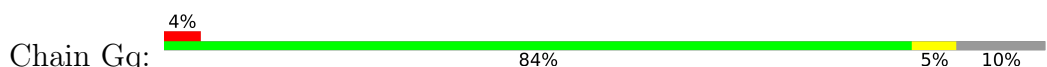
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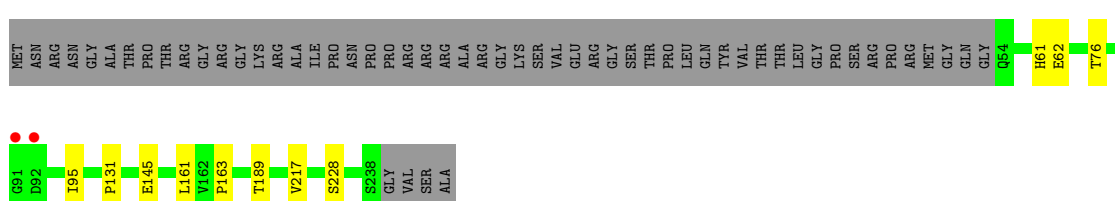
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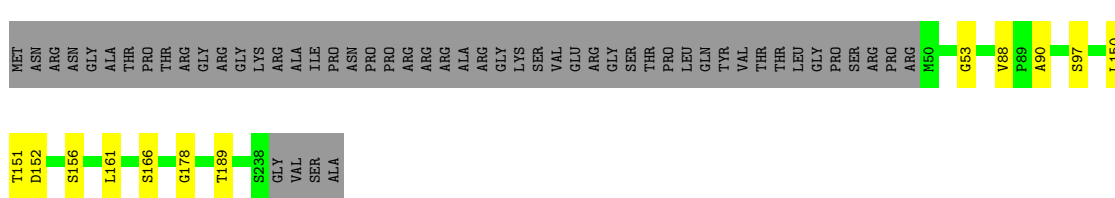
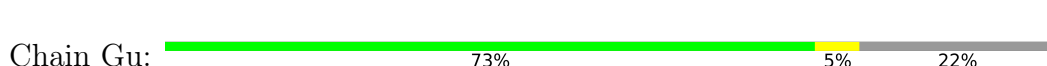
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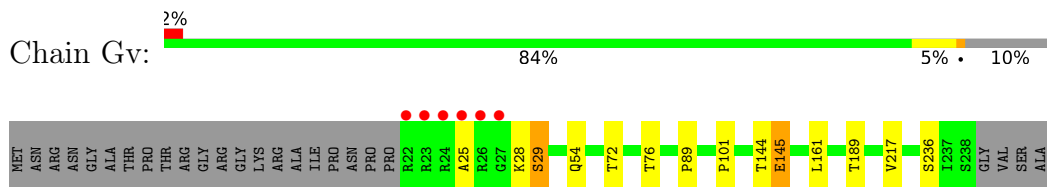
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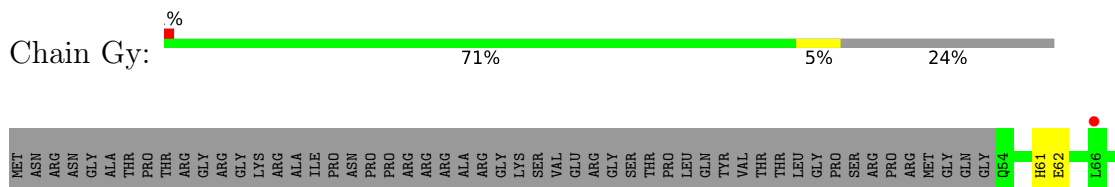
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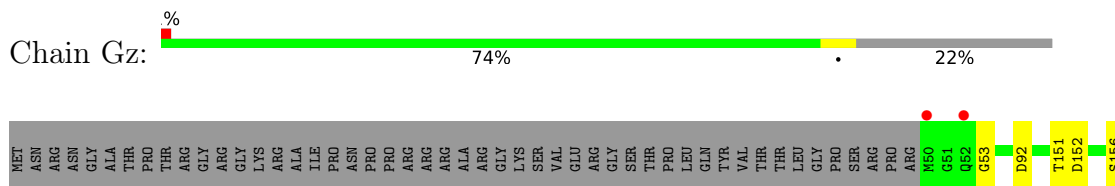
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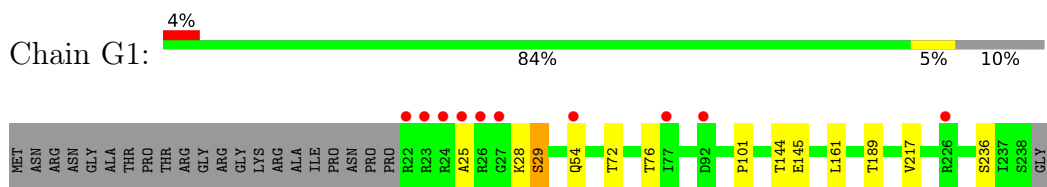
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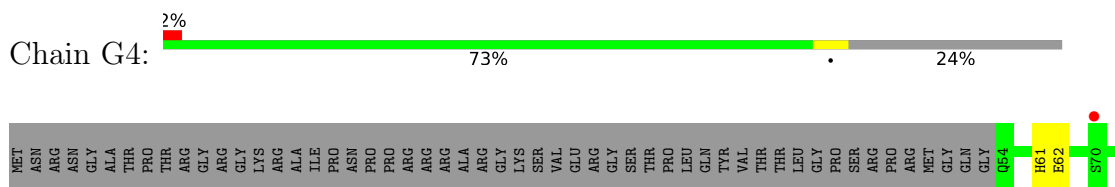
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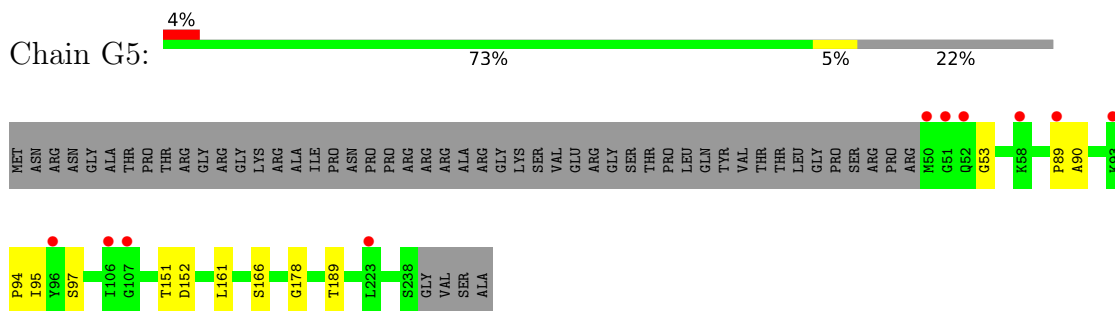


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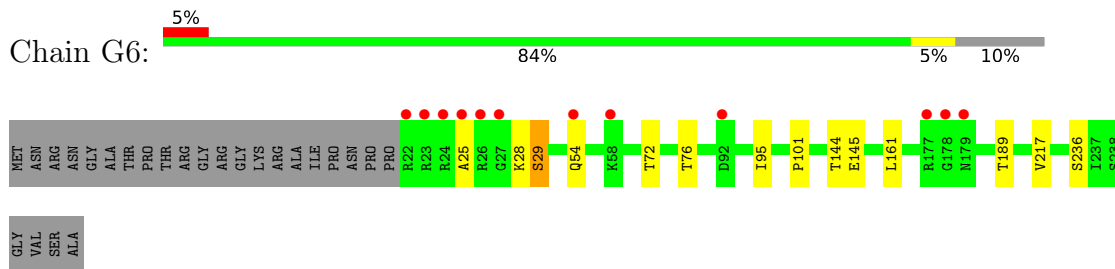


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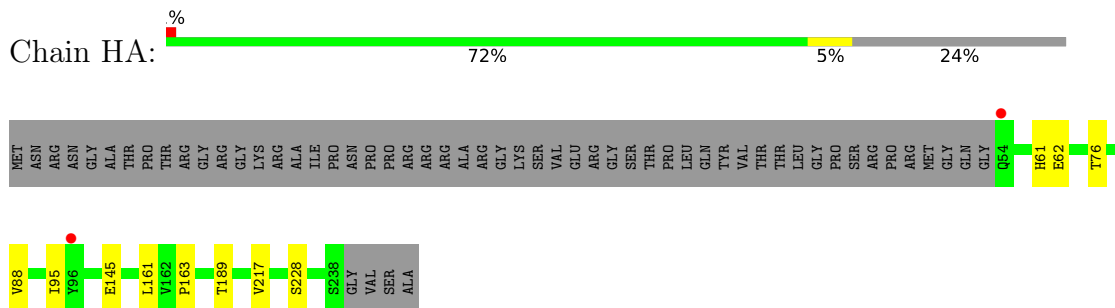




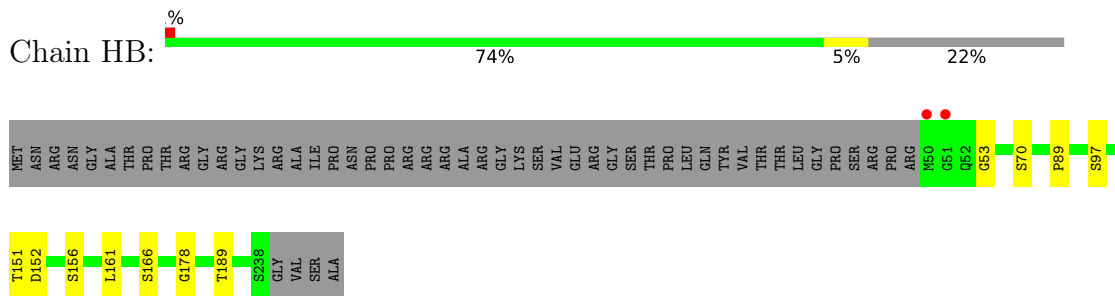
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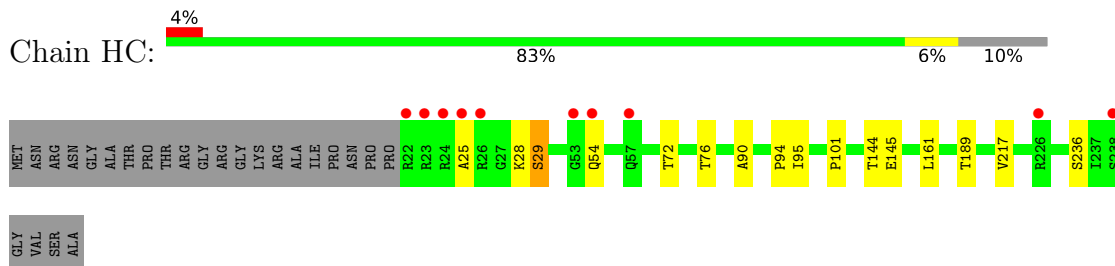
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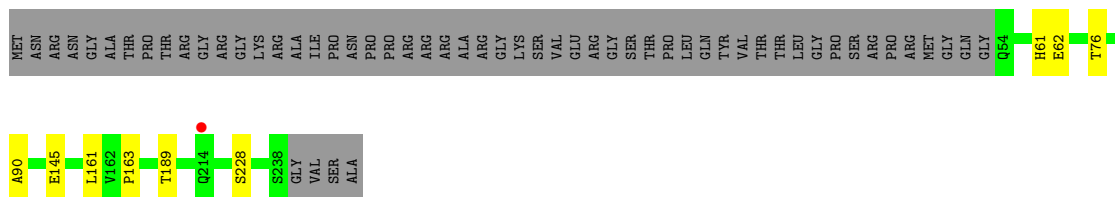
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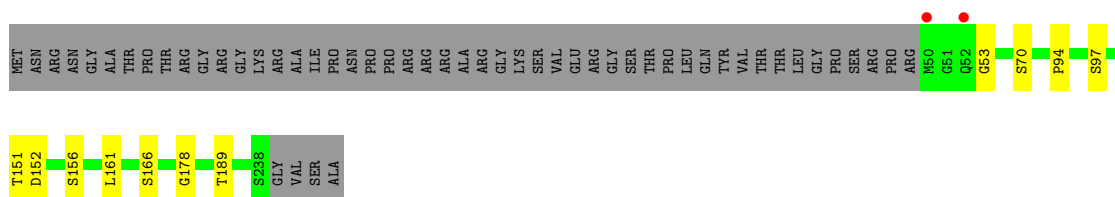
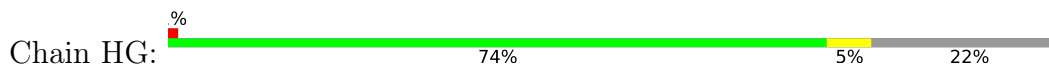
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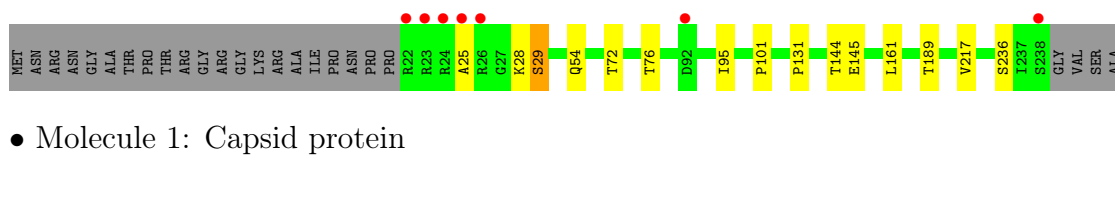
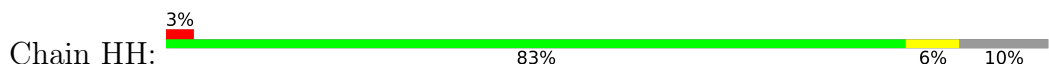
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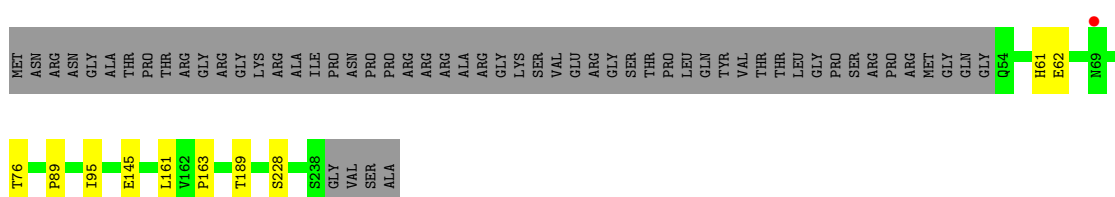
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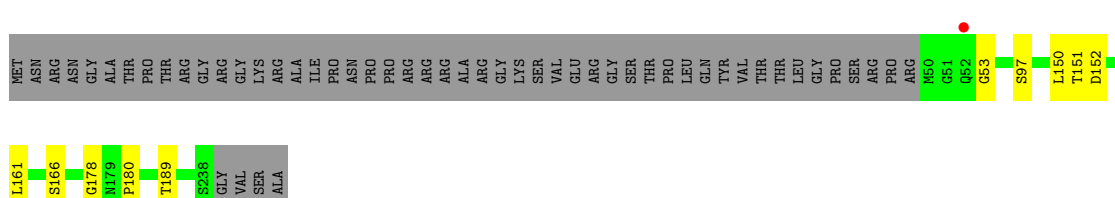
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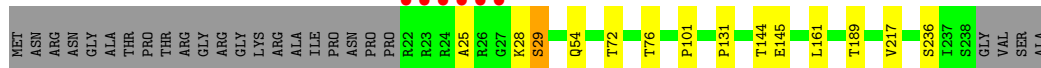
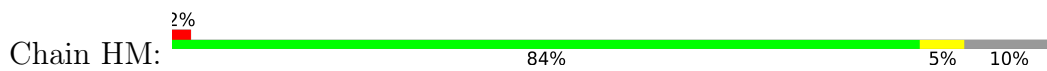
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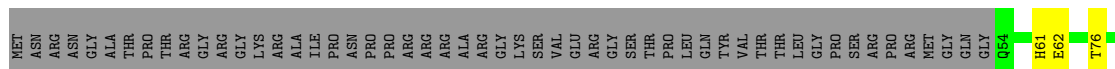
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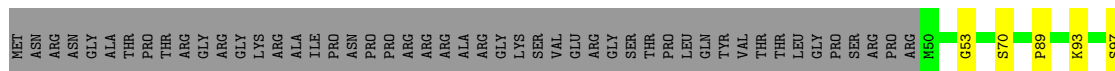
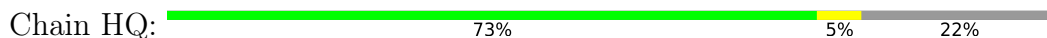
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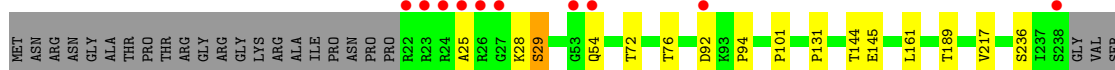
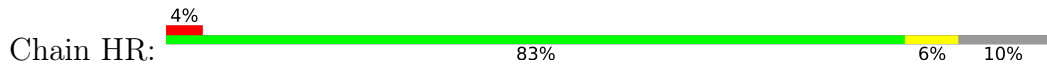
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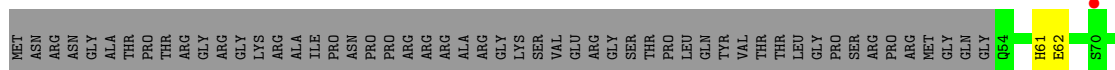
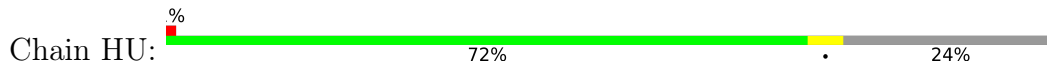
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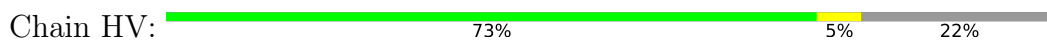
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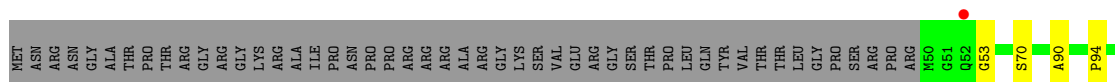


● Molecule 1: Capsid protein

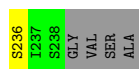
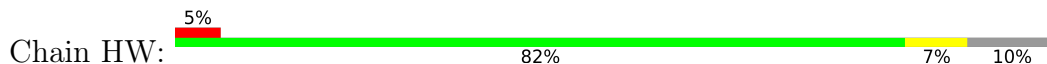


● Molecule 1: Capsid protein

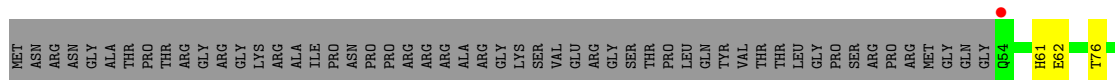




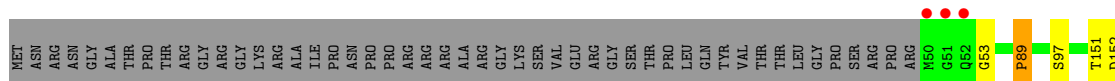
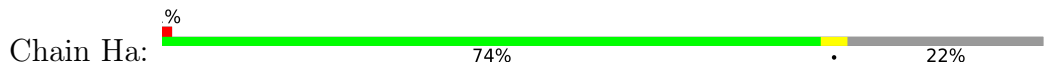
● Molecule 1: Capsid protein



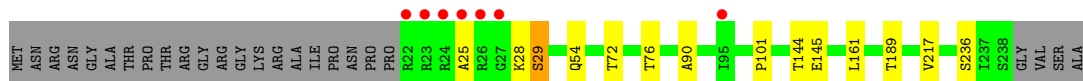
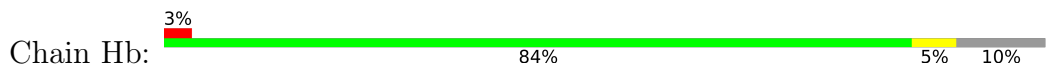
● Molecule 1: Capsid protein



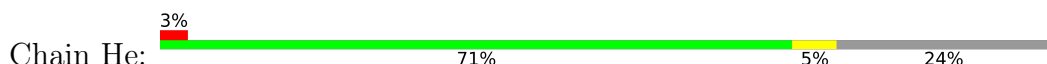
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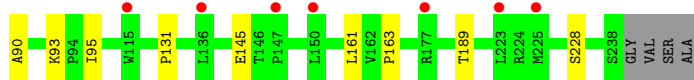
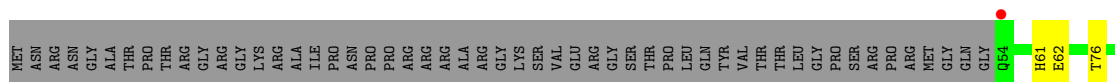


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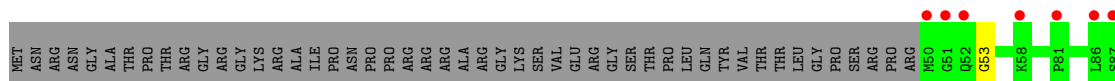
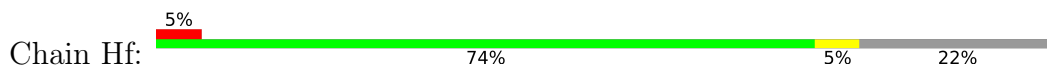


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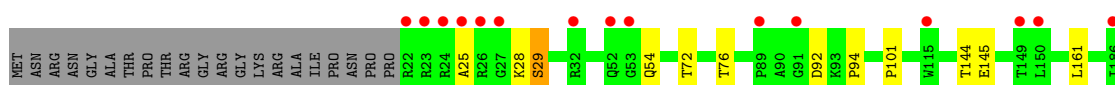
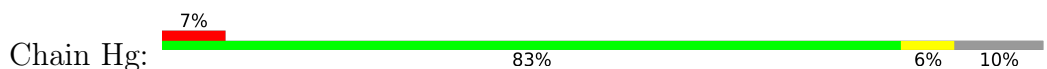




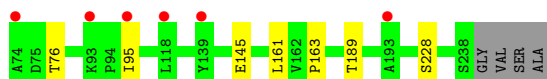
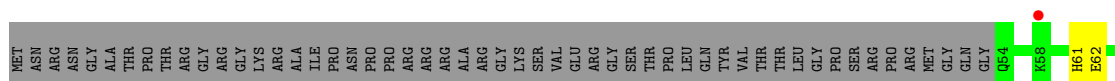
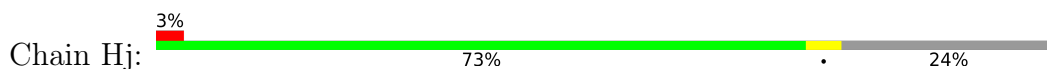
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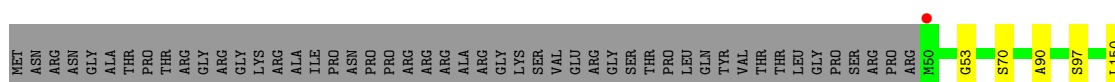
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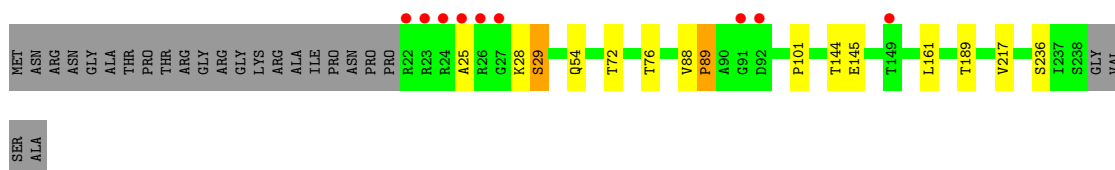
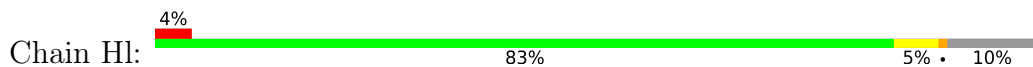
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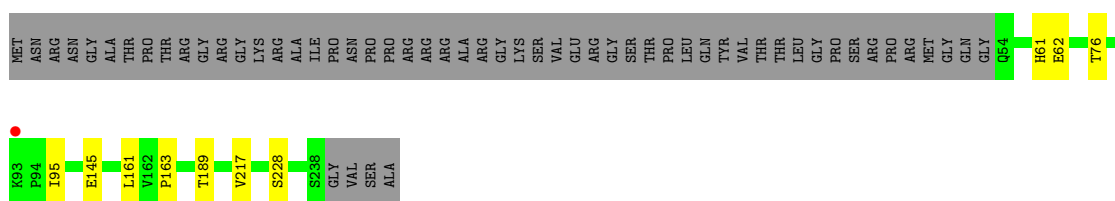
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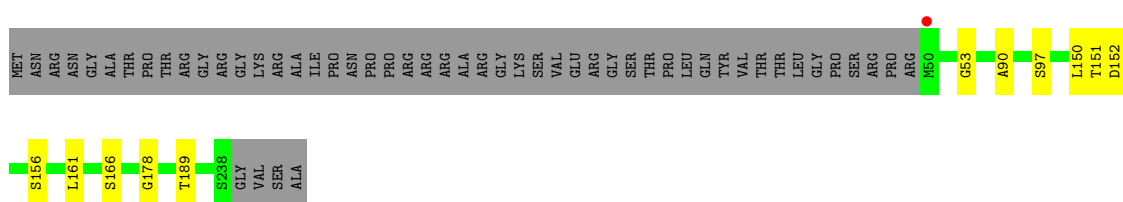
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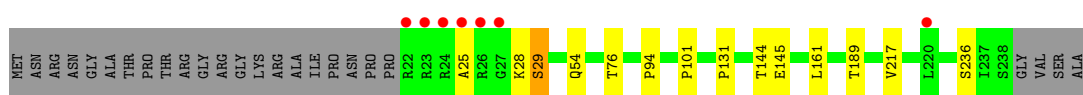
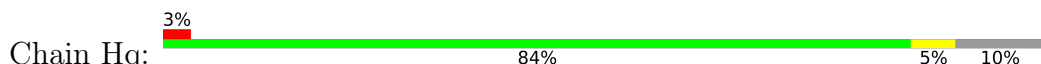
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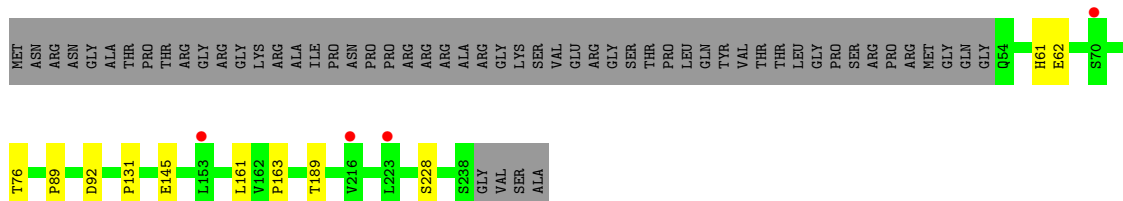
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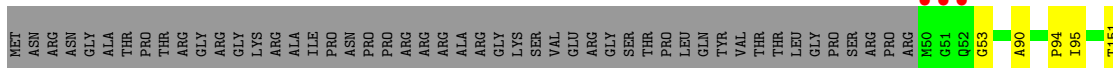
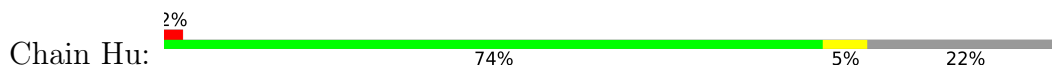
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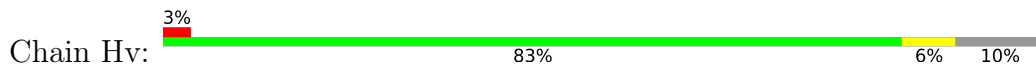
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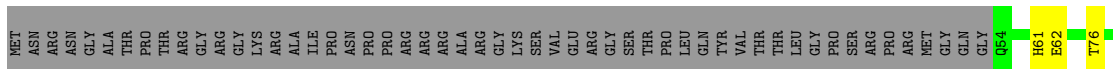
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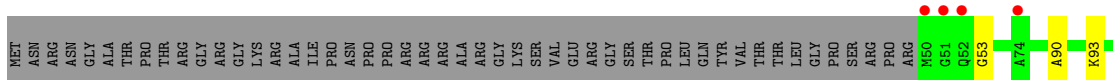
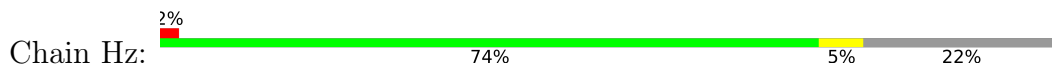
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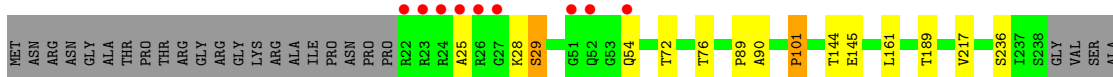
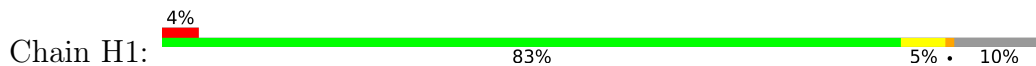
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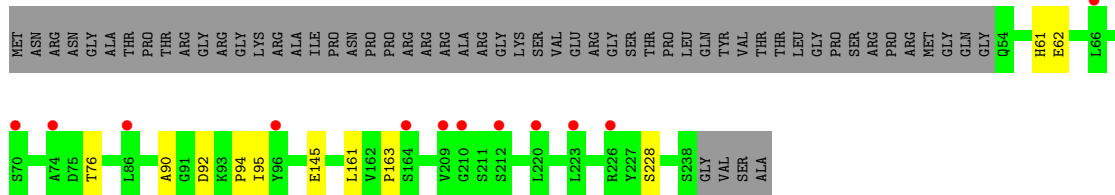
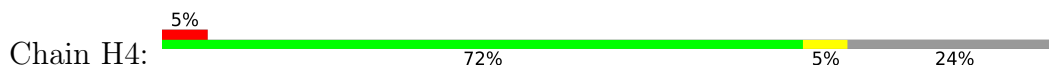
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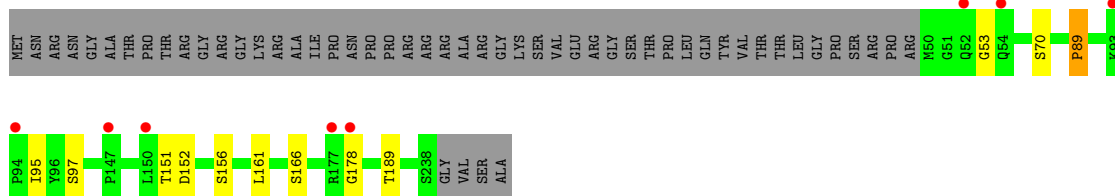
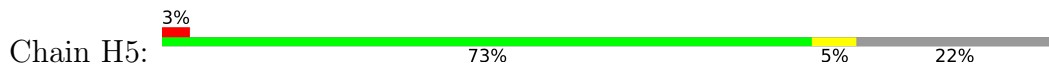
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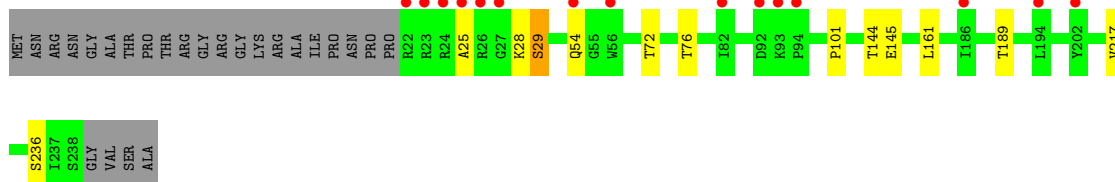
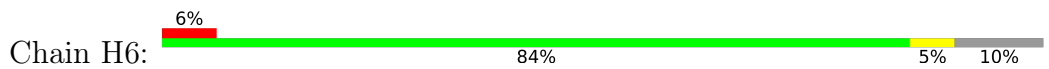
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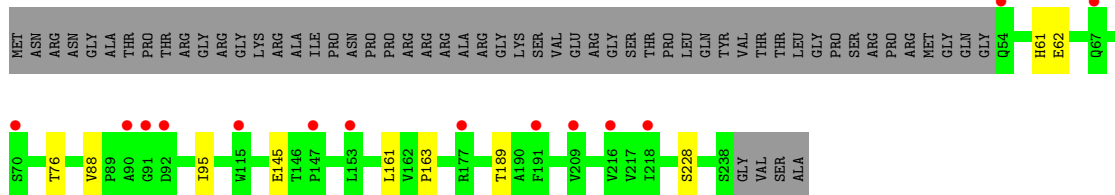
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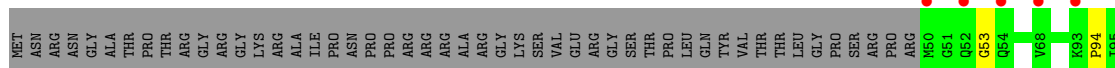
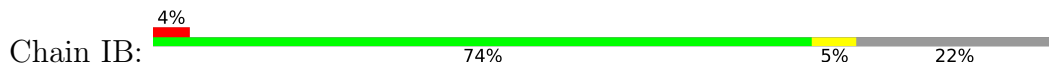
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• Molecule 1: Capsid protein

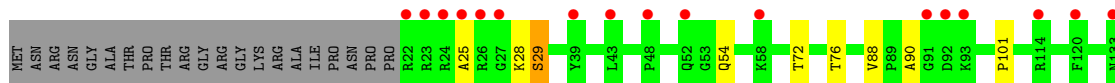
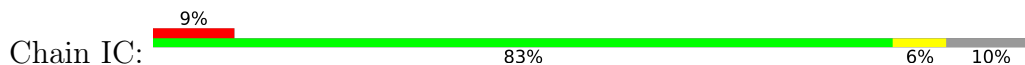


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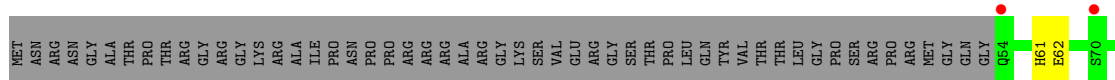
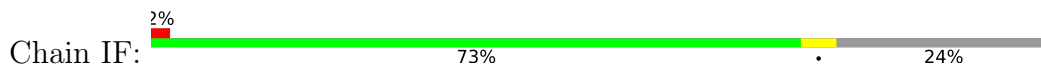




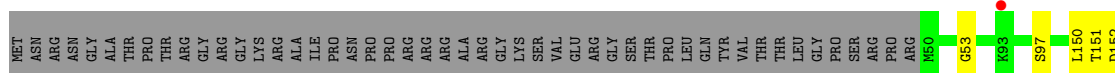
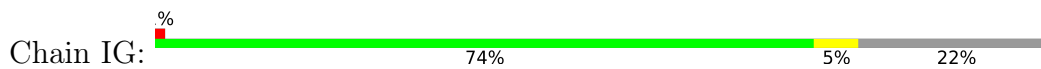
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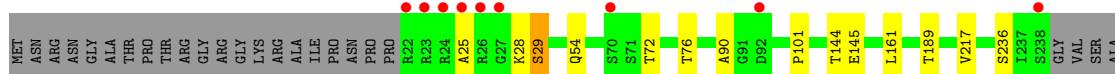
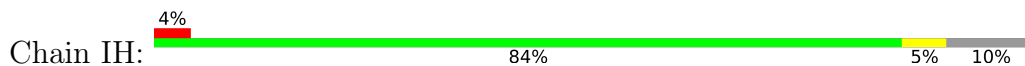
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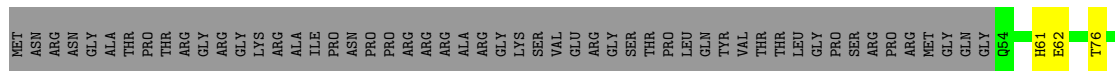
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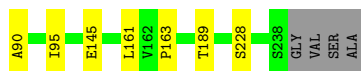


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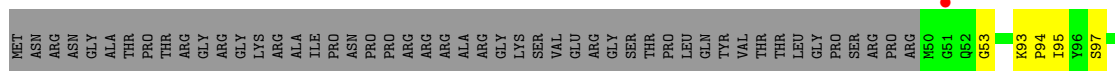


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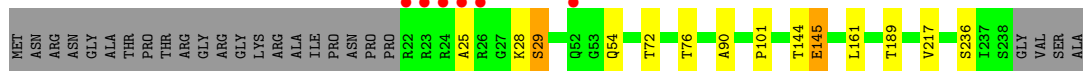
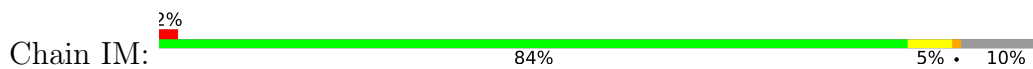




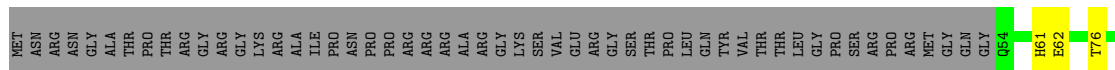
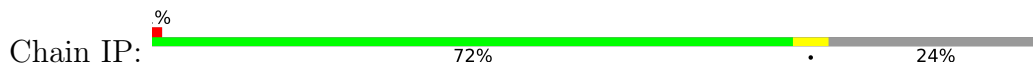
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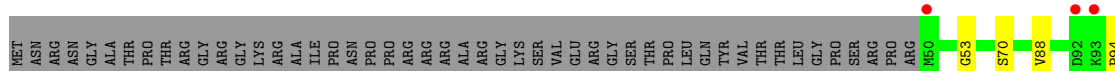
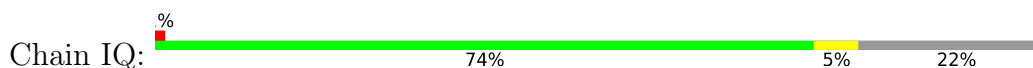
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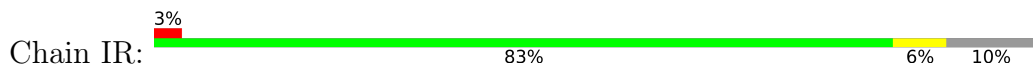
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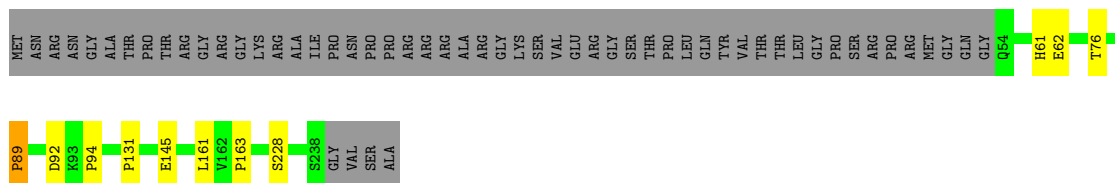


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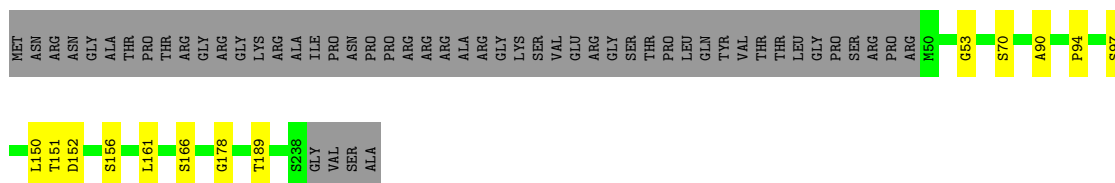
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Chain IU: 72% 24%



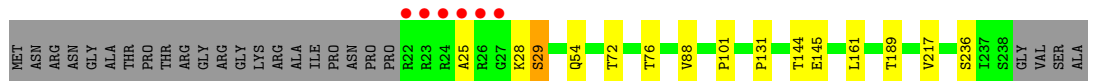
• Molecule 1: Capsid protein

Chain IV: 73% 22% 5%



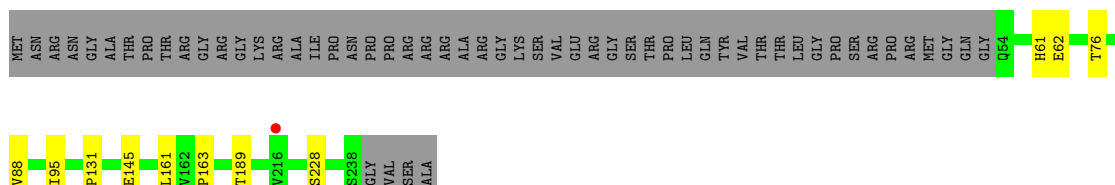
• Molecule 1: Capsid protein

Chain IW: 83% 6% 10% 2%



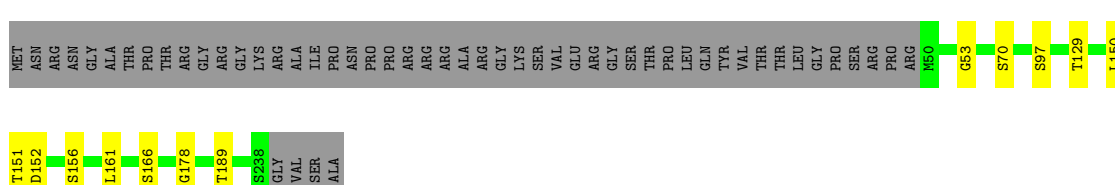
• Molecule 1: Capsid protein

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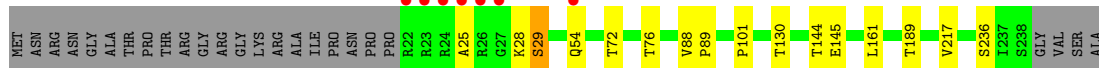
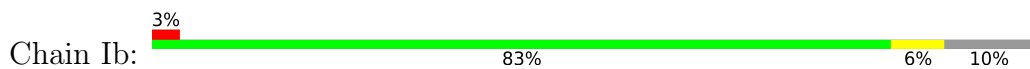


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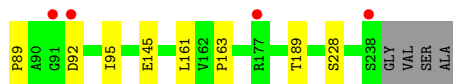
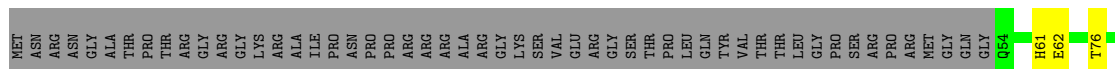
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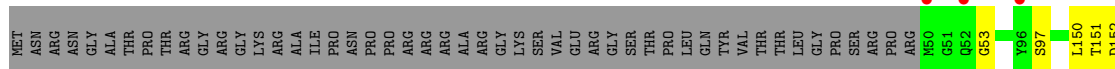
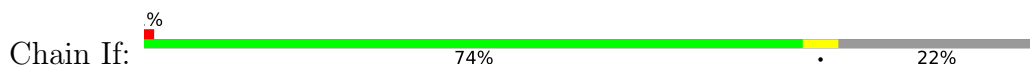
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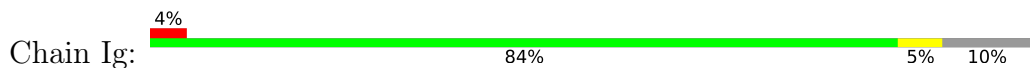
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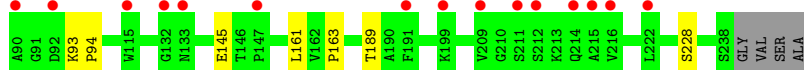
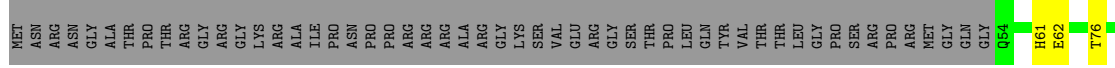


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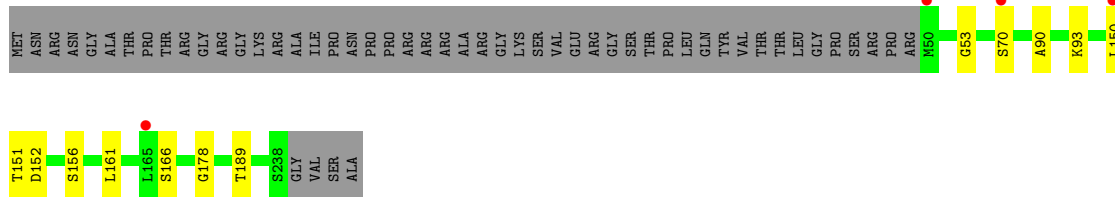
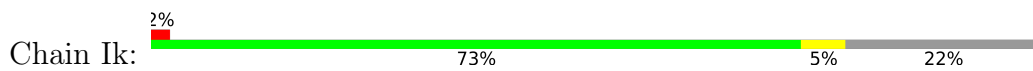


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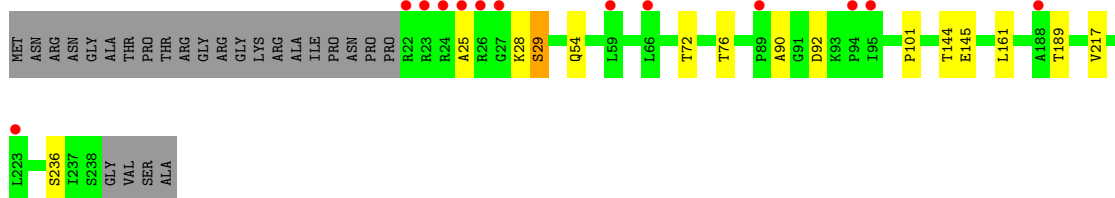
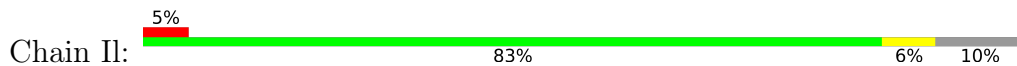
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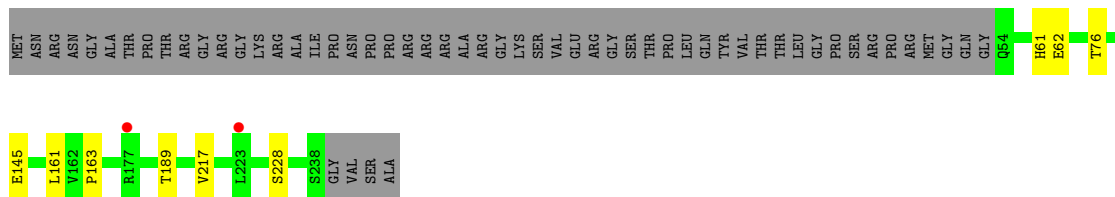
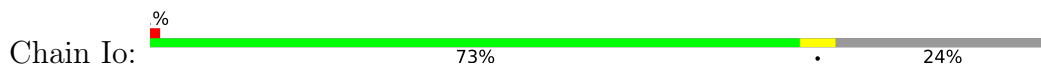
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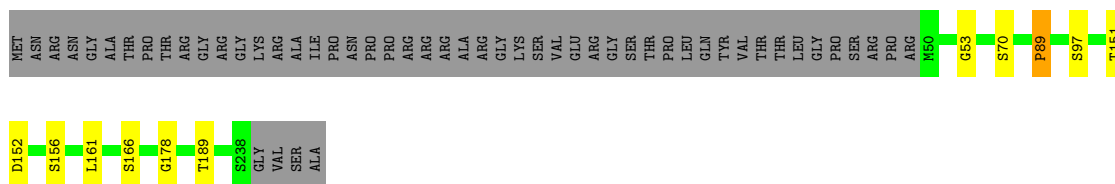
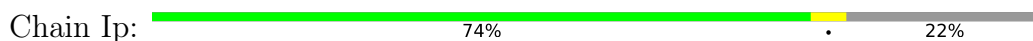
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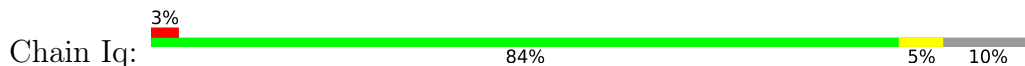
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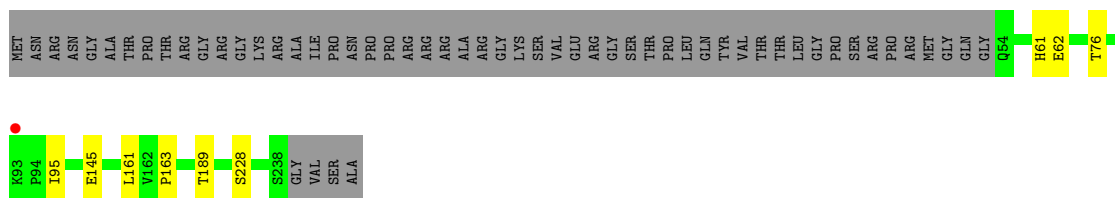
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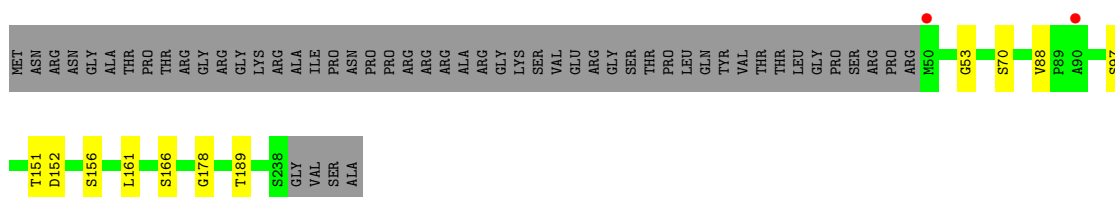
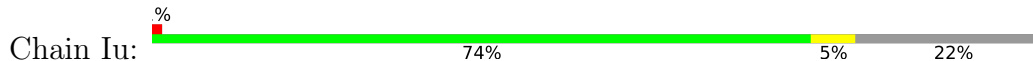
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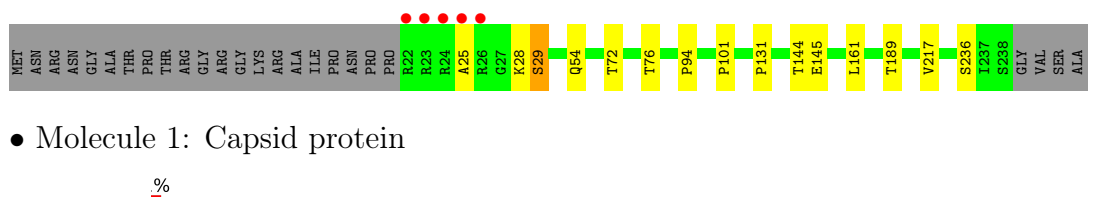
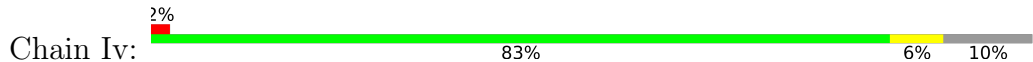
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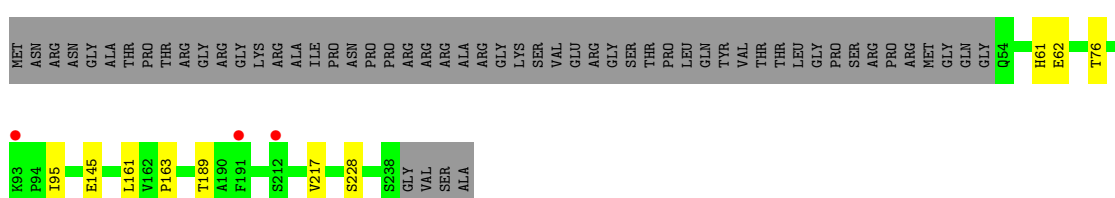
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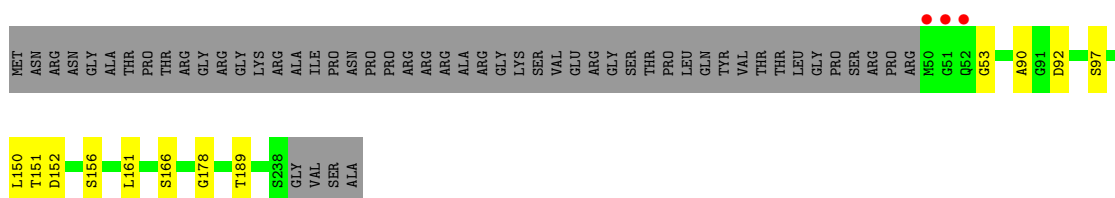
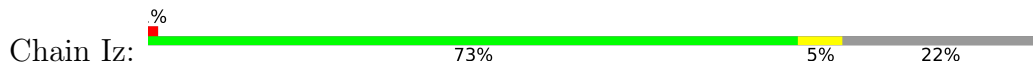
• Molecule 1: Capsid protein



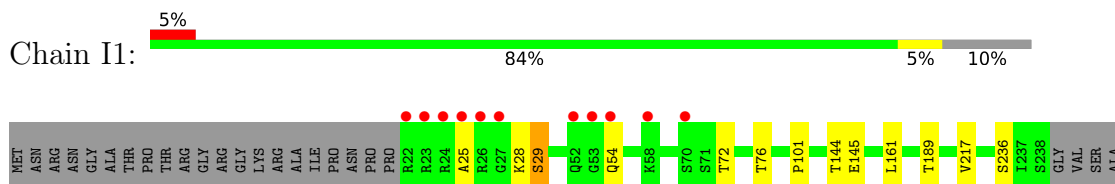
• Molecule 1: Capsid protein



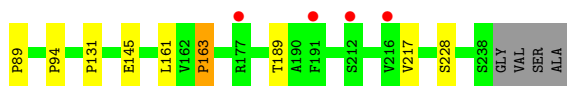
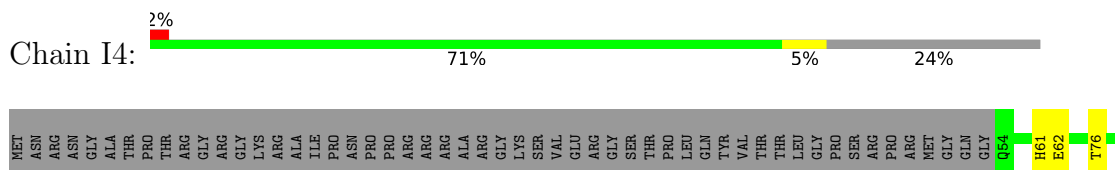
• Molecule 1: Capsid protein



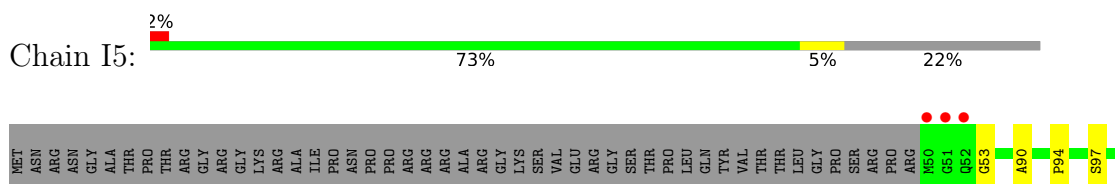
• Molecule 1: Capsid protein



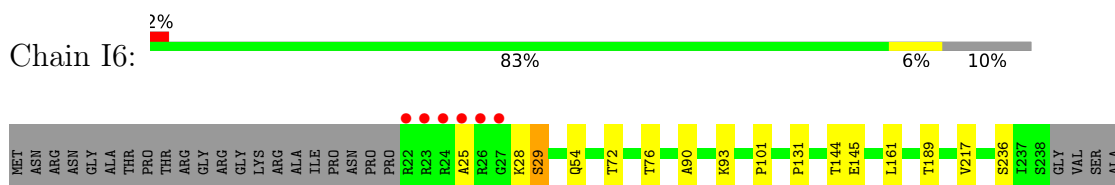
• Molecule 1: Capsid protein



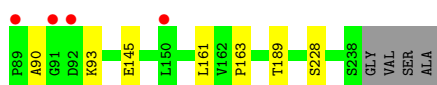
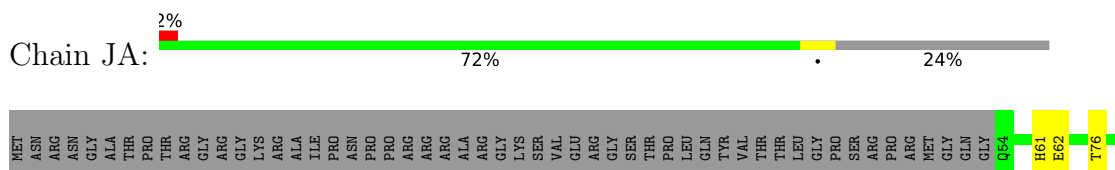
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

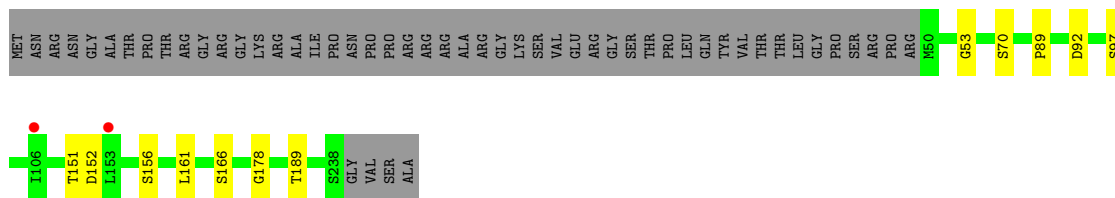


• Molecule 1: Capsid protein

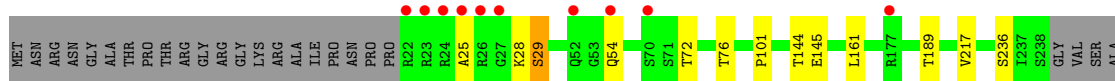
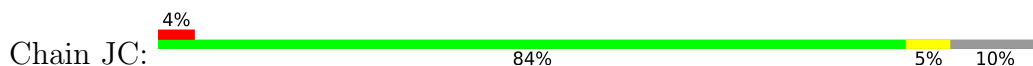


• Molecule 1: Capsid protein

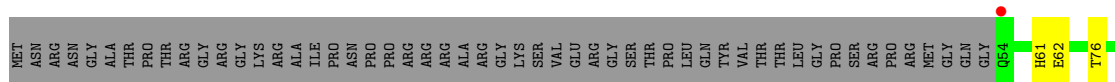
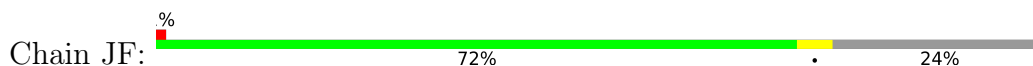




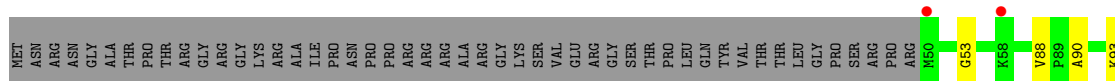
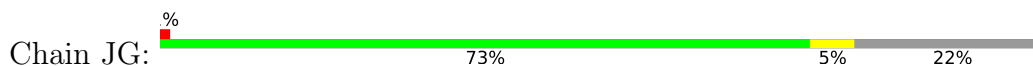
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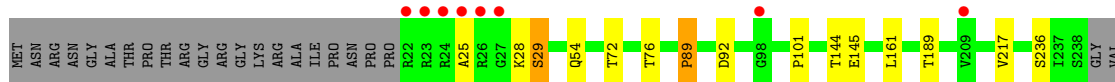
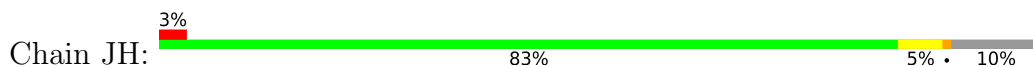
• Molecule 1: Capsid protein



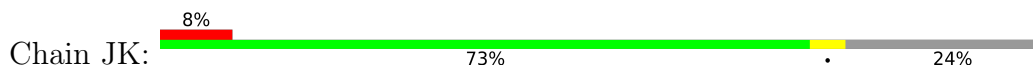
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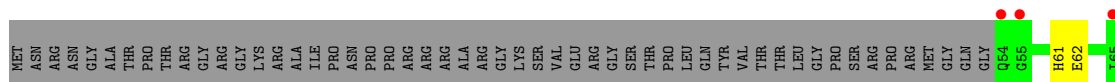


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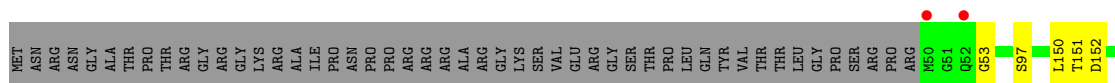
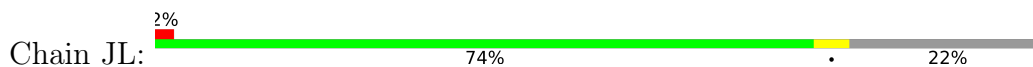


• Molecule 1: Capsid protein

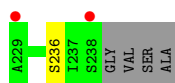
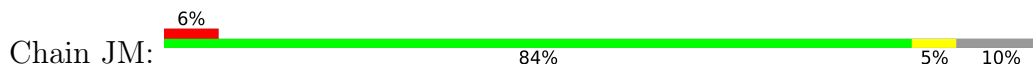




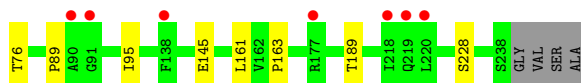
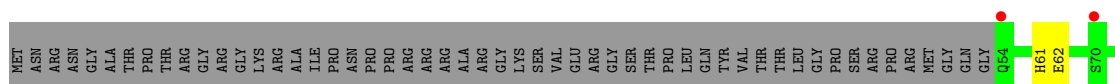
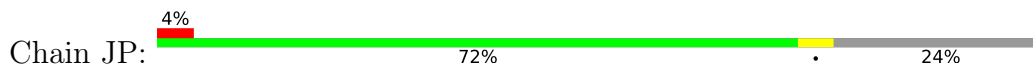
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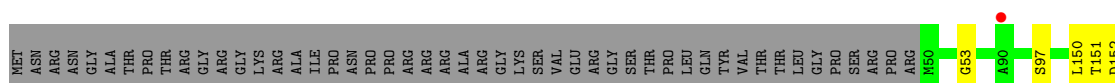
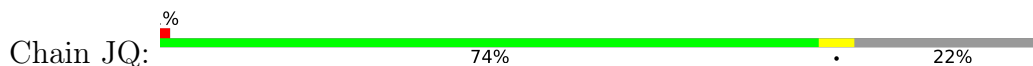
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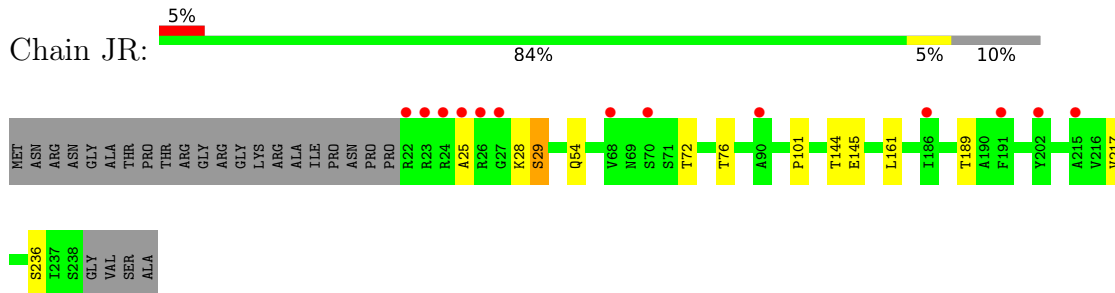
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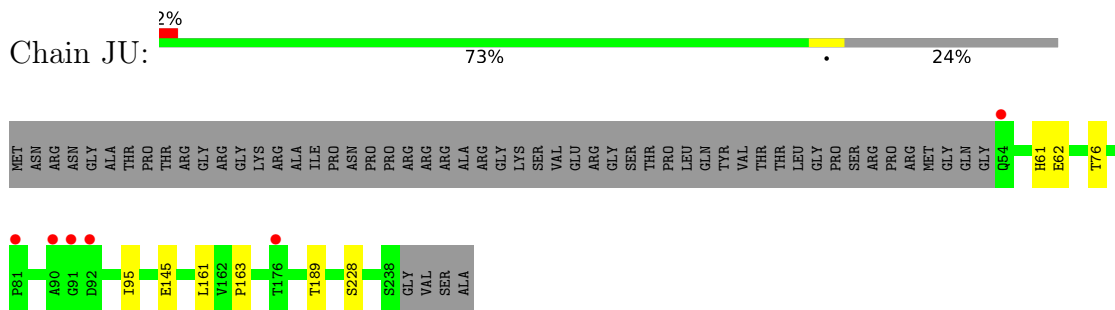
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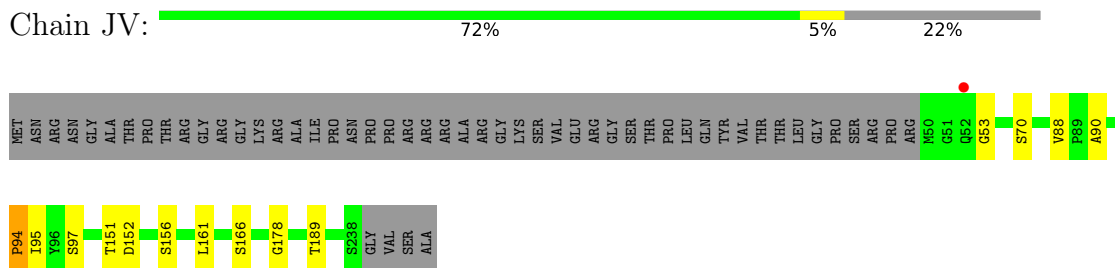
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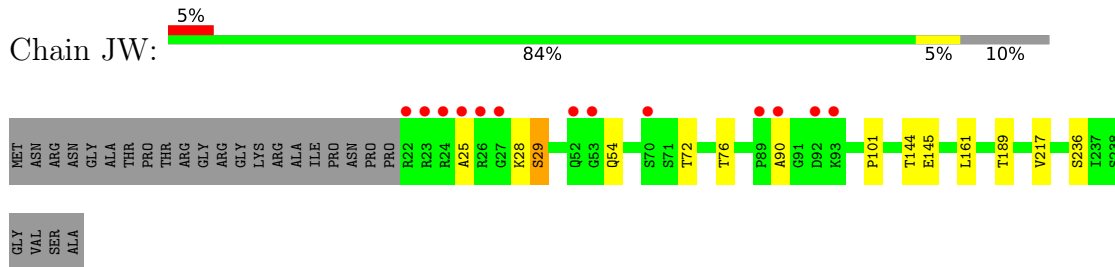
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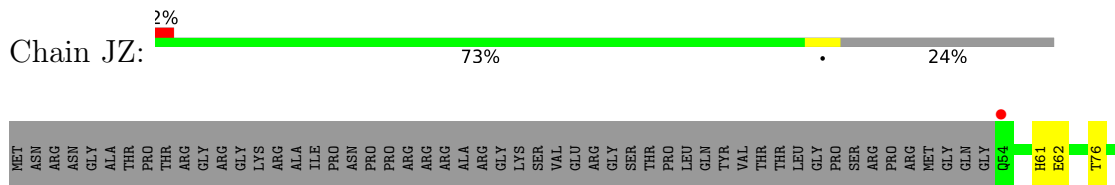
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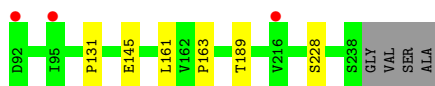


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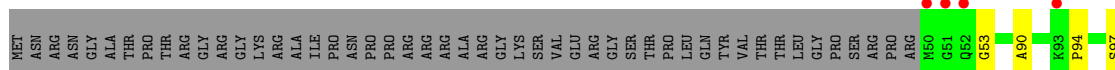
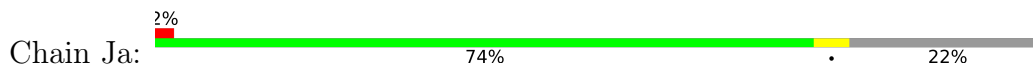


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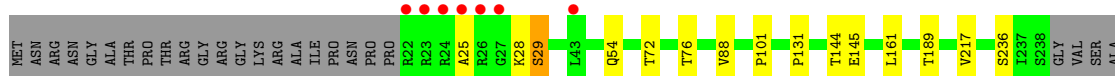
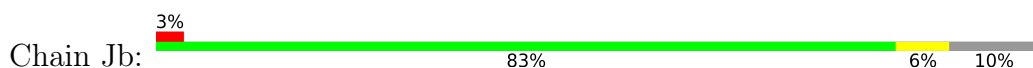




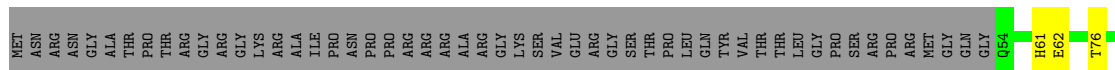
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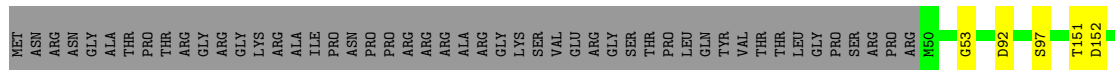
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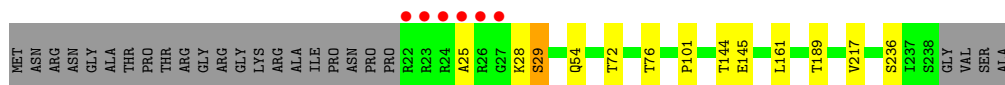
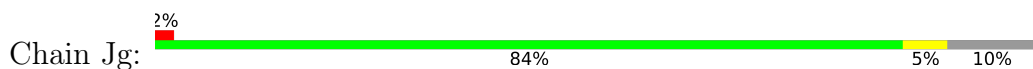
• Molecule 1: Capsid protein



• Molecule 1: Capsid protein

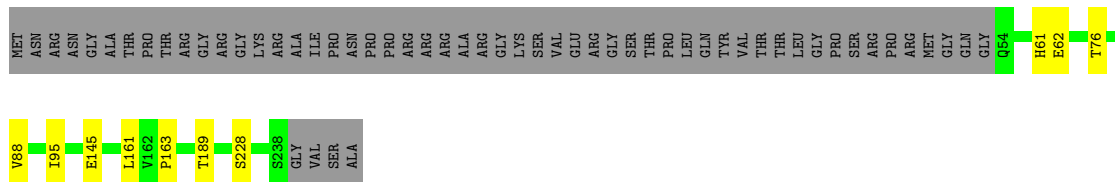


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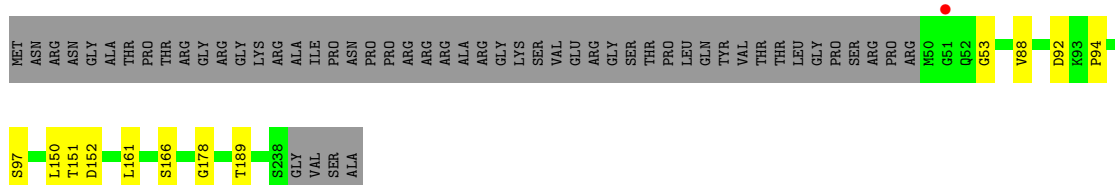
• Molecule 1: Capsid protein

Chain Jj: 72% 24%



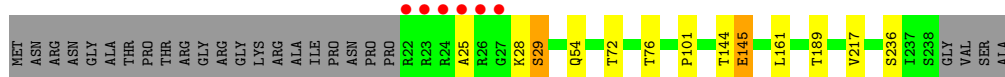
• Molecule 1: Capsid protein

Chain Jk: 73% 22%



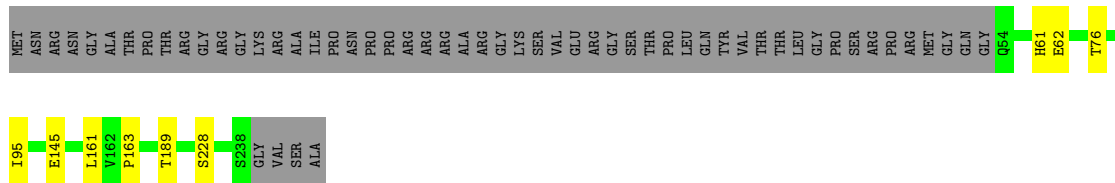
• Molecule 1: Capsid protein

Chain Jl: 2% 84% 5% • 10%



• Molecule 1: Capsid protein

Chain Jo: 73% 24%

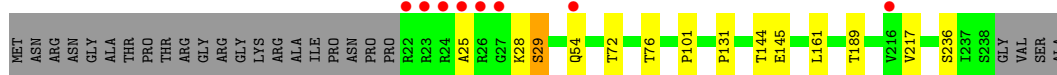
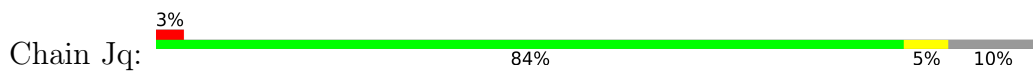


• Molecule 1: Capsid protein

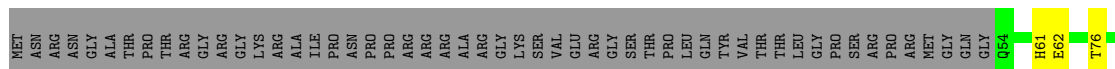
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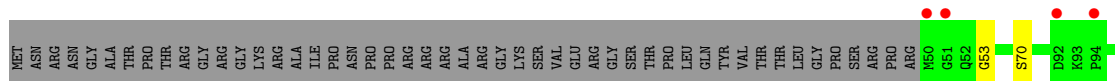
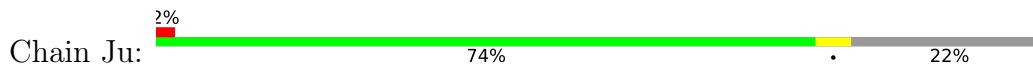
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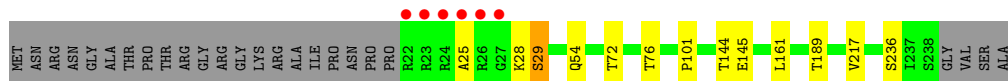
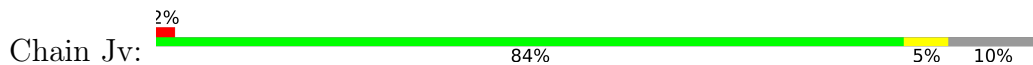
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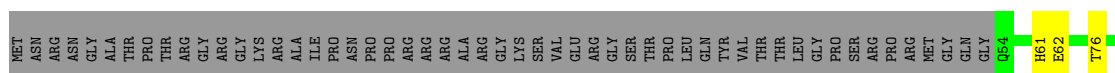
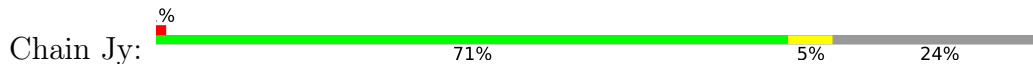
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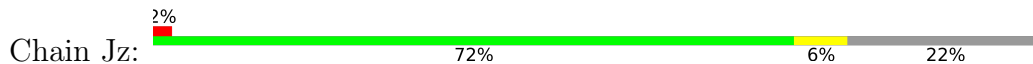
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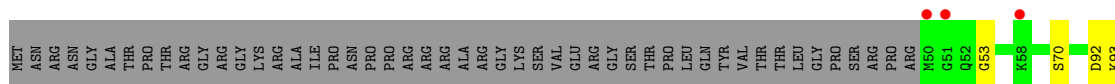


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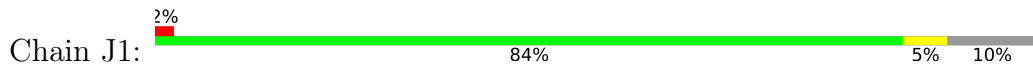


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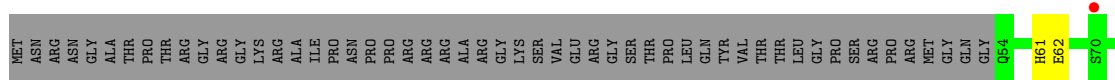
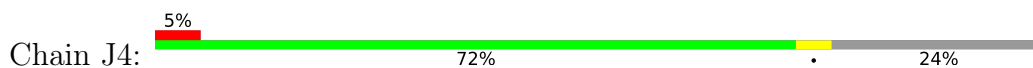




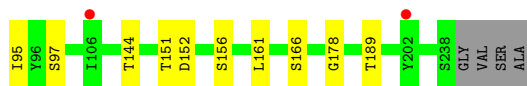
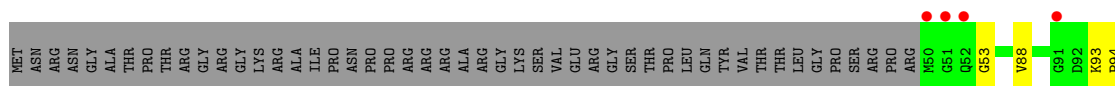
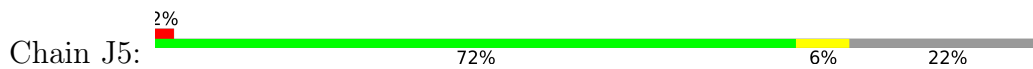
• Molecule 1: Capsid protein



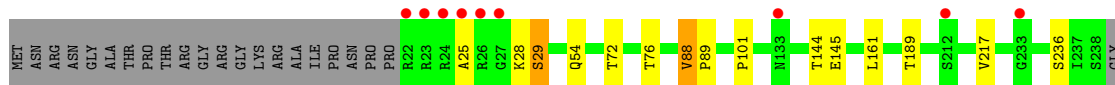
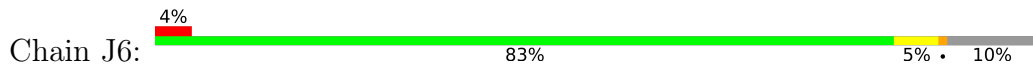
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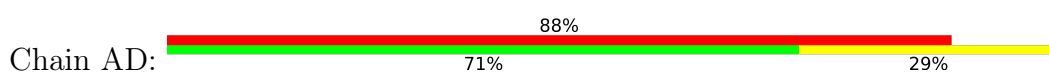
• Molecule 1: Capsid protein

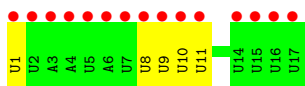


• Molecule 1: Capsid protein

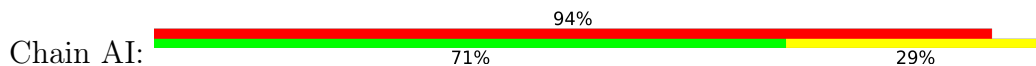


• Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3

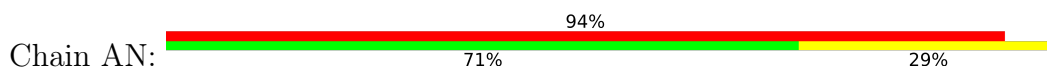




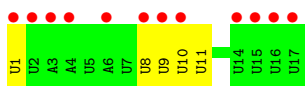
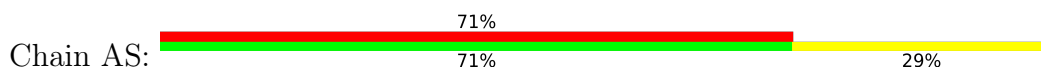
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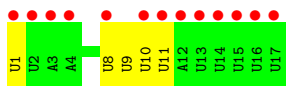
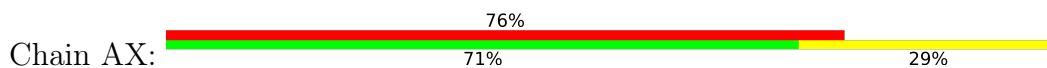
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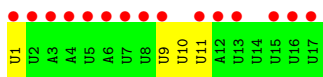
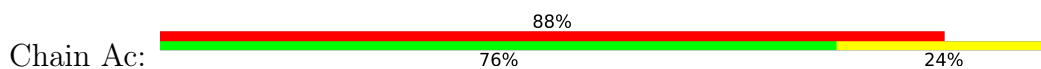
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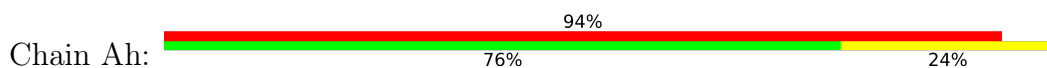
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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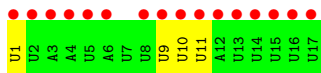


● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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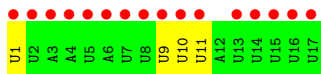
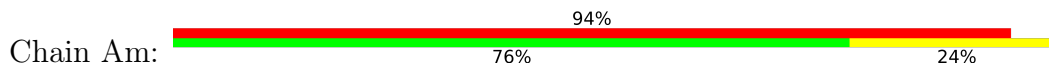


● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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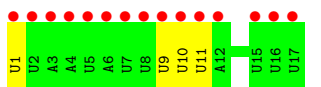
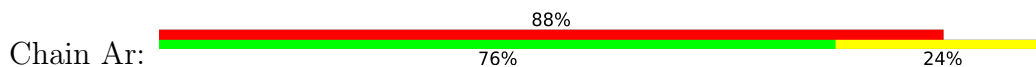




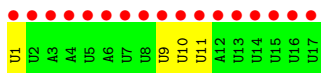
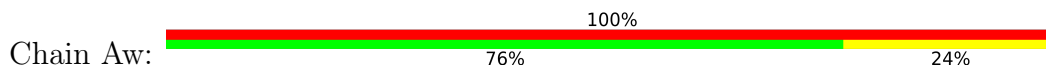
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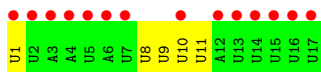
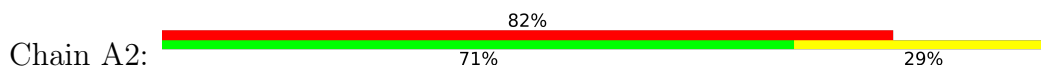
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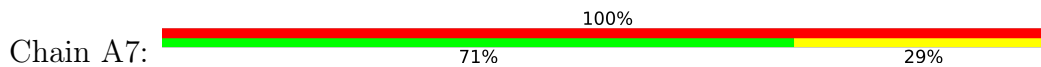
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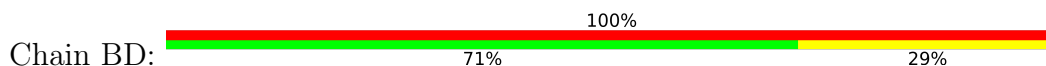
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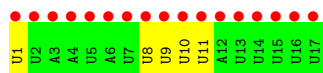


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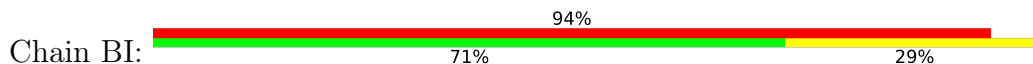


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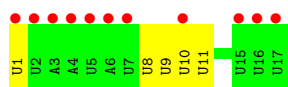




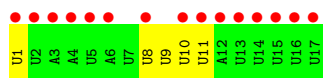
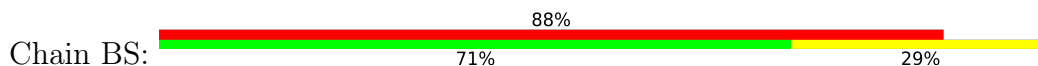
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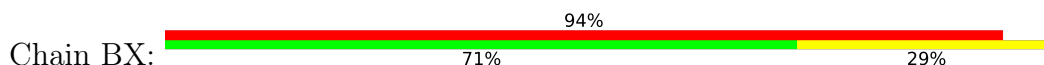
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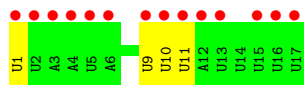
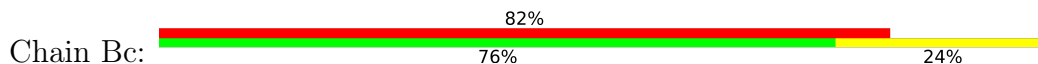
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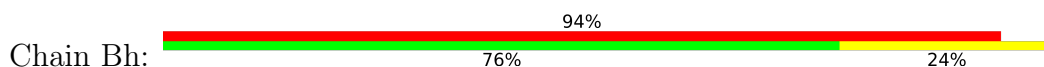
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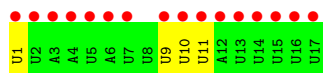


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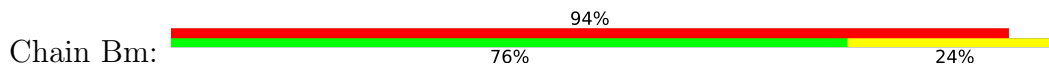


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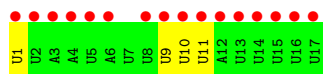
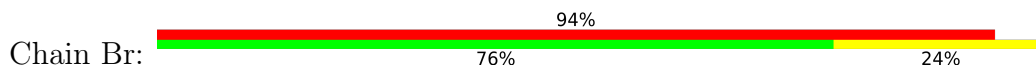




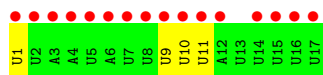
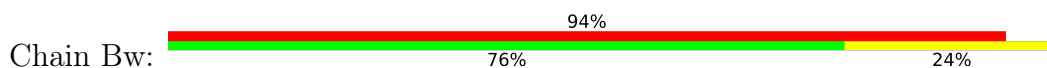
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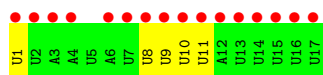
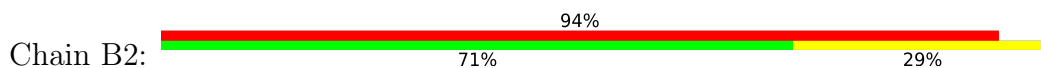
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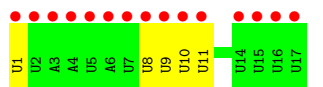
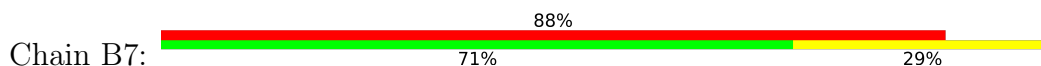
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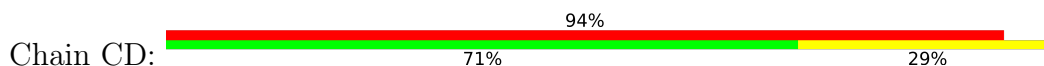
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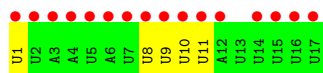


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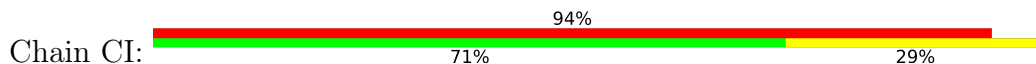


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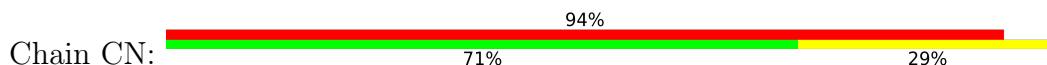




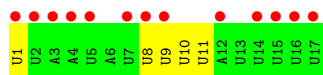
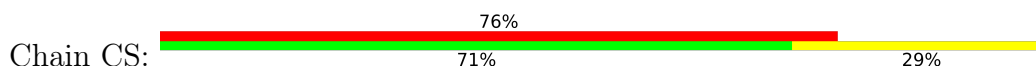
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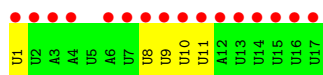
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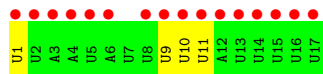
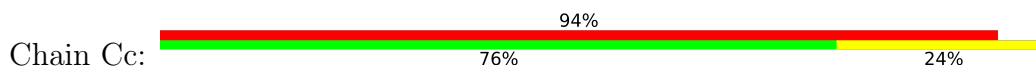
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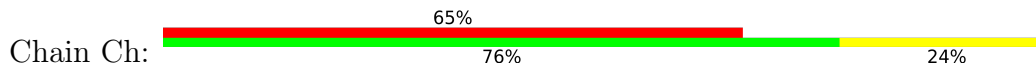
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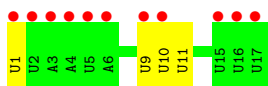


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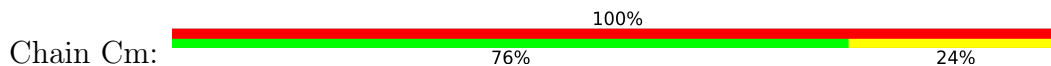


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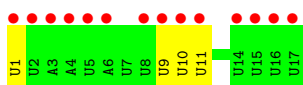
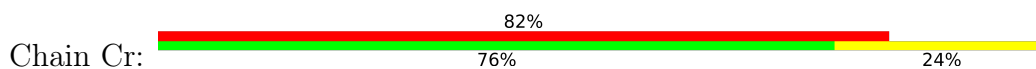




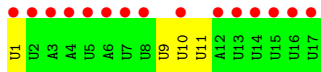
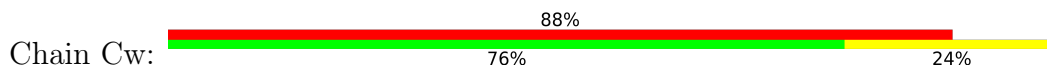
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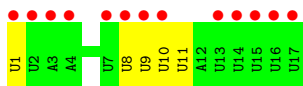
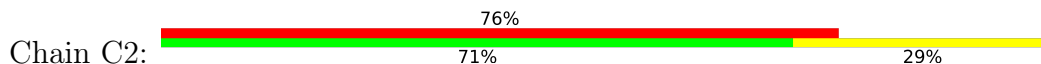
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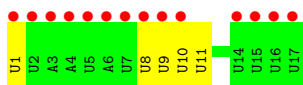
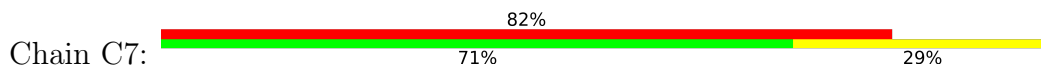
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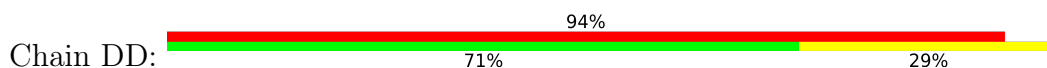
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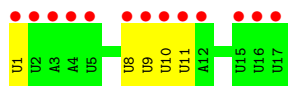
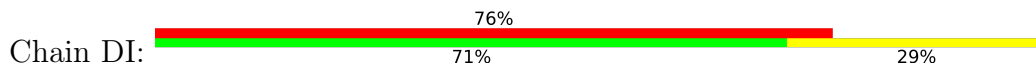


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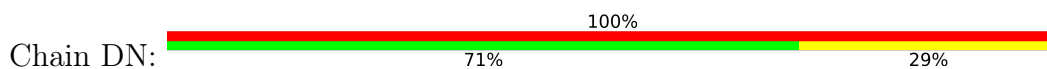




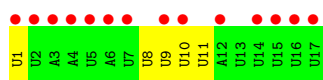
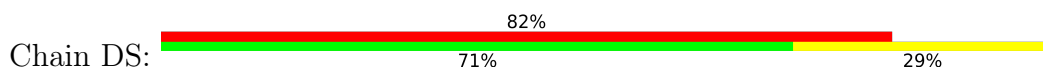
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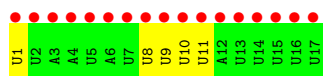
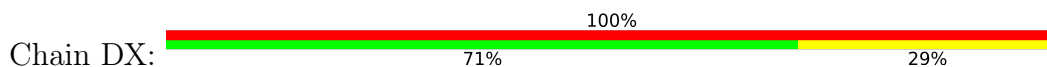
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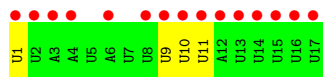
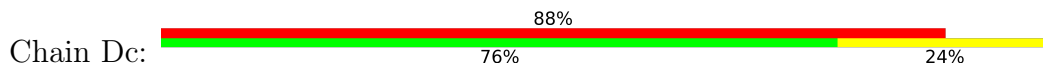
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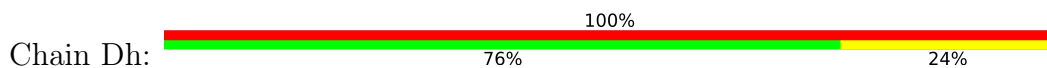
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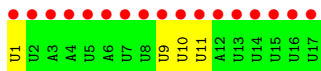


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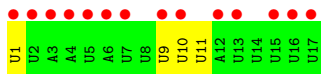
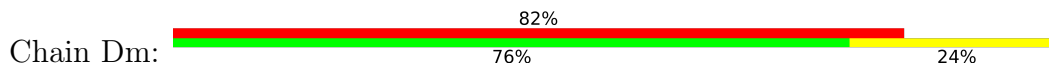


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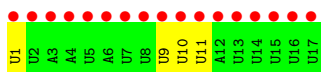
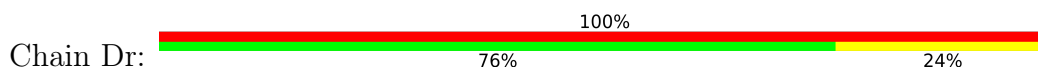




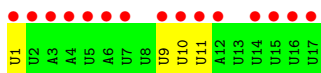
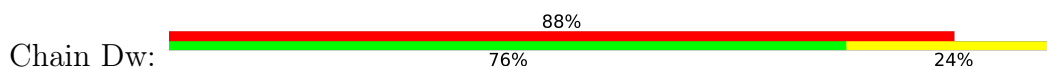
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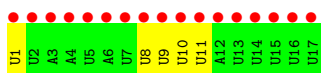
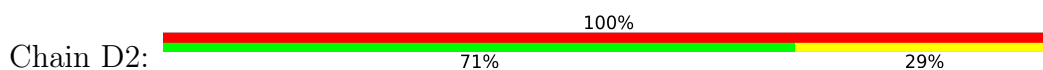
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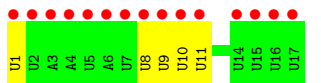
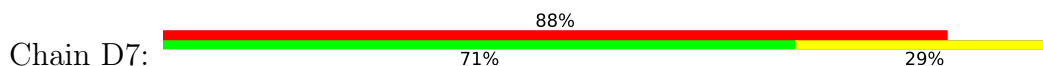
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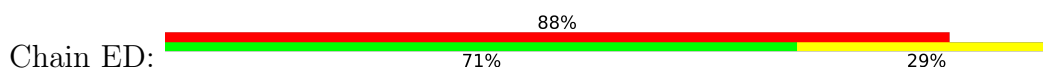
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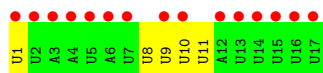


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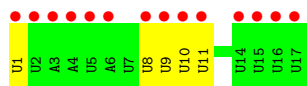
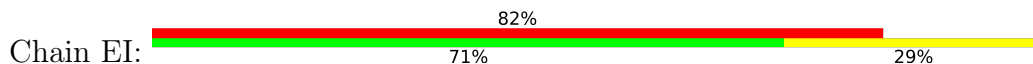


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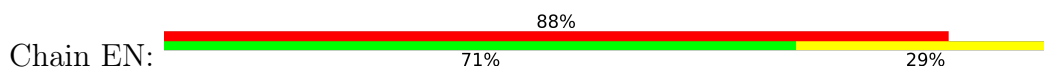




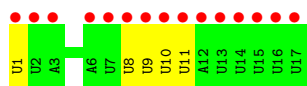
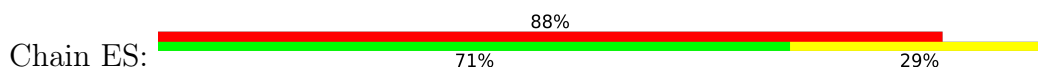
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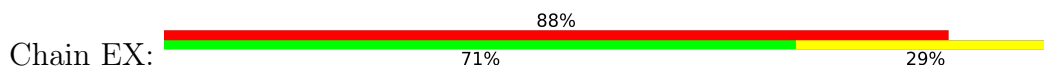
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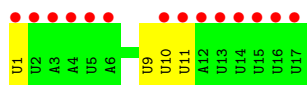
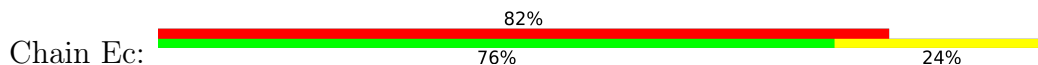
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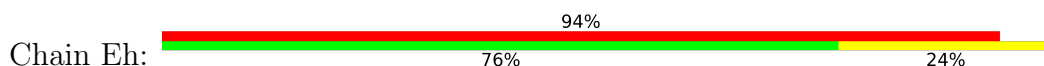
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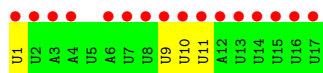


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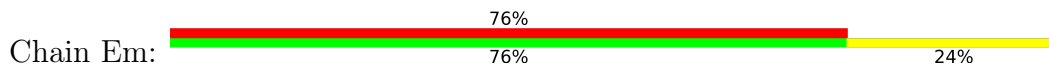


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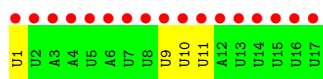
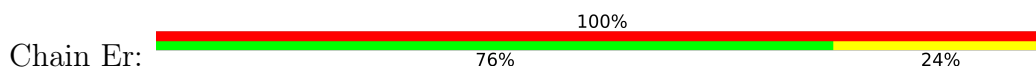




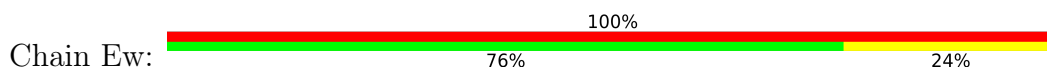
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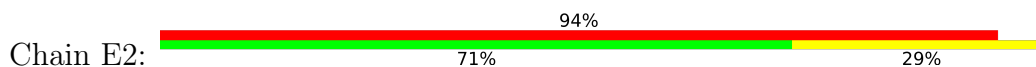
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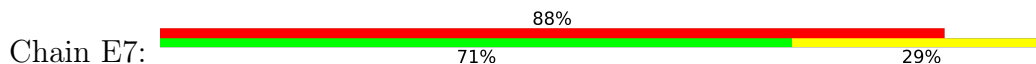
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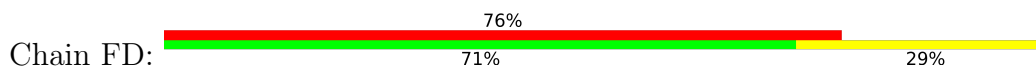
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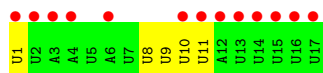


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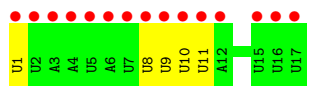
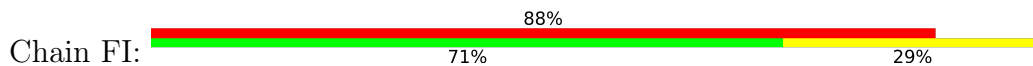


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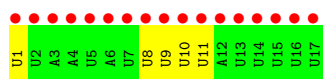
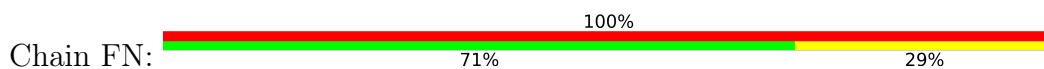




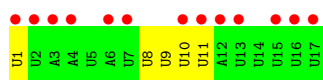
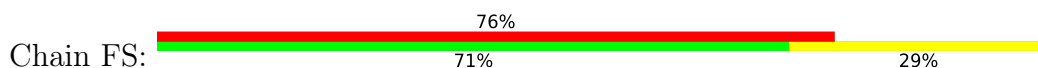
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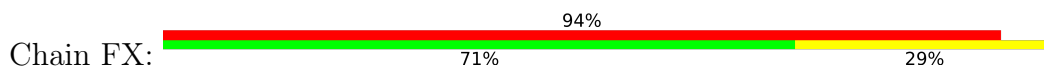
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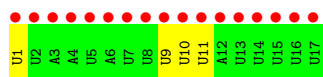
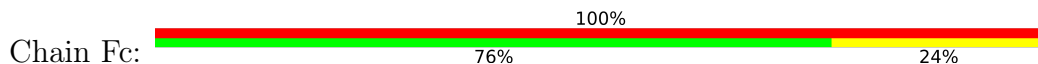
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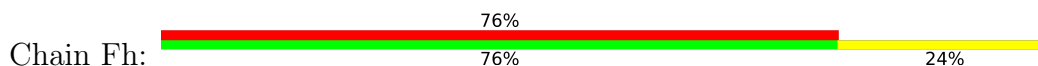
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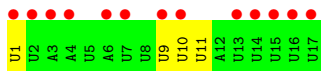


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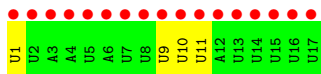
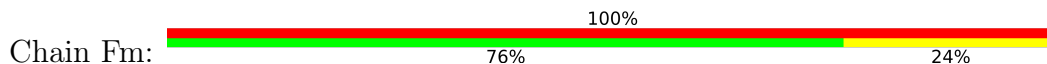


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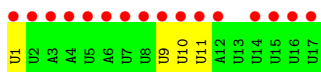
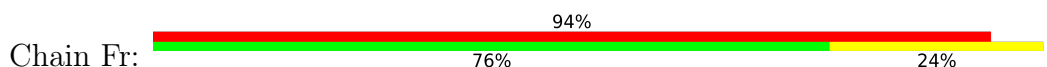




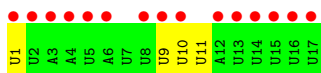
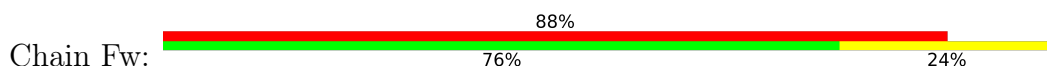
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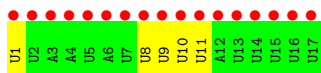
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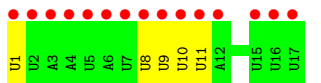
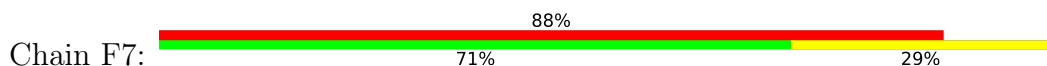
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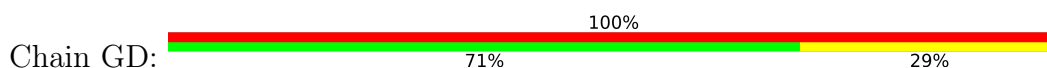
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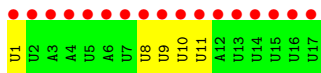


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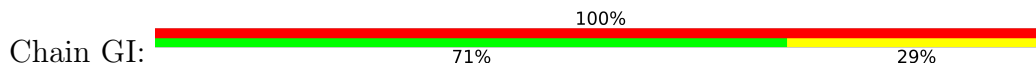


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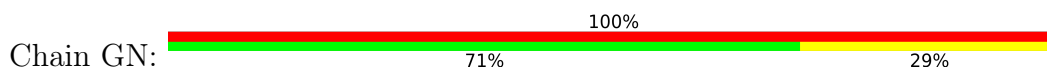




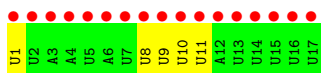
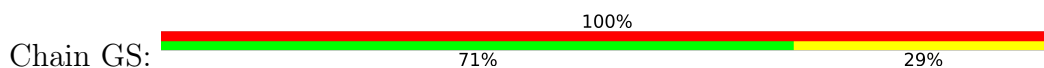
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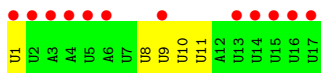
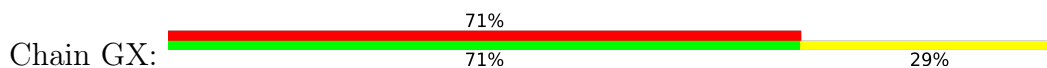
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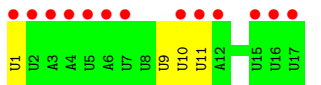
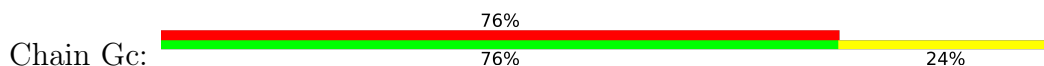
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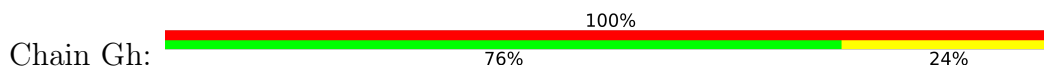
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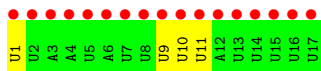


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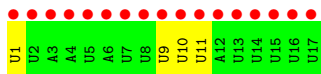
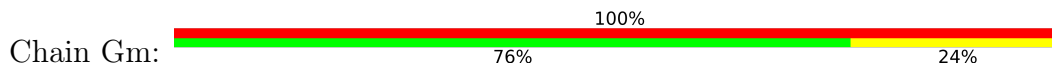


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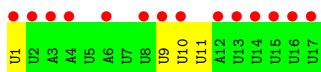
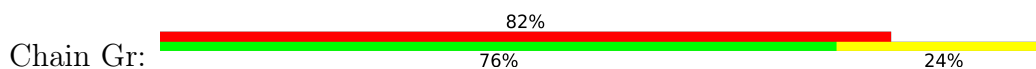




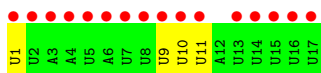
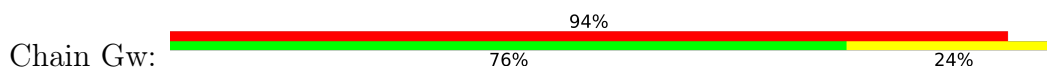
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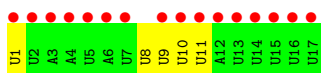
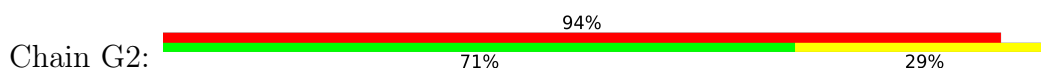
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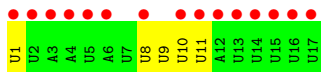
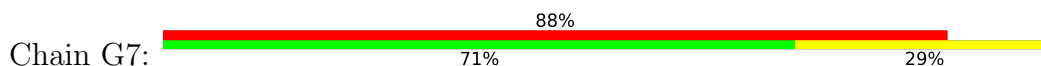
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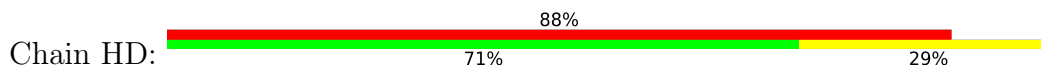
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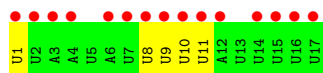


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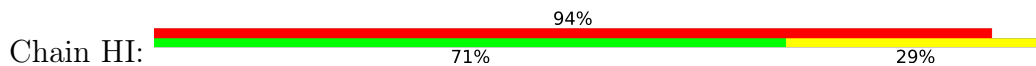


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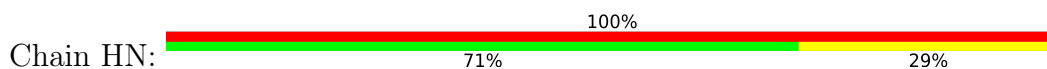




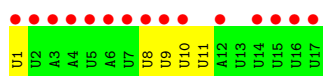
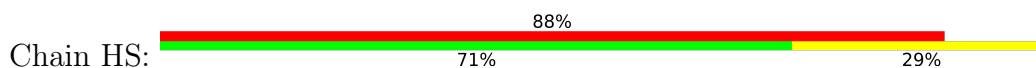
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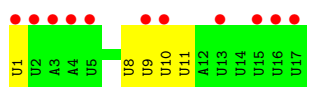
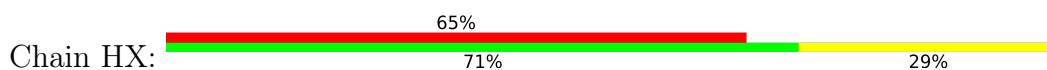
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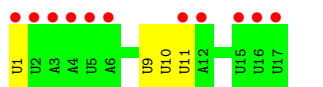
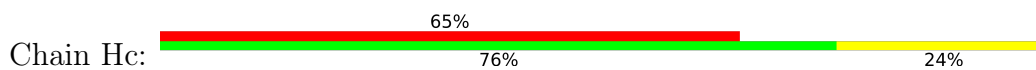
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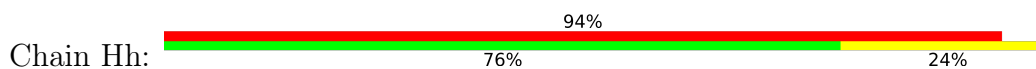
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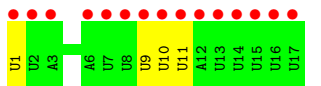
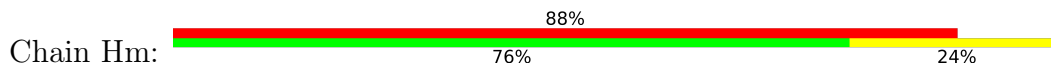


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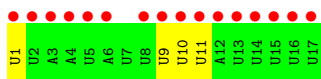
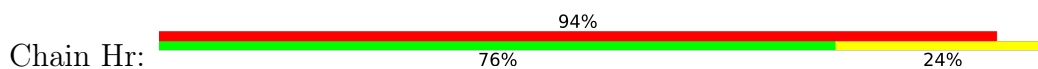




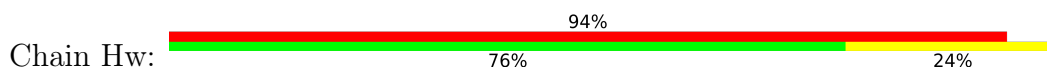
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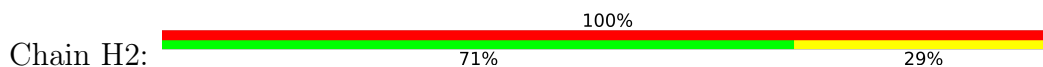
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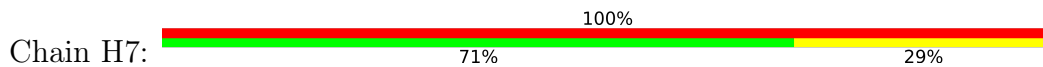
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,



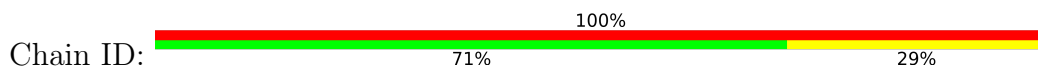
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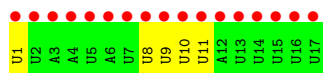


● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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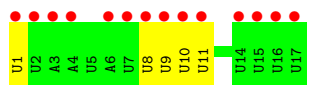
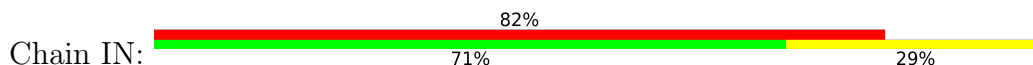




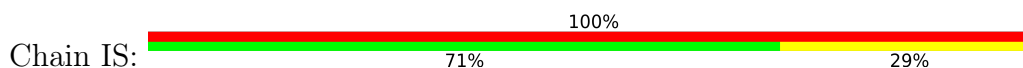
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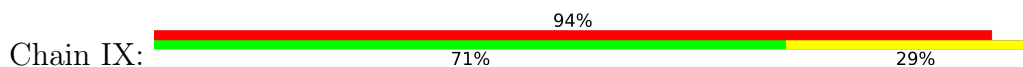
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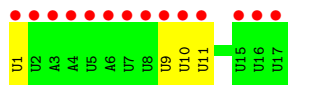
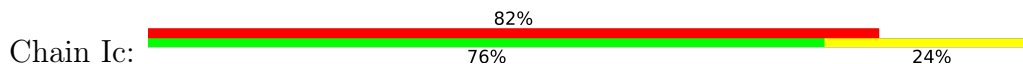
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



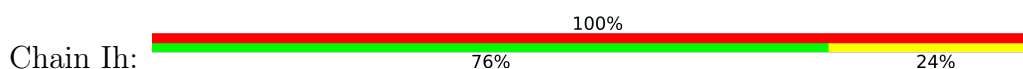
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',

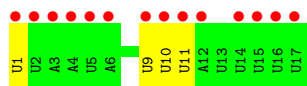
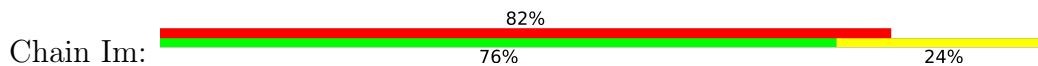


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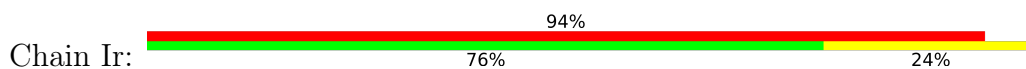




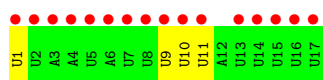
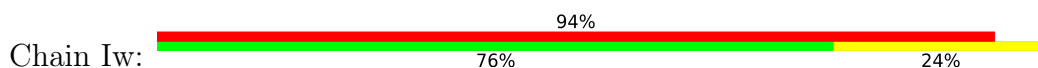
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



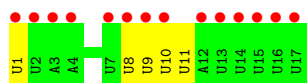
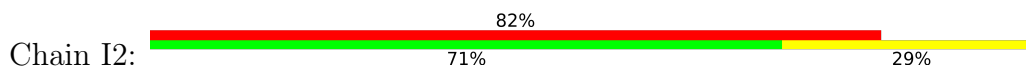
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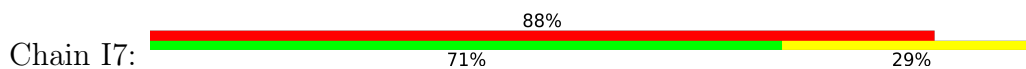
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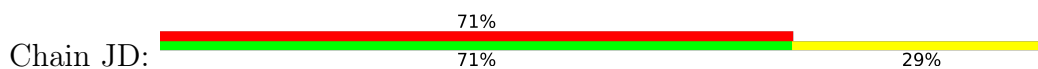
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',

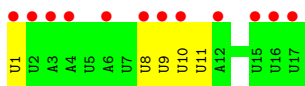


● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',

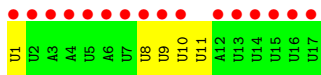
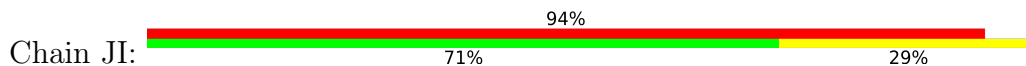


● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',

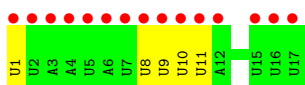
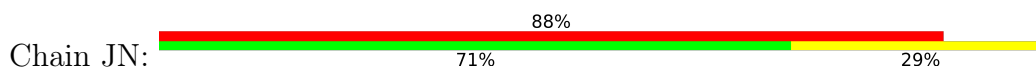




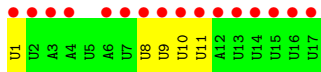
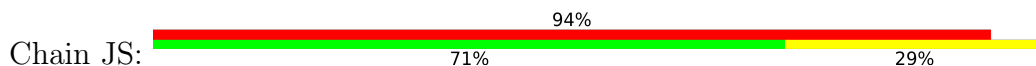
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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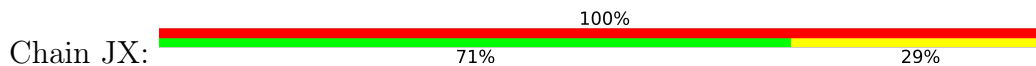
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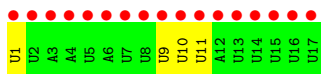
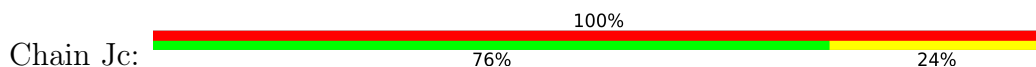
● Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3
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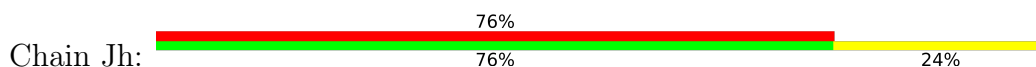
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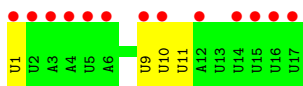


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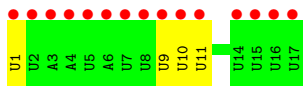
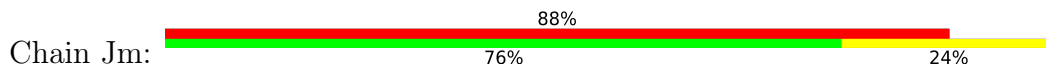


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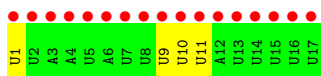
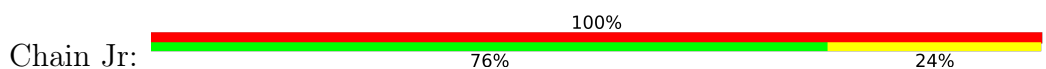




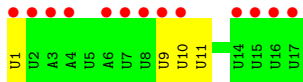
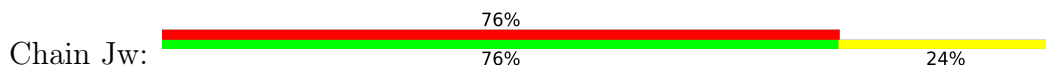
- Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



- Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



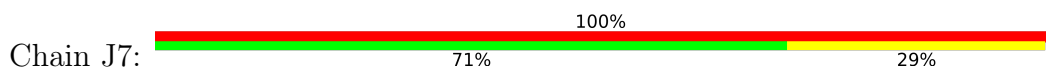
- Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



- Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



- Molecule 2: 5'-R(P*UP*UP*AP*AP*UP*AP*UP*UP*UP*UP*UP*AP*UP*UP*UP*UP*U)-3',



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	411.74Å 403.90Å 412.46Å 90.00° 89.65° 90.00°	Depositor
Resolution (Å)	50.01 – 2.90 50.01 – 2.90	Depositor EDS
% Data completeness (in resolution range)	74.9 (50.01-2.90) 74.9 (50.01-2.90)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.99 (at 2.91Å)	Xtriage
Refinement program	CNS 1.3	Depositor
R, R_{free}	0.251 , 0.285 0.235 , 0.267	Depositor DCC
R_{free} test set	221945 reflections (10.01%)	wwPDB-VP
Wilson B-factor (Å ²)	45.5	Xtriage
Anisotropy	0.138	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 51.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.39$, $\langle L^2 \rangle = 0.22$	Xtriage
Estimated twinning fraction	0.025 for -l,k,h 0.034 for -h,-l,-k 0.024 for -h,l,k 0.044 for -k,-h,-l 0.024 for k,h,-l 0.017 for -l,-h,k 0.030 for -k,l,-h 0.038 for l,h,k 0.027 for k,-l,-h 0.035 for h,-k,-l 0.030 for -l,-k,-h	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	588120	wwPDB-VP
Average B, all atoms (Å ²)	73.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	A1	0.46	1/1710 (0.1%)	0.72	0/2323
1	A4	0.45	0/1458	0.72	0/1986
1	A5	0.41	0/1483	0.67	0/2018
1	A6	0.46	2/1710 (0.1%)	0.71	0/2323
1	AA	0.48	1/1458 (0.1%)	0.74	1/1986 (0.1%)
1	AB	0.43	0/1483	0.71	0/2018
1	AC	0.48	1/1710 (0.1%)	0.72	0/2323
1	AF	0.51	1/1458 (0.1%)	0.75	0/1986
1	AG	0.47	0/1483	0.71	0/2018
1	AH	0.47	0/1710	0.72	0/2323
1	AK	0.49	1/1458 (0.1%)	0.74	0/1986
1	AL	0.46	0/1483	0.69	0/2018
1	AM	0.48	1/1710 (0.1%)	0.73	0/2323
1	AP	0.49	1/1458 (0.1%)	0.75	0/1986
1	AQ	0.43	0/1483	0.69	0/2018
1	AR	0.48	2/1710 (0.1%)	0.72	0/2323
1	AU	0.45	1/1458 (0.1%)	0.71	0/1986
1	AV	0.39	0/1483	0.67	0/2018
1	AW	0.45	0/1710	0.70	0/2323
1	AZ	0.52	2/1458 (0.1%)	0.76	0/1986
1	Aa	0.45	0/1483	0.70	0/2018
1	Ab	0.49	2/1710 (0.1%)	0.73	0/2323
1	Ae	0.50	1/1458 (0.1%)	0.76	0/1986
1	Af	0.46	0/1483	0.70	0/2018
1	Ag	0.51	2/1710 (0.1%)	0.74	0/2323
1	Aj	0.47	1/1458 (0.1%)	0.73	0/1986
1	Ak	0.44	0/1483	0.70	0/2018
1	Al	0.51	2/1710 (0.1%)	0.73	0/2323
1	Ao	0.51	1/1458 (0.1%)	0.76	0/1986
1	Ap	0.49	0/1483	0.70	0/2018
1	Aq	0.51	1/1710 (0.1%)	0.74	0/2323
1	At	0.51	2/1458 (0.1%)	0.76	0/1986

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	Au	0.45	0/1483	0.69	0/2018
1	Av	0.51	1/1710 (0.1%)	0.73	0/2323
1	Ay	0.46	1/1458 (0.1%)	0.72	0/1986
1	Az	0.40	0/1483	0.67	0/2018
1	B1	0.49	1/1710 (0.1%)	0.72	0/2323
1	B4	0.44	1/1458 (0.1%)	0.72	0/1986
1	B5	0.42	0/1483	0.67	0/2018
1	B6	0.45	0/1710	0.71	0/2323
1	BA	0.49	1/1458 (0.1%)	0.74	0/1986
1	BB	0.46	0/1483	0.69	0/2018
1	BC	0.49	0/1710	0.72	0/2323
1	BF	0.48	1/1458 (0.1%)	0.75	0/1986
1	BG	0.45	0/1483	0.71	0/2018
1	BH	0.50	1/1710 (0.1%)	0.74	0/2323
1	BK	0.53	1/1458 (0.1%)	0.76	0/1986
1	BL	0.45	0/1483	0.69	0/2018
1	BM	0.49	1/1710 (0.1%)	0.72	0/2323
1	BP	0.47	2/1458 (0.1%)	0.73	0/1986
1	BQ	0.42	0/1483	0.68	0/2018
1	BR	0.48	1/1710 (0.1%)	0.72	0/2323
1	BU	0.44	1/1458 (0.1%)	0.71	0/1986
1	BV	0.42	0/1483	0.67	0/2018
1	BW	0.44	1/1710 (0.1%)	0.71	0/2323
1	BZ	0.50	1/1458 (0.1%)	0.75	0/1986
1	Ba	0.43	0/1483	0.68	0/2018
1	Bb	0.49	2/1710 (0.1%)	0.73	0/2323
1	Be	0.50	1/1458 (0.1%)	0.74	0/1986
1	Bf	0.45	0/1483	0.71	0/2018
1	Bg	0.51	2/1710 (0.1%)	0.73	0/2323
1	Bj	0.50	1/1458 (0.1%)	0.74	0/1986
1	Bk	0.45	0/1483	0.70	0/2018
1	Bl	0.49	2/1710 (0.1%)	0.72	0/2323
1	Bo	0.49	1/1458 (0.1%)	0.74	0/1986
1	Bp	0.44	0/1483	0.70	0/2018
1	Bq	0.48	2/1710 (0.1%)	0.72	0/2323
1	Bt	0.47	1/1458 (0.1%)	0.73	0/1986
1	Bu	0.43	0/1483	0.69	0/2018
1	Bv	0.46	1/1710 (0.1%)	0.72	0/2323
1	By	0.51	2/1458 (0.1%)	0.74	0/1986
1	Bz	0.46	0/1483	0.71	0/2018
1	C1	0.50	2/1710 (0.1%)	0.73	0/2323
1	C4	0.48	2/1458 (0.1%)	0.73	0/1986
1	C5	0.43	0/1483	0.68	0/2018

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	C6	0.47	0/1710	0.71	0/2323
1	CA	0.49	1/1458 (0.1%)	0.75	0/1986
1	CB	0.45	0/1483	0.69	0/2018
1	CC	0.47	1/1710 (0.1%)	0.73	0/2323
1	CF	0.56	2/1458 (0.1%)	0.77	0/1986
1	CG	0.47	0/1483	0.70	0/2018
1	CH	0.52	0/1710	0.75	0/2323
1	CK	0.50	1/1458 (0.1%)	0.74	0/1986
1	CL	0.46	0/1483	0.71	0/2018
1	CM	0.48	0/1710	0.73	0/2323
1	CP	0.47	2/1458 (0.1%)	0.73	0/1986
1	CQ	0.42	0/1483	0.68	0/2018
1	CR	0.46	0/1710	0.71	0/2323
1	CU	0.49	1/1458 (0.1%)	0.73	0/1986
1	CV	0.44	0/1483	0.69	0/2018
1	CW	0.47	0/1710	0.73	0/2323
1	CZ	0.45	1/1458 (0.1%)	0.73	0/1986
1	Ca	0.42	0/1483	0.68	0/2018
1	Cb	0.47	0/1710	0.71	0/2323
1	Ce	0.51	1/1458 (0.1%)	0.74	0/1986
1	Cf	0.43	0/1483	0.69	0/2018
1	Cg	0.47	2/1710 (0.1%)	0.71	0/2323
1	Cj	0.48	1/1458 (0.1%)	0.75	0/1986
1	Ck	0.45	0/1483	0.70	0/2018
1	Cl	0.50	2/1710 (0.1%)	0.74	0/2323
1	Co	0.49	1/1458 (0.1%)	0.75	0/1986
1	Cp	0.43	0/1483	0.68	0/2018
1	Cq	0.49	2/1710 (0.1%)	0.72	0/2323
1	Ct	0.49	1/1458 (0.1%)	0.74	0/1986
1	Cu	0.45	0/1483	0.69	0/2018
1	Cv	0.49	2/1710 (0.1%)	0.73	0/2323
1	Cy	0.52	2/1458 (0.1%)	0.75	0/1986
1	Cz	0.47	0/1483	0.70	0/2018
1	D1	0.51	2/1710 (0.1%)	0.75	0/2323
1	D4	0.51	1/1458 (0.1%)	0.75	0/1986
1	D5	0.48	0/1483	0.71	0/2018
1	D6	0.51	1/1710 (0.1%)	0.74	0/2323
1	DA	0.49	1/1458 (0.1%)	0.75	0/1986
1	DB	0.46	0/1483	0.70	0/2018
1	DC	0.48	1/1710 (0.1%)	0.73	0/2323
1	DF	0.49	2/1458 (0.1%)	0.75	0/1986
1	DG	0.42	0/1483	0.68	0/2018
1	DH	0.48	1/1710 (0.1%)	0.71	0/2323

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	DK	0.50	2/1458 (0.1%)	0.75	0/1986
1	DL	0.47	0/1483	0.70	0/2018
1	DM	0.50	0/1710	0.73	0/2323
1	DP	0.44	0/1458	0.72	0/1986
1	DQ	0.42	0/1483	0.69	0/2018
1	DR	0.48	0/1710	0.72	0/2323
1	DU	0.46	2/1458 (0.1%)	0.73	0/1986
1	DV	0.41	0/1483	0.68	0/2018
1	DW	0.45	1/1710 (0.1%)	0.71	0/2323
1	DZ	0.50	1/1458 (0.1%)	0.75	0/1986
1	Da	0.47	0/1483	0.71	0/2018
1	Db	0.50	1/1710 (0.1%)	0.74	0/2323
1	De	0.46	1/1458 (0.1%)	0.72	0/1986
1	Df	0.40	0/1483	0.68	0/2018
1	Dg	0.44	0/1710	0.70	0/2323
1	Dj	0.51	2/1458 (0.1%)	0.75	0/1986
1	Dk	0.46	0/1483	0.70	0/2018
1	Dl	0.49	1/1710 (0.1%)	0.73	0/2323
1	Do	0.47	1/1458 (0.1%)	0.71	0/1986
1	Dp	0.41	0/1483	0.67	0/2018
1	Dq	0.45	0/1710	0.70	0/2323
1	Dt	0.51	1/1458 (0.1%)	0.74	0/1986
1	Du	0.44	0/1483	0.70	0/2018
1	Dv	0.48	1/1710 (0.1%)	0.73	0/2323
1	Dy	0.52	2/1458 (0.1%)	0.77	0/1986
1	Dz	0.46	0/1483	0.72	0/2018
1	E1	0.50	0/1710	0.73	0/2323
1	E4	0.52	2/1458 (0.1%)	0.77	0/1986
1	E5	0.47	0/1483	0.70	0/2018
1	E6	0.49	0/1710	0.72	0/2323
1	EA	0.50	2/1458 (0.1%)	0.74	0/1986
1	EB	0.47	0/1483	0.70	0/2018
1	EC	0.49	0/1710	0.74	0/2323
1	EF	0.47	1/1458 (0.1%)	0.73	0/1986
1	EG	0.40	0/1483	0.68	0/2018
1	EH	0.46	0/1710	0.70	0/2323
1	EK	0.46	1/1458 (0.1%)	0.73	0/1986
1	EL	0.42	0/1483	0.69	0/2018
1	EM	0.48	2/1710 (0.1%)	0.72	0/2323
1	EP	0.51	2/1458 (0.1%)	0.75	0/1986
1	EQ	0.49	0/1483	0.71	0/2018
1	ER	0.48	0/1710	0.72	0/2323
1	EU	0.47	1/1458 (0.1%)	0.74	0/1986

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	EV	0.46	0/1483	0.69	0/2018
1	EW	0.49	0/1710	0.72	0/2323
1	EZ	0.46	1/1458 (0.1%)	0.73	0/1986
1	Ea	0.43	0/1483	0.70	0/2018
1	Eb	0.49	1/1710 (0.1%)	0.73	0/2323
1	Ee	0.48	2/1458 (0.1%)	0.72	0/1986
1	Ef	0.42	0/1483	0.68	0/2018
1	Eg	0.45	0/1710	0.70	0/2323
1	Ej	0.46	1/1458 (0.1%)	0.72	0/1986
1	Ek	0.39	0/1483	0.66	0/2018
1	El	0.44	1/1710 (0.1%)	0.70	0/2323
1	Eo	0.46	1/1458 (0.1%)	0.71	0/1986
1	Ep	0.42	0/1483	0.68	0/2018
1	Eq	0.45	0/1710	0.71	0/2323
1	Et	0.51	2/1458 (0.1%)	0.75	0/1986
1	Eu	0.47	0/1483	0.71	0/2018
1	Ev	0.51	2/1710 (0.1%)	0.73	0/2323
1	Ey	0.49	1/1458 (0.1%)	0.74	0/1986
1	Ez	0.44	0/1483	0.69	0/2018
1	F1	0.39	0/1710	0.64	0/2323
1	F4	0.48	0/1458	0.71	0/1986
1	F5	0.43	0/1483	0.67	0/2018
1	F6	0.47	0/1710	0.67	0/2323
1	FA	0.46	1/1458 (0.1%)	0.69	0/1986
1	FB	0.43	0/1483	0.67	0/2018
1	FC	0.45	0/1710	0.67	0/2323
1	FF	0.46	0/1458	0.71	0/1986
1	FG	0.44	0/1483	0.68	0/2018
1	FH	0.46	2/1710 (0.1%)	0.68	0/2323
1	FK	0.45	0/1458	0.69	0/1986
1	FL	0.41	0/1483	0.66	0/2018
1	FM	0.48	1/1710 (0.1%)	0.69	0/2323
1	FP	0.48	0/1458	0.70	0/1986
1	FQ	0.44	0/1483	0.67	0/2018
1	FR	0.47	0/1710	0.70	0/2323
1	FU	0.45	0/1458	0.69	0/1986
1	FV	0.43	0/1483	0.66	0/2018
1	FW	0.48	0/1710	0.70	0/2323
1	FZ	0.40	0/1458	0.67	0/1986
1	Fa	0.37	0/1483	0.63	0/2018
1	Fb	0.40	0/1710	0.66	0/2323
1	Fe	0.40	0/1458	0.66	0/1986
1	Ff	0.36	0/1483	0.63	0/2018

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	Fg	0.39	0/1710	0.66	0/2323
1	Fj	0.46	0/1458	0.69	0/1986
1	Fk	0.42	0/1483	0.66	0/2018
1	Fl	0.44	0/1710	0.67	0/2323
1	Fo	0.46	1/1458 (0.1%)	0.70	0/1986
1	Fp	0.44	0/1483	0.68	0/2018
1	Fq	0.51	0/1710	0.71	0/2323
1	Ft	0.45	0/1458	0.70	0/1986
1	Fu	0.43	0/1483	0.66	0/2018
1	Fv	0.47	0/1710	0.69	0/2323
1	Fy	0.38	0/1458	0.65	0/1986
1	Fz	0.36	0/1483	0.63	0/2018
1	G1	0.43	0/1710	0.66	0/2323
1	G4	0.39	0/1458	0.66	0/1986
1	G5	0.38	0/1483	0.63	0/2018
1	G6	0.43	0/1710	0.67	0/2323
1	GA	0.47	0/1458	0.71	0/1986
1	GB	0.42	0/1483	0.66	0/2018
1	GC	0.47	1/1710 (0.1%)	0.68	0/2323
1	GF	0.47	0/1458	0.71	0/1986
1	GG	0.43	0/1483	0.67	0/2018
1	GH	0.46	0/1710	0.68	0/2323
1	GK	0.38	0/1458	0.66	0/1986
1	GL	0.36	0/1483	0.63	0/2018
1	GM	0.41	0/1710	0.65	0/2323
1	GP	0.47	0/1458	0.70	0/1986
1	GQ	0.46	0/1483	0.67	0/2018
1	GR	0.47	0/1710	0.70	0/2323
1	GU	0.44	0/1458	0.69	0/1986
1	GV	0.43	0/1483	0.67	0/2018
1	GW	0.47	0/1710	0.69	0/2323
1	GZ	0.44	0/1458	0.70	0/1986
1	Ga	0.42	0/1483	0.66	0/2018
1	Gb	0.45	0/1710	0.67	0/2323
1	Ge	0.47	0/1458	0.71	0/1986
1	Gf	0.46	0/1483	0.68	0/2018
1	Gg	0.46	0/1710	0.69	0/2323
1	Gj	0.42	0/1458	0.67	0/1986
1	Gk	0.39	0/1483	0.64	0/2018
1	Gl	0.42	0/1710	0.66	0/2323
1	Go	0.38	0/1458	0.66	0/1986
1	Gp	0.35	0/1483	0.62	0/2018
1	Gq	0.39	0/1710	0.65	0/2323

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	Gt	0.49	0/1458	0.72	0/1986
1	Gu	0.44	0/1483	0.67	0/2018
1	Gv	0.49	1/1710 (0.1%)	0.70	0/2323
1	Gy	0.43	0/1458	0.67	0/1986
1	Gz	0.38	0/1483	0.65	0/2018
1	H1	0.45	0/1710	0.68	0/2323
1	H4	0.38	0/1458	0.66	0/1986
1	H5	0.36	0/1483	0.64	0/2018
1	H6	0.39	0/1710	0.65	0/2323
1	HA	0.41	0/1458	0.68	0/1986
1	HB	0.38	0/1483	0.65	0/2018
1	HC	0.41	0/1710	0.66	0/2323
1	HF	0.43	0/1458	0.68	0/1986
1	HG	0.40	0/1483	0.66	0/2018
1	HH	0.43	0/1710	0.67	0/2323
1	HK	0.44	0/1458	0.69	0/1986
1	HL	0.44	0/1483	0.67	0/2018
1	HM	0.43	0/1710	0.67	0/2323
1	HP	0.45	0/1458	0.69	0/1986
1	HQ	0.46	0/1483	0.69	0/2018
1	HR	0.45	0/1710	0.68	0/2323
1	HU	0.45	0/1458	0.69	0/1986
1	HV	0.40	0/1483	0.65	0/2018
1	HW	0.43	0/1710	0.67	0/2323
1	HZ	0.44	0/1458	0.69	0/1986
1	Ha	0.40	0/1483	0.66	0/2018
1	Hb	0.43	0/1710	0.67	0/2323
1	He	0.40	0/1458	0.66	0/1986
1	Hf	0.37	0/1483	0.62	0/2018
1	Hg	0.40	0/1710	0.65	0/2323
1	Hj	0.39	0/1458	0.67	0/1986
1	Hk	0.37	0/1483	0.63	0/2018
1	Hl	0.41	0/1710	0.66	0/2323
1	Ho	0.43	0/1458	0.68	0/1986
1	Hp	0.40	0/1483	0.65	0/2018
1	Hq	0.43	0/1710	0.68	0/2323
1	Ht	0.47	0/1458	0.70	0/1986
1	Hu	0.42	0/1483	0.67	0/2018
1	Hv	0.49	0/1710	0.69	0/2323
1	Hy	0.44	0/1458	0.68	0/1986
1	Hz	0.43	0/1483	0.67	0/2018
1	I1	0.41	0/1710	0.66	0/2323
1	I4	0.47	0/1458	0.70	0/1986

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	I5	0.44	0/1483	0.67	0/2018
1	I6	0.45	0/1710	0.69	0/2323
1	IA	0.38	0/1458	0.65	0/1986
1	IB	0.35	0/1483	0.63	0/2018
1	IC	0.38	0/1710	0.65	0/2323
1	IF	0.41	0/1458	0.66	0/1986
1	IG	0.37	0/1483	0.64	0/2018
1	IH	0.41	0/1710	0.67	0/2323
1	IK	0.42	0/1458	0.68	0/1986
1	IL	0.42	0/1483	0.67	0/2018
1	IM	0.46	2/1710 (0.1%)	0.68	0/2323
1	IP	0.41	0/1458	0.67	0/1986
1	IQ	0.38	0/1483	0.64	0/2018
1	IR	0.41	0/1710	0.66	0/2323
1	IU	0.48	0/1458	0.72	0/1986
1	IV	0.44	0/1483	0.69	0/2018
1	IW	0.48	0/1710	0.69	0/2323
1	IZ	0.45	0/1458	0.70	0/1986
1	Ia	0.45	0/1483	0.67	0/2018
1	Ib	0.48	0/1710	0.69	0/2323
1	Ie	0.40	0/1458	0.65	0/1986
1	If	0.38	0/1483	0.65	0/2018
1	Ig	0.42	0/1710	0.66	0/2323
1	Ij	0.42	0/1458	0.67	0/1986
1	Ik	0.43	0/1483	0.68	0/2018
1	Il	0.43	0/1710	0.67	0/2323
1	Io	0.48	0/1458	0.71	0/1986
1	Ip	0.44	0/1483	0.67	0/2018
1	Iq	0.45	0/1710	0.68	0/2323
1	It	0.45	0/1458	0.70	0/1986
1	Iu	0.43	0/1483	0.68	0/2018
1	Iv	0.46	0/1710	0.70	0/2323
1	Iy	0.41	0/1458	0.67	0/1986
1	Iz	0.37	0/1483	0.64	0/2018
1	J1	0.47	0/1710	0.68	0/2323
1	J4	0.44	0/1458	0.68	0/1986
1	J5	0.43	0/1483	0.70	0/2018
1	J6	0.46	0/1710	0.68	0/2323
1	JA	0.47	0/1458	0.69	0/1986
1	JB	0.45	0/1483	0.67	0/2018
1	JC	0.46	0/1710	0.68	0/2323
1	JF	0.45	0/1458	0.69	0/1986
1	JG	0.41	0/1483	0.66	0/2018

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	JH	0.44	0/1710	0.67	0/2323
1	JK	0.38	0/1458	0.65	0/1986
1	JL	0.37	0/1483	0.63	0/2018
1	JM	0.39	0/1710	0.64	0/2323
1	JP	0.40	0/1458	0.65	0/1986
1	JQ	0.37	0/1483	0.64	0/2018
1	JR	0.39	0/1710	0.65	0/2323
1	JU	0.42	0/1458	0.68	0/1986
1	JV	0.39	0/1483	0.65	0/2018
1	JW	0.41	0/1710	0.66	0/2323
1	JZ	0.42	0/1458	0.68	0/1986
1	Ja	0.36	0/1483	0.63	0/2018
1	Jb	0.42	0/1710	0.67	0/2323
1	Je	0.46	0/1458	0.69	0/1986
1	Jf	0.41	0/1483	0.67	0/2018
1	Jg	0.48	0/1710	0.70	0/2323
1	Jj	0.46	0/1458	0.70	0/1986
1	Jk	0.45	0/1483	0.68	0/2018
1	Jl	0.48	2/1710 (0.1%)	0.71	0/2323
1	Jo	0.43	0/1458	0.67	0/1986
1	Jp	0.39	0/1483	0.65	0/2018
1	Jq	0.45	0/1710	0.68	0/2323
1	Jt	0.42	0/1458	0.68	0/1986
1	Ju	0.40	0/1483	0.66	0/2018
1	Jv	0.44	0/1710	0.67	0/2323
1	Jy	0.46	0/1458	0.70	0/1986
1	Jz	0.43	0/1483	0.67	0/2018
2	A2	0.56	1/386 (0.3%)	0.70	0/594
2	A7	0.56	1/386 (0.3%)	0.70	0/594
2	AD	0.55	1/386 (0.3%)	0.69	0/594
2	AI	0.56	1/386 (0.3%)	0.69	0/594
2	AN	0.55	1/386 (0.3%)	0.68	0/594
2	AS	0.56	1/386 (0.3%)	0.69	0/594
2	AX	0.54	1/386 (0.3%)	0.70	0/594
2	Ac	0.56	1/386 (0.3%)	0.70	0/594
2	Ah	0.55	1/386 (0.3%)	0.69	0/594
2	Am	0.55	1/386 (0.3%)	0.69	0/594
2	Ar	0.55	1/386 (0.3%)	0.70	0/594
2	Aw	0.55	1/386 (0.3%)	0.69	0/594
2	B2	0.56	1/386 (0.3%)	0.69	0/594
2	B7	0.55	1/386 (0.3%)	0.69	0/594
2	BD	0.55	1/386 (0.3%)	0.69	0/594
2	BI	0.55	1/386 (0.3%)	0.70	0/594

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
2	BN	0.56	1/386 (0.3%)	0.70	0/594
2	BS	0.55	1/386 (0.3%)	0.69	0/594
2	BX	0.54	1/386 (0.3%)	0.69	0/594
2	Bc	0.55	1/386 (0.3%)	0.69	0/594
2	Bh	0.56	1/386 (0.3%)	0.69	0/594
2	Bm	0.56	1/386 (0.3%)	0.70	0/594
2	Br	0.55	1/386 (0.3%)	0.70	0/594
2	Bw	0.55	1/386 (0.3%)	0.69	0/594
2	C2	0.57	1/386 (0.3%)	0.69	0/594
2	C7	0.56	1/386 (0.3%)	0.69	0/594
2	CD	0.55	1/386 (0.3%)	0.70	0/594
2	CI	0.57	1/386 (0.3%)	0.71	0/594
2	CN	0.56	1/386 (0.3%)	0.69	0/594
2	CS	0.55	1/386 (0.3%)	0.69	0/594
2	CX	0.55	1/386 (0.3%)	0.69	0/594
2	Cc	0.55	1/386 (0.3%)	0.70	0/594
2	Ch	0.56	1/386 (0.3%)	0.70	0/594
2	Cm	0.56	1/386 (0.3%)	0.70	0/594
2	Cr	0.55	1/386 (0.3%)	0.70	0/594
2	Cw	0.56	1/386 (0.3%)	0.70	0/594
2	D2	0.55	1/386 (0.3%)	0.70	0/594
2	D7	0.54	1/386 (0.3%)	0.70	0/594
2	DD	0.55	1/386 (0.3%)	0.68	0/594
2	DI	0.56	1/386 (0.3%)	0.70	0/594
2	DN	0.56	1/386 (0.3%)	0.69	0/594
2	DS	0.54	1/386 (0.3%)	0.70	0/594
2	DX	0.54	1/386 (0.3%)	0.69	0/594
2	Dc	0.55	1/386 (0.3%)	0.69	0/594
2	Dh	0.55	1/386 (0.3%)	0.69	0/594
2	Dm	0.56	1/386 (0.3%)	0.70	0/594
2	Dr	0.55	1/386 (0.3%)	0.68	0/594
2	Dw	0.56	1/386 (0.3%)	0.68	0/594
2	E2	0.56	1/386 (0.3%)	0.71	0/594
2	E7	0.54	1/386 (0.3%)	0.70	0/594
2	ED	0.56	1/386 (0.3%)	0.70	0/594
2	EI	0.55	1/386 (0.3%)	0.70	0/594
2	EN	0.54	1/386 (0.3%)	0.69	0/594
2	ES	0.55	1/386 (0.3%)	0.69	0/594
2	EX	0.56	1/386 (0.3%)	0.71	0/594
2	Ec	0.55	1/386 (0.3%)	0.70	0/594
2	Eh	0.56	1/386 (0.3%)	0.69	0/594
2	Em	0.55	1/386 (0.3%)	0.69	0/594
2	Er	0.55	1/386 (0.3%)	0.70	0/594

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
2	Ew	0.55	1/386 (0.3%)	0.70	0/594
2	F2	0.54	1/386 (0.3%)	0.70	0/594
2	F7	0.55	1/386 (0.3%)	0.70	0/594
2	FD	0.56	1/386 (0.3%)	0.71	0/594
2	FI	0.54	1/386 (0.3%)	0.71	0/594
2	FN	0.57	1/386 (0.3%)	0.69	0/594
2	FS	0.55	1/386 (0.3%)	0.70	0/594
2	FX	0.55	1/386 (0.3%)	0.69	0/594
2	Fc	0.54	1/386 (0.3%)	0.71	0/594
2	Fh	0.54	1/386 (0.3%)	0.70	0/594
2	Fm	0.54	1/386 (0.3%)	0.70	0/594
2	Fr	0.55	1/386 (0.3%)	0.70	0/594
2	Fw	0.55	1/386 (0.3%)	0.70	0/594
2	G2	0.54	1/386 (0.3%)	0.70	0/594
2	G7	0.54	1/386 (0.3%)	0.70	0/594
2	GD	0.55	1/386 (0.3%)	0.70	0/594
2	GI	0.56	1/386 (0.3%)	0.70	0/594
2	GN	0.54	1/386 (0.3%)	0.70	0/594
2	GS	0.55	1/386 (0.3%)	0.69	0/594
2	GX	0.55	1/386 (0.3%)	0.71	0/594
2	Gc	0.56	1/386 (0.3%)	0.71	0/594
2	Gh	0.55	1/386 (0.3%)	0.71	0/594
2	Gm	0.54	1/386 (0.3%)	0.70	0/594
2	Gr	0.54	1/386 (0.3%)	0.69	0/594
2	Gw	0.56	1/386 (0.3%)	0.70	0/594
2	H2	0.54	1/386 (0.3%)	0.70	0/594
2	H7	0.53	1/386 (0.3%)	0.70	0/594
2	HD	0.54	1/386 (0.3%)	0.69	0/594
2	HI	0.54	1/386 (0.3%)	0.71	0/594
2	HN	0.55	1/386 (0.3%)	0.70	0/594
2	HS	0.54	1/386 (0.3%)	0.70	0/594
2	HX	0.55	1/386 (0.3%)	0.71	0/594
2	Hc	0.54	1/386 (0.3%)	0.69	0/594
2	Hh	0.54	1/386 (0.3%)	0.70	0/594
2	Hm	0.54	1/386 (0.3%)	0.71	0/594
2	Hr	0.54	1/386 (0.3%)	0.70	0/594
2	Hw	0.55	1/386 (0.3%)	0.70	0/594
2	I2	0.55	1/386 (0.3%)	0.71	0/594
2	I7	0.54	1/386 (0.3%)	0.70	0/594
2	ID	0.53	1/386 (0.3%)	0.70	0/594
2	II	0.55	1/386 (0.3%)	0.70	0/594
2	IN	0.55	1/386 (0.3%)	0.70	0/594
2	IS	0.54	1/386 (0.3%)	0.70	0/594

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
2	IX	0.55	1/386 (0.3%)	0.70	0/594
2	Ic	0.54	1/386 (0.3%)	0.71	0/594
2	Ih	0.53	1/386 (0.3%)	0.69	0/594
2	Im	0.54	1/386 (0.3%)	0.70	0/594
2	Ir	0.55	1/386 (0.3%)	0.71	0/594
2	Iw	0.54	1/386 (0.3%)	0.71	0/594
2	J2	0.54	1/386 (0.3%)	0.70	0/594
2	J7	0.54	1/386 (0.3%)	0.70	0/594
2	JD	0.53	1/386 (0.3%)	0.70	0/594
2	JI	0.54	1/386 (0.3%)	0.70	0/594
2	JN	0.54	1/386 (0.3%)	0.71	0/594
2	JS	0.54	1/386 (0.3%)	0.71	0/594
2	JX	0.54	1/386 (0.3%)	0.71	0/594
2	Jc	0.53	1/386 (0.3%)	0.71	0/594
2	Jh	0.55	1/386 (0.3%)	0.71	0/594
2	Jm	0.54	1/386 (0.3%)	0.70	0/594
2	Jr	0.54	1/386 (0.3%)	0.70	0/594
2	Jw	0.55	1/386 (0.3%)	0.70	0/594
All	All	0.46	262/604440 (0.0%)	0.70	1/830520 (0.0%)

All (262) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	BN	1	U	OP3-P	-7.52	1.52	1.61
2	FN	1	U	OP3-P	-7.50	1.52	1.61
2	Dw	1	U	OP3-P	-7.50	1.52	1.61
2	C2	1	U	OP3-P	-7.44	1.52	1.61
2	Dc	1	U	OP3-P	-7.43	1.52	1.61
2	GI	1	U	OP3-P	-7.42	1.52	1.61
2	A2	1	U	OP3-P	-7.42	1.52	1.61
2	Bh	1	U	OP3-P	-7.41	1.52	1.61
2	DI	1	U	OP3-P	-7.41	1.52	1.61
2	GD	1	U	OP3-P	-7.40	1.52	1.61
2	Fr	1	U	OP3-P	-7.40	1.52	1.61
2	G7	1	U	OP3-P	-7.39	1.52	1.61
2	Ir	1	U	OP3-P	-7.39	1.52	1.61
2	CN	1	U	OP3-P	-7.39	1.52	1.61
2	Eh	1	U	OP3-P	-7.38	1.52	1.61
2	FI	1	U	OP3-P	-7.37	1.52	1.61
2	Fw	1	U	OP3-P	-7.36	1.52	1.61
2	Hw	1	U	OP3-P	-7.36	1.52	1.61
2	I2	1	U	OP3-P	-7.36	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C7	1	U	OP3-P	-7.36	1.52	1.61
2	ES	1	U	OP3-P	-7.36	1.52	1.61
2	Am	1	U	OP3-P	-7.36	1.52	1.61
2	Hh	1	U	OP3-P	-7.35	1.52	1.61
2	CX	1	U	OP3-P	-7.35	1.52	1.61
2	Gc	1	U	OP3-P	-7.35	1.52	1.61
2	DN	1	U	OP3-P	-7.35	1.52	1.61
2	Hr	1	U	OP3-P	-7.35	1.52	1.61
2	BS	1	U	OP3-P	-7.35	1.52	1.61
2	AI	1	U	OP3-P	-7.35	1.52	1.61
2	Bm	1	U	OP3-P	-7.35	1.52	1.61
2	B2	1	U	OP3-P	-7.34	1.52	1.61
2	Fm	1	U	OP3-P	-7.34	1.52	1.61
2	E7	1	U	OP3-P	-7.33	1.52	1.61
2	Gr	1	U	OP3-P	-7.33	1.52	1.61
2	G2	1	U	OP3-P	-7.33	1.52	1.61
2	Jm	1	U	OP3-P	-7.33	1.52	1.61
2	HN	1	U	OP3-P	-7.33	1.52	1.61
2	Cm	1	U	OP3-P	-7.32	1.52	1.61
2	H2	1	U	OP3-P	-7.32	1.52	1.61
2	GS	1	U	OP3-P	-7.32	1.52	1.61
2	HS	1	U	OP3-P	-7.32	1.52	1.61
2	Jc	1	U	OP3-P	-7.32	1.52	1.61
2	Ac	1	U	OP3-P	-7.32	1.52	1.61
2	Br	1	U	OP3-P	-7.32	1.52	1.61
2	AS	1	U	OP3-P	-7.32	1.52	1.61
2	IX	1	U	OP3-P	-7.31	1.52	1.61
2	Jw	1	U	OP3-P	-7.31	1.52	1.61
2	FX	1	U	OP3-P	-7.31	1.52	1.61
2	Dr	1	U	OP3-P	-7.30	1.52	1.61
2	Fh	1	U	OP3-P	-7.30	1.52	1.61
2	Gw	1	U	OP3-P	-7.30	1.52	1.61
2	GX	1	U	OP3-P	-7.30	1.52	1.61
2	Hc	1	U	OP3-P	-7.30	1.52	1.61
2	Hm	1	U	OP3-P	-7.29	1.52	1.61
2	J2	1	U	OP3-P	-7.29	1.52	1.61
2	Dh	1	U	OP3-P	-7.29	1.52	1.61
2	Cr	1	U	OP3-P	-7.29	1.52	1.61
2	D2	1	U	OP3-P	-7.29	1.52	1.61
2	B7	1	U	OP3-P	-7.29	1.52	1.61
2	Bw	1	U	OP3-P	-7.28	1.52	1.61
2	CS	1	U	OP3-P	-7.28	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	IN	1	U	OP3-P	-7.28	1.52	1.61
2	J7	1	U	OP3-P	-7.28	1.52	1.61
2	DD	1	U	OP3-P	-7.28	1.52	1.61
2	E2	1	U	OP3-P	-7.28	1.52	1.61
2	FD	1	U	OP3-P	-7.28	1.52	1.61
2	Cw	1	U	OP3-P	-7.28	1.52	1.61
2	JN	1	U	OP3-P	-7.28	1.52	1.61
2	CI	1	U	OP3-P	-7.28	1.52	1.61
2	Iw	1	U	OP3-P	-7.28	1.52	1.61
2	ED	1	U	OP3-P	-7.27	1.52	1.61
2	Ih	1	U	OP3-P	-7.27	1.52	1.61
2	A7	1	U	OP3-P	-7.27	1.52	1.61
2	H7	1	U	OP3-P	-7.27	1.52	1.61
2	DX	1	U	OP3-P	-7.27	1.52	1.61
2	AD	1	U	OP3-P	-7.26	1.52	1.61
2	FS	1	U	OP3-P	-7.26	1.52	1.61
2	Gm	1	U	OP3-P	-7.26	1.52	1.61
2	Aw	1	U	OP3-P	-7.26	1.52	1.61
2	EX	1	U	OP3-P	-7.26	1.52	1.61
2	GN	1	U	OP3-P	-7.26	1.52	1.61
2	Jh	1	U	OP3-P	-7.26	1.52	1.61
2	F2	1	U	OP3-P	-7.25	1.52	1.61
2	ID	1	U	OP3-P	-7.25	1.52	1.61
2	I7	1	U	OP3-P	-7.25	1.52	1.61
2	D7	1	U	OP3-P	-7.25	1.52	1.61
2	Dm	1	U	OP3-P	-7.24	1.52	1.61
2	Er	1	U	OP3-P	-7.24	1.52	1.61
2	F7	1	U	OP3-P	-7.24	1.52	1.61
2	Cc	1	U	OP3-P	-7.24	1.52	1.61
2	CD	1	U	OP3-P	-7.24	1.52	1.61
2	Em	1	U	OP3-P	-7.24	1.52	1.61
2	Ec	1	U	OP3-P	-7.24	1.52	1.61
2	Jr	1	U	OP3-P	-7.24	1.52	1.61
2	Fc	1	U	OP3-P	-7.24	1.52	1.61
2	AN	1	U	OP3-P	-7.23	1.52	1.61
2	Ah	1	U	OP3-P	-7.23	1.52	1.61
2	AX	1	U	OP3-P	-7.23	1.52	1.61
2	JI	1	U	OP3-P	-7.23	1.52	1.61
2	EN	1	U	OP3-P	-7.23	1.52	1.61
2	Gh	1	U	OP3-P	-7.22	1.52	1.61
2	Ew	1	U	OP3-P	-7.22	1.52	1.61
2	BI	1	U	OP3-P	-7.22	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	DS	1	U	OP3-P	-7.20	1.52	1.61
2	HI	1	U	OP3-P	-7.20	1.52	1.61
2	Bc	1	U	OP3-P	-7.20	1.52	1.61
2	HD	1	U	OP3-P	-7.20	1.52	1.61
2	II	1	U	OP3-P	-7.20	1.52	1.61
2	Ar	1	U	OP3-P	-7.20	1.52	1.61
2	BX	1	U	OP3-P	-7.20	1.52	1.61
2	EI	1	U	OP3-P	-7.20	1.52	1.61
2	HX	1	U	OP3-P	-7.19	1.52	1.61
2	Im	1	U	OP3-P	-7.19	1.52	1.61
2	Ch	1	U	OP3-P	-7.17	1.52	1.61
2	BD	1	U	OP3-P	-7.16	1.52	1.61
2	JD	1	U	OP3-P	-7.16	1.52	1.61
2	JX	1	U	OP3-P	-7.15	1.52	1.61
2	JS	1	U	OP3-P	-7.12	1.52	1.61
2	IS	1	U	OP3-P	-7.12	1.52	1.61
2	Ic	1	U	OP3-P	-7.06	1.52	1.61
1	CF	145	GLU	CB-CG	6.82	1.65	1.52
1	Cy	145	GLU	CB-CG	6.42	1.64	1.52
1	Ce	145	GLU	CB-CG	6.36	1.64	1.52
1	Et	145	GLU	CB-CG	6.28	1.64	1.52
1	EA	145	GLU	CB-CG	6.18	1.63	1.52
1	CF	145	GLU	CG-CD	6.16	1.61	1.51
1	D1	145	GLU	CB-CG	6.13	1.63	1.52
1	C4	145	GLU	CB-CG	6.05	1.63	1.52
1	DK	145	GLU	CB-CG	6.02	1.63	1.52
1	AZ	145	GLU	CB-CG	6.01	1.63	1.52
1	Do	145	GLU	CB-CG	5.94	1.63	1.52
1	Dt	145	GLU	CB-CG	5.87	1.63	1.52
1	DF	145	GLU	CB-CG	5.86	1.63	1.52
1	C4	145	GLU	CG-CD	5.86	1.60	1.51
1	Ao	145	GLU	CB-CG	5.84	1.63	1.52
1	Al	145	GLU	CB-CG	5.82	1.63	1.52
1	AF	145	GLU	CB-CG	5.81	1.63	1.52
1	D6	145	GLU	CB-CG	5.79	1.63	1.52
1	DZ	145	GLU	CB-CG	5.79	1.63	1.52
1	AA	145	GLU	CB-CG	5.77	1.63	1.52
1	Bb	145	GLU	CB-CG	5.77	1.63	1.52
1	By	145	GLU	CB-CG	5.76	1.63	1.52
1	Dj	145	GLU	CB-CG	5.75	1.63	1.52
1	Et	145	GLU	CG-CD	5.75	1.60	1.51
1	D4	145	GLU	CB-CG	5.74	1.63	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	Aj	145	GLU	CB-CG	5.73	1.63	1.52
1	BF	145	GLU	CB-CG	5.72	1.63	1.52
1	Cl	145	GLU	CG-CD	5.71	1.60	1.51
1	CU	145	GLU	CB-CG	5.70	1.62	1.52
1	BP	145	GLU	CB-CG	5.70	1.62	1.52
1	Cl	145	GLU	CB-CG	5.69	1.62	1.52
1	Ay	145	GLU	CB-CG	5.69	1.62	1.52
1	EP	145	GLU	CB-CG	5.68	1.62	1.52
1	Cq	145	GLU	CB-CG	5.67	1.62	1.52
1	C1	145	GLU	CB-CG	5.67	1.62	1.52
1	EU	145	GLU	CB-CG	5.67	1.62	1.52
1	Ev	145	GLU	CB-CG	5.66	1.62	1.52
1	DU	145	GLU	CB-CG	5.64	1.62	1.52
1	Bq	145	GLU	CB-CG	5.64	1.62	1.52
1	E4	145	GLU	CB-CG	5.63	1.62	1.52
1	BA	145	GLU	CB-CG	5.63	1.62	1.52
1	Bg	145	GLU	CB-CG	5.60	1.62	1.52
1	Cv	145	GLU	CB-CG	5.60	1.62	1.52
1	Ee	145	GLU	CG-CD	5.59	1.60	1.51
1	Dl	145	GLU	CB-CG	5.59	1.62	1.52
1	Dj	145	GLU	CG-CD	5.58	1.60	1.51
1	Ae	145	GLU	CB-CG	5.58	1.62	1.52
1	DH	145	GLU	CB-CG	5.57	1.62	1.52
1	AR	145	GLU	CB-CG	5.56	1.62	1.52
1	C1	145	GLU	CG-CD	5.52	1.60	1.51
1	Ee	145	GLU	CB-CG	5.52	1.62	1.52
1	Ct	145	GLU	CB-CG	5.50	1.62	1.52
1	Ab	145	GLU	CG-CD	5.49	1.60	1.51
1	Aq	145	GLU	CB-CG	5.49	1.62	1.52
1	Cj	145	GLU	CB-CG	5.49	1.62	1.52
1	BZ	145	GLU	CB-CG	5.49	1.62	1.52
1	CP	145	GLU	CB-CG	5.49	1.62	1.52
1	Ab	145	GLU	CB-CG	5.48	1.62	1.52
1	Dy	145	GLU	CB-CG	5.48	1.62	1.52
1	Bj	145	GLU	CB-CG	5.48	1.62	1.52
1	A6	145	GLU	CG-CD	5.45	1.60	1.51
1	BK	145	GLU	CB-CG	5.45	1.62	1.52
1	D1	145	GLU	CG-CD	5.45	1.60	1.51
1	Av	145	GLU	CB-CG	5.44	1.62	1.52
1	B1	145	GLU	CB-CG	5.43	1.62	1.52
1	AR	145	GLU	CG-CD	5.42	1.60	1.51
1	Cq	145	GLU	CG-CD	5.42	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	DF	145	GLU	CG-CD	5.42	1.60	1.51
1	Ag	145	GLU	CB-CG	5.41	1.62	1.52
1	Ej	145	GLU	CB-CG	5.41	1.62	1.52
1	AP	145	GLU	CB-CG	5.40	1.62	1.52
1	Co	145	GLU	CB-CG	5.40	1.62	1.52
1	Ag	145	GLU	CG-CD	5.38	1.60	1.51
1	IM	145	GLU	CG-CD	5.38	1.60	1.51
1	Jl	145	GLU	CG-CD	5.38	1.60	1.51
1	EZ	145	GLU	CB-CG	5.38	1.62	1.52
1	Eo	145	GLU	CB-CG	5.38	1.62	1.52
1	Dy	145	GLU	CG-CD	5.38	1.60	1.51
1	DA	145	GLU	CB-CG	5.37	1.62	1.52
1	FH	145	GLU	CB-CG	5.37	1.62	1.52
1	At	145	GLU	CB-CG	5.37	1.62	1.52
1	DW	145	GLU	CB-CG	5.37	1.62	1.52
1	FH	145	GLU	CG-CD	5.37	1.59	1.51
1	Db	145	GLU	CB-CG	5.36	1.62	1.52
1	IM	145	GLU	CB-CG	5.35	1.62	1.52
1	EM	145	GLU	CB-CG	5.35	1.62	1.52
1	CK	145	GLU	CB-CG	5.34	1.62	1.52
1	Bt	145	GLU	CB-CG	5.33	1.62	1.52
1	BH	145	GLU	CB-CG	5.32	1.62	1.52
1	BR	145	GLU	CB-CG	5.32	1.62	1.52
1	CZ	145	GLU	CB-CG	5.32	1.62	1.52
1	Cy	145	GLU	CG-CD	5.32	1.59	1.51
1	AU	145	GLU	CB-CG	5.31	1.62	1.52
1	Be	145	GLU	CB-CG	5.31	1.62	1.52
1	Bl	145	GLU	CB-CG	5.29	1.62	1.52
1	Jl	145	GLU	CB-CG	5.29	1.62	1.52
1	At	145	GLU	CG-CD	5.29	1.59	1.51
1	Cg	145	GLU	CB-CG	5.27	1.62	1.52
1	EK	145	GLU	CB-CG	5.27	1.62	1.52
1	Bo	145	GLU	CB-CG	5.27	1.62	1.52
1	Ev	145	GLU	CG-CD	5.27	1.59	1.51
1	A6	145	GLU	CB-CG	5.27	1.62	1.52
1	BU	145	GLU	CB-CG	5.27	1.62	1.52
1	DC	145	GLU	CB-CG	5.26	1.62	1.52
1	GC	145	GLU	CB-CG	5.26	1.62	1.52
1	De	145	GLU	CB-CG	5.21	1.62	1.52
1	BW	145	GLU	CB-CG	5.21	1.62	1.52
1	Al	145	GLU	CG-CD	5.20	1.59	1.51
1	AZ	145	GLU	CG-CD	5.20	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	Bq	145	GLU	CG-CD	5.19	1.59	1.51
1	BP	145	GLU	CG-CD	5.19	1.59	1.51
1	BM	145	GLU	CB-CG	5.18	1.61	1.52
1	E4	145	GLU	CG-CD	5.18	1.59	1.51
1	CC	145	GLU	CB-CG	5.17	1.61	1.52
1	Ey	145	GLU	CB-CG	5.17	1.61	1.52
1	Bl	145	GLU	CG-CD	5.16	1.59	1.51
1	AK	145	GLU	CB-CG	5.14	1.61	1.52
1	Eb	145	GLU	CB-CG	5.13	1.61	1.52
1	A1	145	GLU	CB-CG	5.12	1.61	1.52
1	EF	145	GLU	CB-CG	5.12	1.61	1.52
1	Bb	145	GLU	CG-CD	5.11	1.59	1.51
1	AM	145	GLU	CB-CG	5.10	1.61	1.52
1	B4	145	GLU	CB-CG	5.09	1.61	1.52
1	Cg	145	GLU	CG-CD	5.09	1.59	1.51
1	By	145	GLU	CG-CD	5.09	1.59	1.51
1	FA	145	GLU	CB-CG	5.09	1.61	1.52
1	Cv	145	GLU	CG-CD	5.08	1.59	1.51
1	CA	145	GLU	CG-CD	5.07	1.59	1.51
1	EA	145	GLU	CG-CD	5.07	1.59	1.51
1	El	145	GLU	CB-CG	5.07	1.61	1.52
1	FM	145	GLU	CB-CG	5.07	1.61	1.52
1	AC	145	GLU	CB-CG	5.06	1.61	1.52
1	CP	145	GLU	CG-CD	5.06	1.59	1.51
1	Dv	145	GLU	CB-CG	5.06	1.61	1.52
1	Bv	145	GLU	CB-CG	5.05	1.61	1.52
1	DU	145	GLU	CG-CD	5.04	1.59	1.51
1	EM	145	GLU	CG-CD	5.04	1.59	1.51
1	Gv	145	GLU	CB-CG	5.03	1.61	1.52
1	DK	145	GLU	CG-CD	5.02	1.59	1.51
1	Fo	145	GLU	CB-CG	5.01	1.61	1.52
1	Bg	145	GLU	CG-CD	5.00	1.59	1.51
1	EP	145	GLU	CG-CD	5.00	1.59	1.51

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	91	GLY	N-CA-C	-5.08	100.40	113.10

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A1	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	A4	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	A5	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	A6	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	AA	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19
1	AB	187/242 (77%)	158 (84%)	21 (11%)	8 (4%)	2	10
1	AC	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	AF	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	AG	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	AH	215/242 (89%)	189 (88%)	17 (8%)	9 (4%)	3	10
1	AK	183/242 (76%)	163 (89%)	14 (8%)	6 (3%)	4	15
1	AL	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	AM	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	AP	183/242 (76%)	164 (90%)	13 (7%)	6 (3%)	4	15
1	AQ	187/242 (77%)	163 (87%)	18 (10%)	6 (3%)	4	16
1	AR	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	AU	183/242 (76%)	165 (90%)	11 (6%)	7 (4%)	3	13
1	AV	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	AW	215/242 (89%)	190 (88%)	16 (7%)	9 (4%)	3	10
1	AZ	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	Aa	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Ab	215/242 (89%)	189 (88%)	17 (8%)	9 (4%)	3	10
1	Ae	183/242 (76%)	164 (90%)	14 (8%)	5 (3%)	5	19
1	Af	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	Ag	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	Aj	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	Ak	187/242 (77%)	159 (85%)	21 (11%)	7 (4%)	3	13
1	Al	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	Ao	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Ap	187/242 (77%)	160 (86%)	20 (11%)	7 (4%)	3	13
1	Aq	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	At	183/242 (76%)	163 (89%)	16 (9%)	4 (2%)	6	24
1	Au	187/242 (77%)	159 (85%)	21 (11%)	7 (4%)	3	13
1	Av	215/242 (89%)	186 (86%)	20 (9%)	9 (4%)	3	10
1	Ay	183/242 (76%)	163 (89%)	16 (9%)	4 (2%)	6	24
1	Az	187/242 (77%)	161 (86%)	19 (10%)	7 (4%)	3	13
1	B1	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	B4	183/242 (76%)	164 (90%)	13 (7%)	6 (3%)	4	15
1	B5	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	B6	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	BA	183/242 (76%)	163 (89%)	14 (8%)	6 (3%)	4	15
1	BB	187/242 (77%)	158 (84%)	22 (12%)	7 (4%)	3	13
1	BC	215/242 (89%)	186 (86%)	20 (9%)	9 (4%)	3	10
1	BF	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	BG	187/242 (77%)	161 (86%)	17 (9%)	9 (5%)	2	8
1	BH	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	BK	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	BL	187/242 (77%)	160 (86%)	20 (11%)	7 (4%)	3	13
1	BM	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	BP	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	BQ	187/242 (77%)	155 (83%)	22 (12%)	10 (5%)	2	6
1	BR	215/242 (89%)	188 (87%)	17 (8%)	10 (5%)	2	8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	BU	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	BV	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	BW	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	BZ	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Ba	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	Bb	215/242 (89%)	188 (87%)	17 (8%)	10 (5%)	2	8
1	Be	183/242 (76%)	166 (91%)	12 (7%)	5 (3%)	5	19
1	Bf	187/242 (77%)	159 (85%)	20 (11%)	8 (4%)	2	10
1	Bg	215/242 (89%)	189 (88%)	15 (7%)	11 (5%)	2	7
1	Bj	183/242 (76%)	162 (88%)	16 (9%)	5 (3%)	5	19
1	Bk	187/242 (77%)	157 (84%)	25 (13%)	5 (3%)	5	19
1	Bl	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	Bo	183/242 (76%)	163 (89%)	15 (8%)	5 (3%)	5	19
1	Bp	187/242 (77%)	158 (84%)	21 (11%)	8 (4%)	2	10
1	Bq	215/242 (89%)	190 (88%)	17 (8%)	8 (4%)	3	13
1	Bt	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	Bu	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	Bv	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	By	183/242 (76%)	162 (88%)	13 (7%)	8 (4%)	2	10
1	Bz	187/242 (77%)	163 (87%)	17 (9%)	7 (4%)	3	13
1	C1	215/242 (89%)	190 (88%)	15 (7%)	10 (5%)	2	8
1	C4	183/242 (76%)	166 (91%)	12 (7%)	5 (3%)	5	19
1	C5	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	C6	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	CA	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	CB	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	CC	215/242 (89%)	186 (86%)	19 (9%)	10 (5%)	2	8
1	CF	183/242 (76%)	166 (91%)	12 (7%)	5 (3%)	5	19
1	CG	187/242 (77%)	162 (87%)	19 (10%)	6 (3%)	4	16
1	CH	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	CK	183/242 (76%)	164 (90%)	15 (8%)	4 (2%)	6	24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	CL	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	CM	215/242 (89%)	191 (89%)	15 (7%)	9 (4%)	3	10
1	CP	183/242 (76%)	164 (90%)	15 (8%)	4 (2%)	6	24
1	CQ	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	CR	215/242 (89%)	191 (89%)	15 (7%)	9 (4%)	3	10
1	CU	183/242 (76%)	163 (89%)	15 (8%)	5 (3%)	5	19
1	CV	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	CW	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	CZ	183/242 (76%)	164 (90%)	14 (8%)	5 (3%)	5	19
1	Ca	187/242 (77%)	161 (86%)	19 (10%)	7 (4%)	3	13
1	Cb	215/242 (89%)	186 (86%)	18 (8%)	11 (5%)	2	7
1	Ce	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19
1	Cf	187/242 (77%)	159 (85%)	21 (11%)	7 (4%)	3	13
1	Cg	215/242 (89%)	190 (88%)	15 (7%)	10 (5%)	2	8
1	Cj	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Cl	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	Cl	215/242 (89%)	185 (86%)	20 (9%)	10 (5%)	2	8
1	Co	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	Cp	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	Cq	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	Ct	183/242 (76%)	164 (90%)	13 (7%)	6 (3%)	4	15
1	Cu	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	Cv	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	Cy	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	Cz	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	D1	215/242 (89%)	189 (88%)	16 (7%)	10 (5%)	2	8
1	D4	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19
1	D5	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	D6	215/242 (89%)	190 (88%)	16 (7%)	9 (4%)	3	10
1	DA	183/242 (76%)	163 (89%)	15 (8%)	5 (3%)	5	19
1	DB	187/242 (77%)	163 (87%)	16 (9%)	8 (4%)	2	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	DC	215/242 (89%)	186 (86%)	20 (9%)	9 (4%)	3	10
1	DF	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	DG	187/242 (77%)	161 (86%)	18 (10%)	8 (4%)	2	10
1	DH	215/242 (89%)	186 (86%)	19 (9%)	10 (5%)	2	8
1	DK	183/242 (76%)	161 (88%)	17 (9%)	5 (3%)	5	19
1	DL	187/242 (77%)	157 (84%)	24 (13%)	6 (3%)	4	16
1	DM	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	DP	183/242 (76%)	163 (89%)	16 (9%)	4 (2%)	6	24
1	DQ	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	DR	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	DU	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	DV	187/242 (77%)	159 (85%)	19 (10%)	9 (5%)	2	8
1	DW	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	DZ	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19
1	Da	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	Db	215/242 (89%)	186 (86%)	20 (9%)	9 (4%)	3	10
1	De	183/242 (76%)	168 (92%)	11 (6%)	4 (2%)	6	24
1	Df	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	Dg	215/242 (89%)	191 (89%)	15 (7%)	9 (4%)	3	10
1	Dj	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Dk	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	Dl	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	Do	183/242 (76%)	167 (91%)	12 (7%)	4 (2%)	6	24
1	Dp	187/242 (77%)	161 (86%)	19 (10%)	7 (4%)	3	13
1	Dq	215/242 (89%)	187 (87%)	17 (8%)	11 (5%)	2	7
1	Dt	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Du	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	Dv	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	Dy	183/242 (76%)	165 (90%)	12 (7%)	6 (3%)	4	15
1	Dz	187/242 (77%)	160 (86%)	20 (11%)	7 (4%)	3	13
1	E1	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E4	183/242 (76%)	164 (90%)	15 (8%)	4 (2%)	6	24
1	E5	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	E6	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	EA	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	EB	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	EC	215/242 (89%)	185 (86%)	20 (9%)	10 (5%)	2	8
1	EF	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	EG	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	EH	215/242 (89%)	189 (88%)	17 (8%)	9 (4%)	3	10
1	EK	183/242 (76%)	163 (89%)	16 (9%)	4 (2%)	6	24
1	EL	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	EM	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	EP	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	EQ	187/242 (77%)	160 (86%)	20 (11%)	7 (4%)	3	13
1	ER	215/242 (89%)	186 (86%)	18 (8%)	11 (5%)	2	7
1	EU	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	EV	187/242 (77%)	160 (86%)	19 (10%)	8 (4%)	2	10
1	EW	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	EZ	183/242 (76%)	166 (91%)	13 (7%)	4 (2%)	6	24
1	Ea	187/242 (77%)	159 (85%)	21 (11%)	7 (4%)	3	13
1	Eb	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	Ee	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19
1	Ef	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	Eg	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	Ej	183/242 (76%)	165 (90%)	14 (8%)	4 (2%)	6	24
1	Ek	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	El	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	Eo	183/242 (76%)	164 (90%)	15 (8%)	4 (2%)	6	24
1	Ep	187/242 (77%)	157 (84%)	25 (13%)	5 (3%)	5	19
1	Eq	215/242 (89%)	189 (88%)	17 (8%)	9 (4%)	3	10
1	Et	183/242 (76%)	165 (90%)	13 (7%)	5 (3%)	5	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Eu	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	Ev	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	Ey	183/242 (76%)	164 (90%)	14 (8%)	5 (3%)	5	19
1	Ez	187/242 (77%)	162 (87%)	19 (10%)	6 (3%)	4	16
1	F1	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	F4	183/242 (76%)	154 (84%)	24 (13%)	5 (3%)	5	19
1	F5	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	F6	215/242 (89%)	184 (86%)	21 (10%)	10 (5%)	2	8
1	FA	183/242 (76%)	155 (85%)	24 (13%)	4 (2%)	6	24
1	FB	187/242 (77%)	164 (88%)	20 (11%)	3 (2%)	9	32
1	FC	215/242 (89%)	182 (85%)	24 (11%)	9 (4%)	3	10
1	FF	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	FG	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	FH	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	FK	183/242 (76%)	154 (84%)	25 (14%)	4 (2%)	6	24
1	FL	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	FM	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	FP	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	FQ	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	FR	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	FU	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	FV	187/242 (77%)	159 (85%)	24 (13%)	4 (2%)	7	26
1	FW	215/242 (89%)	182 (85%)	22 (10%)	11 (5%)	2	7
1	FZ	183/242 (76%)	153 (84%)	25 (14%)	5 (3%)	5	19
1	Fa	187/242 (77%)	162 (87%)	19 (10%)	6 (3%)	4	16
1	Fb	215/242 (89%)	183 (85%)	24 (11%)	8 (4%)	3	13
1	Fe	183/242 (76%)	155 (85%)	23 (13%)	5 (3%)	5	19
1	Ff	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	Fg	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	Fj	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	Fk	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	F1	215/242 (89%)	183 (85%)	24 (11%)	8 (4%)	3	13
1	Fo	183/242 (76%)	158 (86%)	22 (12%)	3 (2%)	9	32
1	Fp	187/242 (77%)	160 (86%)	23 (12%)	4 (2%)	7	26
1	Fq	215/242 (89%)	184 (86%)	20 (9%)	11 (5%)	2	7
1	Ft	183/242 (76%)	159 (87%)	19 (10%)	5 (3%)	5	19
1	Fu	187/242 (77%)	162 (87%)	20 (11%)	5 (3%)	5	19
1	Fv	215/242 (89%)	184 (86%)	23 (11%)	8 (4%)	3	13
1	Fy	183/242 (76%)	159 (87%)	20 (11%)	4 (2%)	6	24
1	Fz	187/242 (77%)	160 (86%)	24 (13%)	3 (2%)	9	32
1	G1	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	G4	183/242 (76%)	154 (84%)	25 (14%)	4 (2%)	6	24
1	G5	187/242 (77%)	159 (85%)	21 (11%)	7 (4%)	3	13
1	G6	215/242 (89%)	180 (84%)	27 (13%)	8 (4%)	3	13
1	GA	183/242 (76%)	158 (86%)	21 (12%)	4 (2%)	6	24
1	GB	187/242 (77%)	162 (87%)	21 (11%)	4 (2%)	7	26
1	GC	215/242 (89%)	183 (85%)	23 (11%)	9 (4%)	3	10
1	GF	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	GG	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	GH	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	GK	183/242 (76%)	159 (87%)	17 (9%)	7 (4%)	3	13
1	GL	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	GM	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	GP	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	GQ	187/242 (77%)	162 (87%)	21 (11%)	4 (2%)	7	26
1	GR	215/242 (89%)	185 (86%)	22 (10%)	8 (4%)	3	13
1	GU	183/242 (76%)	155 (85%)	23 (13%)	5 (3%)	5	19
1	GV	187/242 (77%)	162 (87%)	21 (11%)	4 (2%)	7	26
1	GW	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	GZ	183/242 (76%)	157 (86%)	20 (11%)	6 (3%)	4	15
1	Ga	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	Gb	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Ge	183/242 (76%)	156 (85%)	23 (13%)	4 (2%)	6	24
1	Gf	187/242 (77%)	159 (85%)	22 (12%)	6 (3%)	4	16
1	Gg	215/242 (89%)	185 (86%)	22 (10%)	8 (4%)	3	13
1	Gj	183/242 (76%)	153 (84%)	24 (13%)	6 (3%)	4	15
1	Gk	187/242 (77%)	159 (85%)	24 (13%)	4 (2%)	7	26
1	Gl	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	Go	183/242 (76%)	158 (86%)	21 (12%)	4 (2%)	6	24
1	Gp	187/242 (77%)	160 (86%)	23 (12%)	4 (2%)	7	26
1	Gq	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	Gt	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	Gu	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	Gv	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	Gy	183/242 (76%)	159 (87%)	18 (10%)	6 (3%)	4	15
1	Gz	187/242 (77%)	163 (87%)	20 (11%)	4 (2%)	7	26
1	H1	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	H4	183/242 (76%)	157 (86%)	21 (12%)	5 (3%)	5	19
1	H5	187/242 (77%)	160 (86%)	22 (12%)	5 (3%)	5	19
1	H6	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	HA	183/242 (76%)	159 (87%)	19 (10%)	5 (3%)	5	19
1	HB	187/242 (77%)	160 (86%)	23 (12%)	4 (2%)	7	26
1	HC	215/242 (89%)	184 (86%)	21 (10%)	10 (5%)	2	8
1	HF	183/242 (76%)	155 (85%)	23 (13%)	5 (3%)	5	19
1	HG	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	HH	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	HK	183/242 (76%)	159 (87%)	19 (10%)	5 (3%)	5	19
1	HL	187/242 (77%)	159 (85%)	24 (13%)	4 (2%)	7	26
1	HM	215/242 (89%)	184 (86%)	23 (11%)	8 (4%)	3	13
1	HP	183/242 (76%)	159 (87%)	19 (10%)	5 (3%)	5	19
1	HQ	187/242 (77%)	162 (87%)	19 (10%)	6 (3%)	4	16
1	HR	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	HU	183/242 (76%)	155 (85%)	24 (13%)	4 (2%)	6	24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	HV	187/242 (77%)	161 (86%)	20 (11%)	6 (3%)	4	16
1	HW	215/242 (89%)	185 (86%)	19 (9%)	11 (5%)	2	7
1	HZ	183/242 (76%)	159 (87%)	18 (10%)	6 (3%)	4	15
1	Ha	187/242 (77%)	163 (87%)	20 (11%)	4 (2%)	7	26
1	Hb	215/242 (89%)	184 (86%)	22 (10%)	9 (4%)	3	10
1	He	183/242 (76%)	156 (85%)	21 (12%)	6 (3%)	4	15
1	Hf	187/242 (77%)	160 (86%)	22 (12%)	5 (3%)	5	19
1	Hg	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	Hj	183/242 (76%)	157 (86%)	22 (12%)	4 (2%)	6	24
1	Hk	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	Hl	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	Ho	183/242 (76%)	159 (87%)	19 (10%)	5 (3%)	5	19
1	Hp	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	Hq	215/242 (89%)	185 (86%)	22 (10%)	8 (4%)	3	13
1	Ht	183/242 (76%)	155 (85%)	23 (13%)	5 (3%)	5	19
1	Hu	187/242 (77%)	160 (86%)	21 (11%)	6 (3%)	4	16
1	Hv	215/242 (89%)	184 (86%)	22 (10%)	9 (4%)	3	10
1	Hy	183/242 (76%)	153 (84%)	26 (14%)	4 (2%)	6	24
1	Hz	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	I1	215/242 (89%)	185 (86%)	22 (10%)	8 (4%)	3	13
1	I4	183/242 (76%)	155 (85%)	21 (12%)	7 (4%)	3	13
1	I5	187/242 (77%)	158 (84%)	22 (12%)	7 (4%)	3	13
1	I6	215/242 (89%)	187 (87%)	18 (8%)	10 (5%)	2	8
1	IA	183/242 (76%)	156 (85%)	23 (13%)	4 (2%)	6	24
1	IB	187/242 (77%)	160 (86%)	22 (12%)	5 (3%)	5	19
1	IC	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	IF	183/242 (76%)	158 (86%)	21 (12%)	4 (2%)	6	24
1	IG	187/242 (77%)	162 (87%)	20 (11%)	5 (3%)	5	19
1	IH	215/242 (89%)	187 (87%)	19 (9%)	9 (4%)	3	10
1	IK	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	IL	187/242 (77%)	160 (86%)	20 (11%)	7 (4%)	3	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	IM	215/242 (89%)	183 (85%)	23 (11%)	9 (4%)	3	10
1	IP	183/242 (76%)	155 (85%)	23 (13%)	5 (3%)	5	19
1	IQ	187/242 (77%)	161 (86%)	22 (12%)	4 (2%)	7	26
1	IR	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	IU	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	IV	187/242 (77%)	160 (86%)	22 (12%)	5 (3%)	5	19
1	IW	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	IZ	183/242 (76%)	155 (85%)	24 (13%)	4 (2%)	6	24
1	Ia	187/242 (77%)	161 (86%)	22 (12%)	4 (2%)	7	26
1	Ib	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	Ie	183/242 (76%)	158 (86%)	20 (11%)	5 (3%)	5	19
1	If	187/242 (77%)	162 (87%)	22 (12%)	3 (2%)	9	32
1	Ig	215/242 (89%)	185 (86%)	21 (10%)	9 (4%)	3	10
1	Ij	183/242 (76%)	156 (85%)	21 (12%)	6 (3%)	4	15
1	Ik	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	Il	215/242 (89%)	180 (84%)	26 (12%)	9 (4%)	3	10
1	Io	183/242 (76%)	157 (86%)	21 (12%)	5 (3%)	5	19
1	Ip	187/242 (77%)	161 (86%)	21 (11%)	5 (3%)	5	19
1	Iq	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	It	183/242 (76%)	156 (85%)	23 (13%)	4 (2%)	6	24
1	Iu	187/242 (77%)	158 (84%)	25 (13%)	4 (2%)	7	26
1	Iv	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	Iy	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	Iz	187/242 (77%)	162 (87%)	20 (11%)	5 (3%)	5	19
1	J1	215/242 (89%)	185 (86%)	22 (10%)	8 (4%)	3	13
1	J4	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	J5	187/242 (77%)	158 (84%)	23 (12%)	6 (3%)	4	16
1	J6	215/242 (89%)	185 (86%)	20 (9%)	10 (5%)	2	8
1	JA	183/242 (76%)	158 (86%)	19 (10%)	6 (3%)	4	15
1	JB	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	JC	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	JF	183/242 (76%)	157 (86%)	22 (12%)	4 (2%)	6	24
1	JG	187/242 (77%)	161 (86%)	19 (10%)	7 (4%)	3	13
1	JH	215/242 (89%)	188 (87%)	18 (8%)	9 (4%)	3	10
1	JK	183/242 (76%)	158 (86%)	21 (12%)	4 (2%)	6	24
1	JL	187/242 (77%)	162 (87%)	21 (11%)	4 (2%)	7	26
1	JM	215/242 (89%)	184 (86%)	23 (11%)	8 (4%)	3	13
1	JP	183/242 (76%)	156 (85%)	22 (12%)	5 (3%)	5	19
1	JQ	187/242 (77%)	163 (87%)	20 (11%)	4 (2%)	7	26
1	JR	215/242 (89%)	189 (88%)	18 (8%)	8 (4%)	3	13
1	JU	183/242 (76%)	157 (86%)	22 (12%)	4 (2%)	6	24
1	JV	187/242 (77%)	158 (84%)	22 (12%)	7 (4%)	3	13
1	JW	215/242 (89%)	184 (86%)	22 (10%)	9 (4%)	3	10
1	JZ	183/242 (76%)	155 (85%)	24 (13%)	4 (2%)	6	24
1	Ja	187/242 (77%)	159 (85%)	23 (12%)	5 (3%)	5	19
1	Jb	215/242 (89%)	184 (86%)	23 (11%)	8 (4%)	3	13
1	Je	183/242 (76%)	161 (88%)	18 (10%)	4 (2%)	6	24
1	Jf	187/242 (77%)	164 (88%)	19 (10%)	4 (2%)	7	26
1	Jg	215/242 (89%)	186 (86%)	21 (10%)	8 (4%)	3	13
1	Jj	183/242 (76%)	156 (85%)	23 (13%)	4 (2%)	6	24
1	Jk	187/242 (77%)	160 (86%)	23 (12%)	4 (2%)	7	26
1	Jl	215/242 (89%)	188 (87%)	19 (9%)	8 (4%)	3	13
1	Jo	183/242 (76%)	153 (84%)	26 (14%)	4 (2%)	6	24
1	Jp	187/242 (77%)	160 (86%)	22 (12%)	5 (3%)	5	19
1	Jq	215/242 (89%)	190 (88%)	17 (8%)	8 (4%)	3	13
1	Jt	183/242 (76%)	157 (86%)	21 (12%)	5 (3%)	5	19
1	Ju	187/242 (77%)	161 (86%)	23 (12%)	3 (2%)	9	32
1	Jv	215/242 (89%)	187 (87%)	20 (9%)	8 (4%)	3	13
1	Jy	183/242 (76%)	157 (86%)	19 (10%)	7 (4%)	3	13
1	Jz	187/242 (77%)	161 (86%)	19 (10%)	7 (4%)	3	13
All	All	70200/87120 (81%)	60905 (87%)	6970 (10%)	2325 (3%)	4	15

All (2325) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AC	28	LYS
1	AC	29	SER
1	AH	28	LYS
1	AH	29	SER
1	AM	28	LYS
1	AM	29	SER
1	AP	93	LYS
1	AR	28	LYS
1	AR	29	SER
1	AW	28	LYS
1	AW	29	SER
1	Ab	28	LYS
1	Ab	29	SER
1	Ag	28	LYS
1	Ag	29	SER
1	Al	28	LYS
1	Al	29	SER
1	Aq	28	LYS
1	Aq	29	SER
1	Av	28	LYS
1	Av	29	SER
1	A1	28	LYS
1	A1	29	SER
1	A5	94	PRO
1	A5	95	ILE
1	A6	28	LYS
1	A6	29	SER
1	BC	28	LYS
1	BC	29	SER
1	BH	28	LYS
1	BH	29	SER
1	BM	28	LYS
1	BM	29	SER
1	BR	28	LYS
1	BR	29	SER
1	BU	93	LYS
1	BW	28	LYS
1	BW	29	SER
1	Bb	28	LYS
1	Bb	29	SER
1	Bg	28	LYS
1	Bg	29	SER
1	Bl	28	LYS

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Mol	Chain	Res	Type
1	Bl	29	SER
1	Bq	28	LYS
1	Bq	29	SER
1	Bv	28	LYS
1	Bv	29	SER
1	By	90	ALA
1	B1	28	LYS
1	B1	29	SER
1	B4	94	PRO
1	B6	28	LYS
1	B6	29	SER
1	CC	28	LYS
1	CC	29	SER
1	CC	90	ALA
1	CH	28	LYS
1	CH	29	SER
1	CM	28	LYS
1	CM	29	SER
1	CR	28	LYS
1	CR	29	SER
1	CW	28	LYS
1	CW	29	SER
1	Cb	28	LYS
1	Cb	29	SER
1	Cg	28	LYS
1	Cg	29	SER
1	Cl	28	LYS
1	Cl	29	SER
1	Cq	28	LYS
1	Cq	29	SER
1	Cv	28	LYS
1	Cv	29	SER
1	C1	28	LYS
1	C1	29	SER
1	C6	28	LYS
1	C6	29	SER
1	DC	28	LYS
1	DC	29	SER
1	DH	28	LYS
1	DH	29	SER
1	DM	28	LYS
1	DM	29	SER

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Mol	Chain	Res	Type
1	DR	28	LYS
1	DR	29	SER
1	DV	93	LYS
1	DW	28	LYS
1	DW	29	SER
1	Db	28	LYS
1	Db	29	SER
1	Dg	28	LYS
1	Dg	29	SER
1	Dl	28	LYS
1	Dl	29	SER
1	Dq	28	LYS
1	Dq	29	SER
1	Dv	28	LYS
1	Dv	29	SER
1	D1	28	LYS
1	D1	29	SER
1	D6	28	LYS
1	D6	29	SER
1	EC	28	LYS
1	EC	29	SER
1	EH	28	LYS
1	EH	29	SER
1	EM	28	LYS
1	EM	29	SER
1	ER	28	LYS
1	ER	29	SER
1	EW	28	LYS
1	EW	29	SER
1	Eb	28	LYS
1	Eb	29	SER
1	Eg	28	LYS
1	Eg	29	SER
1	El	28	LYS
1	El	29	SER
1	Eq	28	LYS
1	Eq	29	SER
1	Ev	28	LYS
1	Ev	29	SER
1	E1	28	LYS
1	E1	29	SER
1	E6	28	LYS

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Mol	Chain	Res	Type
1	E6	29	SER
1	FC	28	LYS
1	FC	29	SER
1	FC	145	GLU
1	FC	236	SER
1	FG	90	ALA
1	FH	28	LYS
1	FH	29	SER
1	FH	145	GLU
1	FH	236	SER
1	FM	28	LYS
1	FM	145	GLU
1	FM	236	SER
1	FR	28	LYS
1	FR	29	SER
1	FR	145	GLU
1	FR	236	SER
1	FW	28	LYS
1	FW	29	SER
1	FW	145	GLU
1	FW	236	SER
1	Fb	28	LYS
1	Fb	29	SER
1	Fb	236	SER
1	Fg	28	LYS
1	Fg	29	SER
1	Fg	145	GLU
1	Fg	236	SER
1	F1	28	LYS
1	F1	29	SER
1	F1	145	GLU
1	F1	236	SER
1	Fq	28	LYS
1	Fq	29	SER
1	Fq	145	GLU
1	Fq	236	SER
1	Fv	28	LYS
1	Fv	29	SER
1	Fv	145	GLU
1	Fv	236	SER
1	F1	28	LYS
1	F1	29	SER

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Mol	Chain	Res	Type
1	F1	145	GLU
1	F1	236	SER
1	F6	28	LYS
1	F6	29	SER
1	F6	93	LYS
1	F6	145	GLU
1	F6	236	SER
1	GC	28	LYS
1	GC	29	SER
1	GC	145	GLU
1	GC	236	SER
1	GG	94	PRO
1	GH	28	LYS
1	GH	29	SER
1	GH	236	SER
1	GM	28	LYS
1	GM	236	SER
1	GR	28	LYS
1	GR	29	SER
1	GR	145	GLU
1	GR	236	SER
1	GW	28	LYS
1	GW	29	SER
1	GW	145	GLU
1	GW	236	SER
1	Gb	28	LYS
1	Gb	29	SER
1	Gb	236	SER
1	Gg	28	LYS
1	Gg	29	SER
1	Gg	145	GLU
1	Gg	236	SER
1	Gl	28	LYS
1	Gl	29	SER
1	Gl	145	GLU
1	Gl	236	SER
1	Gq	28	LYS
1	Gq	29	SER
1	Gq	145	GLU
1	Gq	236	SER
1	Gv	28	LYS
1	Gv	29	SER

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Mol	Chain	Res	Type
1	Gv	145	GLU
1	Gv	236	SER
1	G1	28	LYS
1	G1	29	SER
1	G1	145	GLU
1	G1	236	SER
1	G5	90	ALA
1	G5	94	PRO
1	G6	28	LYS
1	G6	145	GLU
1	G6	236	SER
1	HC	28	LYS
1	HC	29	SER
1	HC	90	ALA
1	HC	94	PRO
1	HC	145	GLU
1	HC	236	SER
1	HH	28	LYS
1	HH	29	SER
1	HH	145	GLU
1	HH	236	SER
1	HM	28	LYS
1	HM	29	SER
1	HM	145	GLU
1	HM	236	SER
1	HP	94	PRO
1	HR	28	LYS
1	HR	145	GLU
1	HR	236	SER
1	HW	28	LYS
1	HW	29	SER
1	HW	145	GLU
1	HW	236	SER
1	Hb	28	LYS
1	Hb	29	SER
1	Hb	145	GLU
1	Hb	236	SER
1	Hg	28	LYS
1	Hg	145	GLU
1	Hg	236	SER
1	Hl	28	LYS
1	Hl	29	SER

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Mol	Chain	Res	Type
1	Hl	145	GLU
1	Hl	236	SER
1	Hq	28	LYS
1	Hq	29	SER
1	Hq	145	GLU
1	Hq	236	SER
1	Hu	94	PRO
1	Hv	28	LYS
1	Hv	29	SER
1	Hv	145	GLU
1	Hv	236	SER
1	H1	28	LYS
1	H1	29	SER
1	H1	145	GLU
1	H1	236	SER
1	H6	28	LYS
1	H6	29	SER
1	H6	145	GLU
1	H6	236	SER
1	IC	28	LYS
1	IC	236	SER
1	IH	28	LYS
1	IH	29	SER
1	IH	145	GLU
1	IH	236	SER
1	IL	94	PRO
1	IL	95	ILE
1	IM	28	LYS
1	IM	29	SER
1	IM	145	GLU
1	IM	236	SER
1	IR	28	LYS
1	IR	29	SER
1	IR	145	GLU
1	IR	236	SER
1	IW	28	LYS
1	IW	29	SER
1	IW	145	GLU
1	IW	236	SER
1	Ib	28	LYS
1	Ib	29	SER
1	Ib	145	GLU

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Mol	Chain	Res	Type
1	Ib	236	SER
1	Ig	28	LYS
1	Ig	29	SER
1	Ig	145	GLU
1	Ig	236	SER
1	Il	28	LYS
1	Il	29	SER
1	Il	145	GLU
1	Il	236	SER
1	Iq	28	LYS
1	Iq	29	SER
1	Iq	145	GLU
1	Iq	236	SER
1	Iv	28	LYS
1	Iv	29	SER
1	Iv	236	SER
1	I1	28	LYS
1	I1	29	SER
1	I1	145	GLU
1	I1	236	SER
1	I6	28	LYS
1	I6	29	SER
1	I6	145	GLU
1	I6	236	SER
1	JC	28	LYS
1	JC	236	SER
1	JH	28	LYS
1	JH	29	SER
1	JH	89	PRO
1	JH	145	GLU
1	JH	236	SER
1	JM	28	LYS
1	JM	29	SER
1	JM	145	GLU
1	JM	236	SER
1	JR	28	LYS
1	JR	145	GLU
1	JR	236	SER
1	JV	94	PRO
1	JW	28	LYS
1	JW	29	SER
1	JW	145	GLU

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Mol	Chain	Res	Type
1	JW	236	SER
1	Jb	28	LYS
1	Jb	29	SER
1	Jb	145	GLU
1	Jb	236	SER
1	Jg	28	LYS
1	Jg	29	SER
1	Jg	236	SER
1	Jl	28	LYS
1	Jl	29	SER
1	Jl	145	GLU
1	Jl	236	SER
1	Jq	28	LYS
1	Jq	29	SER
1	Jq	145	GLU
1	Jq	236	SER
1	Jv	28	LYS
1	Jv	29	SER
1	Jv	145	GLU
1	Jz	94	PRO
1	Jz	95	ILE
1	J1	28	LYS
1	J1	29	SER
1	J1	236	SER
1	J6	28	LYS
1	J6	29	SER
1	J6	145	GLU
1	J6	236	SER
1	AB	156	SER
1	AC	25	ALA
1	AC	145	GLU
1	AC	217	VAL
1	AF	145	GLU
1	AG	178	GLY
1	AH	25	ALA
1	AH	145	GLU
1	AH	217	VAL
1	AK	145	GLU
1	AM	25	ALA
1	AM	54	GLN
1	AM	145	GLU
1	AM	217	VAL

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Mol	Chain	Res	Type
1	AP	145	GLU
1	AR	25	ALA
1	AR	145	GLU
1	AR	217	VAL
1	AU	145	GLU
1	AW	25	ALA
1	AW	145	GLU
1	AW	217	VAL
1	Aa	156	SER
1	Ab	25	ALA
1	Ab	217	VAL
1	Ae	145	GLU
1	Ag	25	ALA
1	Ag	54	GLN
1	Ag	145	GLU
1	Ag	217	VAL
1	Aj	145	GLU
1	Ak	151	THR
1	Al	25	ALA
1	Al	54	GLN
1	Al	145	GLU
1	Al	217	VAL
1	Ao	145	GLU
1	Ao	217	VAL
1	Aq	25	ALA
1	Aq	54	GLN
1	Aq	145	GLU
1	Aq	217	VAL
1	Au	90	ALA
1	Av	25	ALA
1	Av	145	GLU
1	Av	217	VAL
1	Ay	145	GLU
1	Ay	217	VAL
1	A1	25	ALA
1	A1	54	GLN
1	A1	217	VAL
1	A5	178	GLY
1	A6	25	ALA
1	A6	54	GLN
1	A6	145	GLU
1	A6	217	VAL

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Mol	Chain	Res	Type
1	BA	145	GLU
1	BC	25	ALA
1	BC	54	GLN
1	BC	145	GLU
1	BC	217	VAL
1	BF	145	GLU
1	BF	217	VAL
1	BH	25	ALA
1	BH	54	GLN
1	BH	217	VAL
1	BK	145	GLU
1	BK	217	VAL
1	BM	25	ALA
1	BM	54	GLN
1	BM	145	GLU
1	BM	217	VAL
1	BP	217	VAL
1	BQ	91	GLY
1	BR	25	ALA
1	BR	94	PRO
1	BR	95	ILE
1	BR	145	GLU
1	BR	217	VAL
1	BU	145	GLU
1	BW	25	ALA
1	BW	145	GLU
1	BW	217	VAL
1	BZ	145	GLU
1	Ba	151	THR
1	Bb	25	ALA
1	Bb	54	GLN
1	Bb	145	GLU
1	Bb	217	VAL
1	Bg	25	ALA
1	Bg	54	GLN
1	Bg	145	GLU
1	Bg	217	VAL
1	Bj	145	GLU
1	Bj	217	VAL
1	Bl	25	ALA
1	Bl	145	GLU
1	Bl	217	VAL

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Mol	Chain	Res	Type
1	Bp	94	PRO
1	Bp	156	SER
1	Bq	25	ALA
1	Bq	145	GLU
1	Bq	217	VAL
1	Bt	145	GLU
1	Bu	151	THR
1	Bv	25	ALA
1	Bv	145	GLU
1	Bv	217	VAL
1	By	145	GLU
1	B1	25	ALA
1	B1	145	GLU
1	B1	217	VAL
1	B5	178	GLY
1	B6	25	ALA
1	B6	145	GLU
1	B6	217	VAL
1	CA	145	GLU
1	CC	25	ALA
1	CC	145	GLU
1	CC	217	VAL
1	CF	145	GLU
1	CH	25	ALA
1	CH	217	VAL
1	CK	145	GLU
1	CM	25	ALA
1	CM	54	GLN
1	CM	145	GLU
1	CM	217	VAL
1	CP	145	GLU
1	CR	25	ALA
1	CR	145	GLU
1	CR	217	VAL
1	CU	94	PRO
1	CU	145	GLU
1	CW	25	ALA
1	CW	145	GLU
1	CW	217	VAL
1	CZ	145	GLU
1	Cb	25	ALA
1	Cb	94	PRO

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Mol	Chain	Res	Type
1	Cb	145	GLU
1	Cb	217	VAL
1	Cf	156	SER
1	Cg	25	ALA
1	Cg	145	GLU
1	Cg	217	VAL
1	Cj	145	GLU
1	Ck	91	GLY
1	Cl	25	ALA
1	Cl	54	GLN
1	Cl	217	VAL
1	Co	145	GLU
1	Cp	156	SER
1	Cq	25	ALA
1	Cq	145	GLU
1	Cq	217	VAL
1	Ct	145	GLU
1	Cv	25	ALA
1	Cv	145	GLU
1	Cv	217	VAL
1	Cy	145	GLU
1	Cz	156	SER
1	C1	25	ALA
1	C1	54	GLN
1	C1	145	GLU
1	C1	217	VAL
1	C4	89	PRO
1	C4	145	GLU
1	C6	25	ALA
1	C6	54	GLN
1	C6	145	GLU
1	C6	217	VAL
1	DA	90	ALA
1	DA	145	GLU
1	DB	91	GLY
1	DC	25	ALA
1	DC	54	GLN
1	DC	145	GLU
1	DC	217	VAL
1	DF	145	GLU
1	DH	25	ALA
1	DH	54	GLN

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Mol	Chain	Res	Type
1	DH	145	GLU
1	DH	217	VAL
1	DK	145	GLU
1	DL	156	SER
1	DM	25	ALA
1	DM	145	GLU
1	DM	217	VAL
1	DP	145	GLU
1	DR	25	ALA
1	DR	145	GLU
1	DR	217	VAL
1	DU	145	GLU
1	DW	25	ALA
1	DW	54	GLN
1	DW	145	GLU
1	DW	217	VAL
1	DZ	145	GLU
1	Db	25	ALA
1	Db	145	GLU
1	Db	217	VAL
1	Dg	25	ALA
1	Dg	145	GLU
1	Dg	217	VAL
1	Dj	145	GLU
1	Dl	25	ALA
1	Dl	145	GLU
1	Dl	217	VAL
1	Do	145	GLU
1	Dq	25	ALA
1	Dq	94	PRO
1	Dq	145	GLU
1	Dq	217	VAL
1	Dt	145	GLU
1	Du	151	THR
1	Dv	25	ALA
1	Dv	145	GLU
1	Dv	217	VAL
1	D1	25	ALA
1	D1	54	GLN
1	D1	145	GLU
1	D1	217	VAL
1	D4	94	PRO

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Mol	Chain	Res	Type
1	D4	145	GLU
1	D6	25	ALA
1	D6	145	GLU
1	D6	217	VAL
1	EA	145	GLU
1	EC	25	ALA
1	EC	54	GLN
1	EC	89	PRO
1	EC	145	GLU
1	EC	217	VAL
1	EF	217	VAL
1	EH	25	ALA
1	EH	145	GLU
1	EH	217	VAL
1	EK	145	GLU
1	EM	25	ALA
1	EM	145	GLU
1	EM	217	VAL
1	EP	145	GLU
1	EP	217	VAL
1	EQ	178	GLY
1	ER	25	ALA
1	ER	145	GLU
1	ER	217	VAL
1	EU	145	GLU
1	EV	91	GLY
1	EW	25	ALA
1	EW	145	GLU
1	EW	217	VAL
1	EZ	145	GLU
1	Eb	25	ALA
1	Eb	54	GLN
1	Eb	145	GLU
1	Eb	217	VAL
1	Ee	145	GLU
1	Eg	25	ALA
1	Eg	145	GLU
1	Eg	217	VAL
1	Ej	145	GLU
1	Ek	178	GLY
1	El	25	ALA
1	El	145	GLU

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Mol	Chain	Res	Type
1	Ei	217	VAL
1	Eo	145	GLU
1	Eq	25	ALA
1	Eq	54	GLN
1	Eq	145	GLU
1	Eq	217	VAL
1	Et	145	GLU
1	Ev	25	ALA
1	Ev	54	GLN
1	Ev	145	GLU
1	Ev	217	VAL
1	Ey	145	GLU
1	E1	25	ALA
1	E1	145	GLU
1	E1	217	VAL
1	E4	145	GLU
1	E6	25	ALA
1	E6	145	GLU
1	E6	217	VAL
1	FA	145	GLU
1	FC	25	ALA
1	FC	90	ALA
1	FF	90	ALA
1	FF	145	GLU
1	FH	25	ALA
1	FK	145	GLU
1	FL	156	SER
1	FM	25	ALA
1	FM	29	SER
1	FP	145	GLU
1	FR	25	ALA
1	FU	145	GLU
1	FW	25	ALA
1	FZ	145	GLU
1	Fa	53	GLY
1	Fb	25	ALA
1	Fb	145	GLU
1	Fe	145	GLU
1	Fe	228	SER
1	Ff	94	PRO
1	Ff	95	ILE
1	Fg	25	ALA

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Mol	Chain	Res	Type
1	Fj	145	GLU
1	Fk	90	ALA
1	Fl	25	ALA
1	Fo	145	GLU
1	Fq	25	ALA
1	Ft	145	GLU
1	Fu	178	GLY
1	Fv	25	ALA
1	Fy	145	GLU
1	F1	25	ALA
1	F4	145	GLU
1	F5	90	ALA
1	F5	178	GLY
1	F6	25	ALA
1	GA	145	GLU
1	GC	25	ALA
1	GF	228	SER
1	GH	25	ALA
1	GH	145	GLU
1	GK	145	GLU
1	GM	25	ALA
1	GM	29	SER
1	GM	145	GLU
1	GP	145	GLU
1	GR	25	ALA
1	GU	90	ALA
1	GU	145	GLU
1	GW	25	ALA
1	GW	54	GLN
1	GZ	145	GLU
1	Gb	25	ALA
1	Gb	145	GLU
1	Ge	145	GLU
1	Ge	228	SER
1	Gf	90	ALA
1	Gg	25	ALA
1	Gj	90	ALA
1	Gj	145	GLU
1	Gl	25	ALA
1	Go	145	GLU
1	Gp	93	LYS
1	Gp	178	GLY

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Mol	Chain	Res	Type
1	Gq	25	ALA
1	Gt	145	GLU
1	Gt	228	SER
1	Gu	90	ALA
1	Gv	25	ALA
1	Gy	145	GLU
1	G1	25	ALA
1	G4	145	GLU
1	G6	25	ALA
1	G6	29	SER
1	HA	145	GLU
1	HC	25	ALA
1	HF	145	GLU
1	HH	25	ALA
1	HH	54	GLN
1	HK	145	GLU
1	HM	25	ALA
1	HP	145	GLU
1	HR	25	ALA
1	HR	29	SER
1	HR	94	PRO
1	HU	145	GLU
1	HV	156	SER
1	HW	25	ALA
1	HW	54	GLN
1	HW	90	ALA
1	HZ	145	GLU
1	Hb	25	ALA
1	He	145	GLU
1	Hf	90	ALA
1	Hf	156	SER
1	Hg	25	ALA
1	Hg	29	SER
1	Hj	145	GLU
1	Hk	90	ALA
1	Hk	156	SER
1	Hl	25	ALA
1	Ho	145	GLU
1	Hq	25	ALA
1	Hu	156	SER
1	Hv	25	ALA
1	Hv	54	GLN

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Mol	Chain	Res	Type
1	Hy	145	GLU
1	Hx	90	ALA
1	H1	25	ALA
1	H1	90	ALA
1	H4	94	PRO
1	H4	145	GLU
1	H6	25	ALA
1	IA	145	GLU
1	IC	25	ALA
1	IC	29	SER
1	IC	90	ALA
1	IC	145	GLU
1	IF	145	GLU
1	IH	25	ALA
1	IH	90	ALA
1	IK	90	ALA
1	IK	145	GLU
1	IM	25	ALA
1	IP	90	ALA
1	IP	145	GLU
1	IR	25	ALA
1	IU	145	GLU
1	IU	163	PRO
1	IW	25	ALA
1	IZ	145	GLU
1	Ib	25	ALA
1	Ib	54	GLN
1	Ie	145	GLU
1	Ig	25	ALA
1	Ij	145	GLU
1	Ik	178	GLY
1	Il	25	ALA
1	Io	145	GLU
1	Iq	25	ALA
1	Iq	54	GLN
1	It	145	GLU
1	It	228	SER
1	Iv	25	ALA
1	Iv	54	GLN
1	Iv	145	GLU
1	Iy	145	GLU
1	Iz	90	ALA

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Mol	Chain	Res	Type
1	Iz	156	SER
1	I1	25	ALA
1	I4	89	PRO
1	I4	94	PRO
1	I4	145	GLU
1	I5	90	ALA
1	I6	25	ALA
1	JA	90	ALA
1	JA	145	GLU
1	JC	25	ALA
1	JC	29	SER
1	JC	145	GLU
1	JF	145	GLU
1	JF	228	SER
1	JG	90	ALA
1	JH	25	ALA
1	JK	145	GLU
1	JM	25	ALA
1	JP	145	GLU
1	JR	25	ALA
1	JR	29	SER
1	JU	145	GLU
1	JV	90	ALA
1	JV	95	ILE
1	JW	25	ALA
1	JW	90	ALA
1	JZ	145	GLU
1	Ja	94	PRO
1	Jb	25	ALA
1	Je	145	GLU
1	Jg	25	ALA
1	Jg	145	GLU
1	Jl	25	ALA
1	Jo	145	GLU
1	Jq	25	ALA
1	Jt	145	GLU
1	Ju	178	GLY
1	Jv	25	ALA
1	Jv	236	SER
1	Jy	145	GLU
1	Jy	228	SER
1	J1	25	ALA

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Mol	Chain	Res	Type
1	J1	145	GLU
1	J4	145	GLU
1	J4	228	SER
1	J6	25	ALA
1	J6	88	VAL
1	J6	89	PRO
1	AA	94	PRO
1	AA	145	GLU
1	AA	217	VAL
1	AB	93	LYS
1	AB	178	GLY
1	AC	54	GLN
1	AC	236	SER
1	AG	151	THR
1	AH	54	GLN
1	AH	94	PRO
1	AK	217	VAL
1	AL	151	THR
1	AL	152	ASP
1	AL	178	GLY
1	AM	236	SER
1	AQ	178	GLY
1	AR	54	GLN
1	AU	90	ALA
1	AU	217	VAL
1	AV	178	GLY
1	AW	54	GLN
1	AW	236	SER
1	AZ	145	GLU
1	AZ	217	VAL
1	AZ	228	SER
1	Aa	151	THR
1	Ab	54	GLN
1	Ab	145	GLU
1	Ab	236	SER
1	Af	53	GLY
1	Af	89	PRO
1	Af	156	SER
1	Ag	236	SER
1	Aj	217	VAL
1	Ak	90	ALA
1	Ak	152	ASP

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Mol	Chain	Res	Type
1	Ak	178	GLY
1	Al	101	PRO
1	Al	236	SER
1	Ap	156	SER
1	Aq	89	PRO
1	Aq	236	SER
1	At	145	GLU
1	At	217	VAL
1	Au	151	THR
1	Au	156	SER
1	Av	54	GLN
1	Az	156	SER
1	A1	145	GLU
1	A1	236	SER
1	A4	145	GLU
1	A5	151	THR
1	A6	101	PRO
1	BA	217	VAL
1	BA	228	SER
1	BB	90	ALA
1	BB	151	THR
1	BB	156	SER
1	BC	236	SER
1	BG	156	SER
1	BG	178	GLY
1	BH	145	GLU
1	BH	236	SER
1	BL	151	THR
1	BL	178	GLY
1	BM	236	SER
1	BP	145	GLU
1	BQ	151	THR
1	BR	54	GLN
1	BR	101	PRO
1	BV	90	ALA
1	BV	151	THR
1	BV	178	GLY
1	BW	54	GLN
1	BW	236	SER
1	BZ	217	VAL
1	Ba	178	GLY
1	Be	145	GLU

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Mol	Chain	Res	Type
1	Be	217	VAL
1	Bf	89	PRO
1	Bf	151	THR
1	Bf	156	SER
1	Bf	178	GLY
1	Bg	94	PRO
1	Bg	236	SER
1	Bj	228	SER
1	Bk	156	SER
1	Bl	54	GLN
1	Bl	101	PRO
1	Bl	236	SER
1	Bo	145	GLU
1	Bo	217	VAL
1	Bp	151	THR
1	Bq	54	GLN
1	Bq	101	PRO
1	Bq	236	SER
1	Bt	163	PRO
1	Bt	217	VAL
1	Bu	152	ASP
1	Bv	54	GLN
1	By	217	VAL
1	B1	54	GLN
1	B4	145	GLU
1	B4	217	VAL
1	B5	151	THR
1	B6	54	GLN
1	CB	151	THR
1	CB	178	GLY
1	CC	54	GLN
1	CF	217	VAL
1	CH	54	GLN
1	CH	145	GLU
1	CK	217	VAL
1	CL	151	THR
1	CL	178	GLY
1	CP	217	VAL
1	CQ	151	THR
1	CQ	178	GLY
1	CR	54	GLN
1	CR	101	PRO

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Mol	Chain	Res	Type
1	CU	217	VAL
1	CW	54	GLN
1	CW	236	SER
1	CZ	217	VAL
1	Cb	54	GLN
1	Cb	101	PRO
1	Cb	236	SER
1	Ce	145	GLU
1	Cf	151	THR
1	Cg	54	GLN
1	Cg	90	ALA
1	Ck	151	THR
1	Ck	156	SER
1	Ck	178	GLY
1	Cl	89	PRO
1	Cl	101	PRO
1	Cl	145	GLU
1	Cl	236	SER
1	Co	217	VAL
1	Cp	151	THR
1	Cq	54	GLN
1	Ct	163	PRO
1	Ct	217	VAL
1	Cu	151	THR
1	Cu	152	ASP
1	Cv	54	GLN
1	Cv	236	SER
1	Cy	163	PRO
1	Cz	151	THR
1	Cz	178	GLY
1	C1	91	GLY
1	C5	151	THR
1	C5	178	GLY
1	C6	90	ALA
1	C6	101	PRO
1	DB	53	GLY
1	DC	236	SER
1	DF	163	PRO
1	DF	228	SER
1	DG	94	PRO
1	DG	151	THR
1	DH	101	PRO

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Mol	Chain	Res	Type
1	DH	236	SER
1	DL	151	THR
1	DM	54	GLN
1	DM	101	PRO
1	DM	236	SER
1	DP	217	VAL
1	DR	54	GLN
1	DR	236	SER
1	DU	163	PRO
1	DU	217	VAL
1	DV	90	ALA
1	DV	151	THR
1	DV	156	SER
1	DV	178	GLY
1	DW	236	SER
1	DZ	217	VAL
1	Da	89	PRO
1	Da	156	SER
1	Db	54	GLN
1	Db	101	PRO
1	Db	236	SER
1	De	145	GLU
1	De	217	VAL
1	Df	156	SER
1	Df	178	GLY
1	Dg	54	GLN
1	Dg	236	SER
1	Dj	217	VAL
1	Dk	178	GLY
1	Do	217	VAL
1	Dp	90	ALA
1	Dp	151	THR
1	Dp	178	GLY
1	Dq	54	GLN
1	Dq	236	SER
1	Dt	163	PRO
1	Dt	217	VAL
1	Du	152	ASP
1	Dv	54	GLN
1	Dv	236	SER
1	Dy	145	GLU
1	Dy	217	VAL

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Mol	Chain	Res	Type
1	Dz	89	PRO
1	Dz	156	SER
1	D1	236	SER
1	D6	54	GLN
1	EA	217	VAL
1	EB	90	ALA
1	EB	151	THR
1	EC	236	SER
1	EF	145	GLU
1	EG	151	THR
1	EG	178	GLY
1	EH	54	GLN
1	EK	217	VAL
1	EL	151	THR
1	EL	178	GLY
1	EM	54	GLN
1	EQ	151	THR
1	EQ	156	SER
1	ER	54	GLN
1	EU	217	VAL
1	EU	228	SER
1	EV	151	THR
1	EV	156	SER
1	EW	54	GLN
1	EW	236	SER
1	EZ	217	VAL
1	Ea	178	GLY
1	Eb	236	SER
1	Ef	151	THR
1	Eg	54	GLN
1	Ek	151	THR
1	El	54	GLN
1	El	236	SER
1	Ep	178	GLY
1	Eq	101	PRO
1	Et	217	VAL
1	Eu	53	GLY
1	Ey	217	VAL
1	Ez	151	THR
1	E1	54	GLN
1	E4	163	PRO
1	E5	151	THR

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Mol	Chain	Res	Type
1	E5	178	GLY
1	E6	54	GLN
1	FA	89	PRO
1	FA	163	PRO
1	FA	228	SER
1	FB	151	THR
1	FC	54	GLN
1	FF	163	PRO
1	FF	228	SER
1	FG	53	GLY
1	FG	89	PRO
1	FG	178	GLY
1	FH	54	GLN
1	FL	178	GLY
1	FM	54	GLN
1	FP	163	PRO
1	FQ	53	GLY
1	FQ	151	THR
1	FQ	178	GLY
1	FR	90	ALA
1	FU	228	SER
1	FV	178	GLY
1	FW	90	ALA
1	FZ	163	PRO
1	FZ	228	SER
1	Fa	94	PRO
1	Fa	156	SER
1	Fe	163	PRO
1	Ff	178	GLY
1	Fj	163	PRO
1	Fj	228	SER
1	Fk	178	GLY
1	Fl	54	GLN
1	Fo	163	PRO
1	Fo	228	SER
1	Fq	54	GLN
1	Fq	90	ALA
1	Ft	94	PRO
1	Ft	163	PRO
1	Fu	90	ALA
1	Fv	54	GLN
1	Fy	163	PRO

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Mol	Chain	Res	Type
1	Fy	228	SER
1	F1	54	GLN
1	F4	89	PRO
1	F4	163	PRO
1	F4	228	SER
1	F5	156	SER
1	GC	90	ALA
1	GF	145	GLU
1	GF	163	PRO
1	GG	156	SER
1	GH	54	GLN
1	GK	90	ALA
1	GK	163	PRO
1	GK	228	SER
1	GL	53	GLY
1	GL	90	ALA
1	GL	94	PRO
1	GP	94	PRO
1	GP	163	PRO
1	GP	228	SER
1	GQ	53	GLY
1	GQ	178	GLY
1	GR	54	GLN
1	GU	163	PRO
1	GU	228	SER
1	GV	178	GLY
1	GZ	163	PRO
1	GZ	228	SER
1	Ga	53	GLY
1	Ga	156	SER
1	Gb	54	GLN
1	Ge	163	PRO
1	Gg	54	GLN
1	Gj	163	PRO
1	Gj	228	SER
1	Gk	178	GLY
1	Go	163	PRO
1	Go	228	SER
1	Gp	90	ALA
1	Gt	163	PRO
1	Gu	151	THR
1	Gu	156	SER

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Mol	Chain	Res	Type
1	Gv	54	GLN
1	Gy	163	PRO
1	Gz	178	GLY
1	G4	163	PRO
1	G4	228	SER
1	G6	54	GLN
1	HA	163	PRO
1	HA	228	SER
1	HB	156	SER
1	HB	178	GLY
1	HC	54	GLN
1	HF	163	PRO
1	HF	228	SER
1	HG	156	SER
1	HK	163	PRO
1	HL	151	THR
1	HM	54	GLN
1	HP	163	PRO
1	HQ	53	GLY
1	HQ	151	THR
1	HR	54	GLN
1	HU	163	PRO
1	HU	228	SER
1	HV	94	PRO
1	HW	89	PRO
1	HW	94	PRO
1	HZ	163	PRO
1	Ha	53	GLY
1	Ha	89	PRO
1	Hb	90	ALA
1	He	163	PRO
1	He	228	SER
1	Hf	151	THR
1	Hj	163	PRO
1	Hj	228	SER
1	Hk	178	GLY
1	Ho	163	PRO
1	Ho	228	SER
1	Hp	90	ALA
1	Hp	178	GLY
1	Hq	54	GLN
1	Ht	89	PRO

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Mol	Chain	Res	Type
1	Ht	145	GLU
1	Ht	163	PRO
1	Ht	228	SER
1	Hu	90	ALA
1	Hu	151	THR
1	Hy	163	PRO
1	Hy	228	SER
1	Hx	178	GLY
1	H4	163	PRO
1	IA	163	PRO
1	IA	228	SER
1	IF	163	PRO
1	IG	156	SER
1	IH	54	GLN
1	IK	228	SER
1	IL	151	THR
1	IL	178	GLY
1	IM	54	GLN
1	IM	90	ALA
1	IP	163	PRO
1	IQ	94	PRO
1	IQ	151	THR
1	IQ	178	GLY
1	IR	54	GLN
1	IU	228	SER
1	IV	90	ALA
1	IV	151	THR
1	IV	156	SER
1	IW	54	GLN
1	IZ	163	PRO
1	IZ	228	SER
1	Ia	151	THR
1	Ia	156	SER
1	Ie	89	PRO
1	Ie	163	PRO
1	Ie	228	SER
1	If	53	GLY
1	If	151	THR
1	If	178	GLY
1	Ig	54	GLN
1	Ig	94	PRO
1	Ij	163	PRO

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Mol	Chain	Res	Type
1	Ij	228	SER
1	Ik	90	ALA
1	Il	90	ALA
1	Ip	53	GLY
1	Ip	156	SER
1	It	163	PRO
1	Iy	163	PRO
1	Iy	228	SER
1	Iz	53	GLY
1	Iz	151	THR
1	Iz	178	GLY
1	I1	54	GLN
1	I4	163	PRO
1	I4	228	SER
1	I5	151	THR
1	I5	178	GLY
1	I6	54	GLN
1	JA	163	PRO
1	JB	53	GLY
1	JC	54	GLN
1	JF	163	PRO
1	JG	156	SER
1	JK	163	PRO
1	JK	228	SER
1	JM	54	GLN
1	JP	163	PRO
1	JP	228	SER
1	JQ	53	GLY
1	JU	163	PRO
1	JU	228	SER
1	JV	53	GLY
1	JW	54	GLN
1	JZ	163	PRO
1	JZ	228	SER
1	Ja	90	ALA
1	Ja	178	GLY
1	Jb	54	GLN
1	Je	163	PRO
1	Je	228	SER
1	Jf	156	SER
1	Jg	54	GLN
1	Jj	145	GLU

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Mol	Chain	Res	Type
1	Jj	163	PRO
1	Jj	228	SER
1	Jl	54	GLN
1	Jo	163	PRO
1	Jo	228	SER
1	Jq	217	VAL
1	Jv	54	GLN
1	Jy	90	ALA
1	Jy	163	PRO
1	Jz	53	GLY
1	Jz	156	SER
1	J1	54	GLN
1	J4	163	PRO
1	J5	94	PRO
1	J5	156	SER
1	J6	54	GLN
1	AB	151	THR
1	AF	217	VAL
1	AF	228	SER
1	AG	90	ALA
1	AG	152	ASP
1	AH	236	SER
1	AK	163	PRO
1	AK	228	SER
1	AQ	151	THR
1	AR	101	PRO
1	AR	236	SER
1	AU	163	PRO
1	AU	228	SER
1	AV	151	THR
1	AW	101	PRO
1	AZ	163	PRO
1	Aa	178	GLY
1	Ab	101	PRO
1	Ae	163	PRO
1	Af	151	THR
1	Af	152	ASP
1	Aj	163	PRO
1	Aj	228	SER
1	Ao	163	PRO
1	Ao	228	SER
1	Ap	53	GLY

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Mol	Chain	Res	Type
1	Ap	89	PRO
1	Ap	151	THR
1	At	228	SER
1	Au	178	GLY
1	Av	101	PRO
1	Av	236	SER
1	Ay	228	SER
1	Az	151	THR
1	A1	101	PRO
1	A4	217	VAL
1	A5	152	ASP
1	A6	236	SER
1	BB	152	ASP
1	BB	178	GLY
1	BC	101	PRO
1	BG	151	THR
1	BK	163	PRO
1	BL	152	ASP
1	BL	156	SER
1	BM	90	ALA
1	BM	101	PRO
1	BM	188	ALA
1	BP	228	SER
1	BQ	89	PRO
1	BQ	152	ASP
1	BQ	178	GLY
1	BR	236	SER
1	BU	163	PRO
1	BU	217	VAL
1	BW	188	ALA
1	BZ	228	SER
1	Ba	152	ASP
1	Bb	90	ALA
1	Bb	101	PRO
1	Bb	188	ALA
1	Bb	236	SER
1	Be	228	SER
1	Bf	152	ASP
1	Bj	163	PRO
1	Bk	151	THR
1	Bo	163	PRO
1	Bo	189	THR

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Mol	Chain	Res	Type
1	Bo	228	SER
1	Bt	228	SER
1	Bu	180	PRO
1	Bv	101	PRO
1	Bv	236	SER
1	Bz	53	GLY
1	Bz	151	THR
1	B1	236	SER
1	B4	163	PRO
1	B4	228	SER
1	B5	152	ASP
1	B6	101	PRO
1	B6	236	SER
1	CA	163	PRO
1	CA	217	VAL
1	CA	228	SER
1	CB	152	ASP
1	CC	101	PRO
1	CC	236	SER
1	CG	151	THR
1	CG	156	SER
1	CG	178	GLY
1	CH	101	PRO
1	CH	236	SER
1	CK	163	PRO
1	CK	228	SER
1	CM	101	PRO
1	CM	236	SER
1	CP	228	SER
1	CR	236	SER
1	CU	228	SER
1	CW	101	PRO
1	CZ	228	SER
1	Ca	90	ALA
1	Ca	151	THR
1	Ca	156	SER
1	Ca	178	GLY
1	Ce	163	PRO
1	Ce	217	VAL
1	Ce	228	SER
1	Cf	152	ASP
1	Cf	178	GLY

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Mol	Chain	Res	Type
1	Cg	236	SER
1	Cj	217	VAL
1	Cj	228	SER
1	Ck	94	PRO
1	Co	163	PRO
1	Cp	152	ASP
1	Cp	178	GLY
1	Cq	101	PRO
1	Cq	236	SER
1	Ct	89	PRO
1	Ct	228	SER
1	Cv	101	PRO
1	Cy	217	VAL
1	Cz	152	ASP
1	C1	101	PRO
1	C1	188	ALA
1	C1	236	SER
1	C4	163	PRO
1	C4	217	VAL
1	C6	236	SER
1	DB	151	THR
1	DC	101	PRO
1	DF	217	VAL
1	DG	156	SER
1	DG	178	GLY
1	DH	94	PRO
1	DK	217	VAL
1	DK	228	SER
1	DL	178	GLY
1	DQ	151	THR
1	DQ	156	SER
1	DQ	178	GLY
1	DU	228	SER
1	DW	101	PRO
1	Da	53	GLY
1	Da	151	THR
1	Df	151	THR
1	Dg	188	ALA
1	Dj	228	SER
1	Dk	151	THR
1	Dl	54	GLN
1	Dl	101	PRO

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Mol	Chain	Res	Type
1	Dl	236	SER
1	Do	163	PRO
1	Dp	152	ASP
1	Dp	156	SER
1	Dq	101	PRO
1	Dq	188	ALA
1	Du	178	GLY
1	Dv	101	PRO
1	Dy	189	THR
1	Dz	178	GLY
1	D1	90	ALA
1	D4	163	PRO
1	D4	217	VAL
1	D5	53	GLY
1	D5	94	PRO
1	D5	151	THR
1	D6	101	PRO
1	D6	236	SER
1	EA	228	SER
1	EB	152	ASP
1	EB	178	GLY
1	EC	101	PRO
1	EF	163	PRO
1	EG	156	SER
1	EH	101	PRO
1	EH	236	SER
1	EK	228	SER
1	EL	156	SER
1	EM	101	PRO
1	EM	188	ALA
1	EM	236	SER
1	EP	163	PRO
1	EP	228	SER
1	ER	90	ALA
1	ER	101	PRO
1	ER	236	SER
1	EV	94	PRO
1	EV	178	GLY
1	EW	101	PRO
1	EZ	163	PRO
1	EZ	228	SER
1	Ea	151	THR

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Mol	Chain	Res	Type
1	Eb	101	PRO
1	Ee	217	VAL
1	Ee	228	SER
1	Ef	178	GLY
1	Eg	101	PRO
1	Eg	236	SER
1	Ej	163	PRO
1	Eo	217	VAL
1	Eo	228	SER
1	Ep	90	ALA
1	Ep	151	THR
1	Eq	236	SER
1	Et	163	PRO
1	Eu	178	GLY
1	Ev	236	SER
1	Ey	228	SER
1	Ez	156	SER
1	Ez	178	GLY
1	E1	236	SER
1	E4	217	VAL
1	E6	101	PRO
1	E6	236	SER
1	FB	53	GLY
1	FB	178	GLY
1	FF	189	THR
1	FG	156	SER
1	FH	101	PRO
1	FK	163	PRO
1	FK	228	SER
1	FL	53	GLY
1	FP	228	SER
1	FQ	90	ALA
1	FR	217	VAL
1	FV	151	THR
1	FW	54	GLN
1	FW	94	PRO
1	Fa	151	THR
1	Fa	178	GLY
1	Fb	54	GLN
1	Fe	189	THR
1	Ff	53	GLY
1	Ff	151	THR

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Mol	Chain	Res	Type
1	Fg	54	GLN
1	Fk	53	GLY
1	Fk	151	THR
1	Fp	178	GLY
1	Fq	89	PRO
1	Ft	228	SER
1	Fu	151	THR
1	Fy	189	THR
1	Fz	53	GLY
1	Fz	151	THR
1	Fz	178	GLY
1	F5	53	GLY
1	F5	151	THR
1	F6	54	GLN
1	GA	163	PRO
1	GA	228	SER
1	GB	53	GLY
1	GB	151	THR
1	GB	178	GLY
1	GC	54	GLN
1	GG	53	GLY
1	GG	151	THR
1	GG	178	GLY
1	GL	151	THR
1	GL	178	GLY
1	GP	189	THR
1	GQ	89	PRO
1	GQ	151	THR
1	GR	217	VAL
1	GV	156	SER
1	Ga	151	THR
1	Ga	178	GLY
1	Gb	101	PRO
1	Ge	189	THR
1	Gf	53	GLY
1	Gk	53	GLY
1	Gk	156	SER
1	Gl	54	GLN
1	Gp	53	GLY
1	Gq	54	GLN
1	Gt	189	THR
1	Gu	53	GLY

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Mol	Chain	Res	Type
1	Gv	217	VAL
1	Gy	228	SER
1	Gz	53	GLY
1	Gz	151	THR
1	Gz	156	SER
1	G1	54	GLN
1	G1	101	PRO
1	G4	189	THR
1	G5	53	GLY
1	G5	178	GLY
1	G6	101	PRO
1	HB	53	GLY
1	HB	151	THR
1	HG	53	GLY
1	HG	94	PRO
1	HG	178	GLY
1	HH	217	VAL
1	HK	228	SER
1	HL	53	GLY
1	HL	178	GLY
1	HQ	156	SER
1	HQ	178	GLY
1	HV	53	GLY
1	HV	90	ALA
1	HV	178	GLY
1	HZ	90	ALA
1	HZ	228	SER
1	Ha	151	THR
1	Ha	178	GLY
1	Hb	54	GLN
1	He	90	ALA
1	Hf	53	GLY
1	Hf	178	GLY
1	Hg	54	GLN
1	Hk	53	GLY
1	Hk	151	THR
1	Hl	54	GLN
1	Hl	89	PRO
1	Ho	189	THR
1	Hp	53	GLY
1	Hp	151	THR
1	Hu	178	GLY

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Mol	Chain	Res	Type
1	Hz	53	GLY
1	Hz	151	THR
1	Hz	212	SER
1	H4	90	ALA
1	H4	228	SER
1	H5	53	GLY
1	H5	151	THR
1	H5	178	GLY
1	H6	54	GLN
1	IB	53	GLY
1	IB	94	PRO
1	IB	151	THR
1	IB	156	SER
1	IB	178	GLY
1	IC	54	GLN
1	IF	228	SER
1	IG	53	GLY
1	IG	151	THR
1	IG	178	GLY
1	IH	217	VAL
1	IK	189	THR
1	IL	53	GLY
1	IP	228	SER
1	IQ	53	GLY
1	IU	89	PRO
1	IV	178	GLY
1	IZ	189	THR
1	Ia	53	GLY
1	Ij	94	PRO
1	Ik	53	GLY
1	Ik	151	THR
1	Ik	156	SER
1	Il	54	GLN
1	Io	163	PRO
1	Io	189	THR
1	Io	228	SER
1	It	189	THR
1	Iu	53	GLY
1	Iu	156	SER
1	Iu	178	GLY
1	Iv	101	PRO
1	Iv	217	VAL

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Mol	Chain	Res	Type
1	Iy	189	THR
1	I5	53	GLY
1	I5	156	SER
1	I6	93	LYS
1	JA	228	SER
1	JB	156	SER
1	JB	178	GLY
1	JF	189	THR
1	JG	53	GLY
1	JG	151	THR
1	JH	54	GLN
1	JL	151	THR
1	JL	156	SER
1	JL	178	GLY
1	JQ	178	GLY
1	JR	54	GLN
1	JU	189	THR
1	JV	151	THR
1	JV	178	GLY
1	Ja	53	GLY
1	Ja	151	THR
1	Je	90	ALA
1	Jf	151	THR
1	Jf	178	GLY
1	Jg	217	VAL
1	Jj	189	THR
1	Jk	53	GLY
1	Jk	151	THR
1	Jo	189	THR
1	Jp	53	GLY
1	Jp	90	ALA
1	Jp	178	GLY
1	Jq	54	GLN
1	Jt	163	PRO
1	Ju	53	GLY
1	Ju	151	THR
1	Jv	217	VAL
1	Jy	189	THR
1	J5	178	GLY
1	AA	228	SER
1	AB	89	PRO
1	AB	152	ASP

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Mol	Chain	Res	Type
1	AC	101	PRO
1	AC	188	ALA
1	AH	101	PRO
1	AL	156	SER
1	AL	180	PRO
1	AM	101	PRO
1	AP	163	PRO
1	AP	189	THR
1	AP	217	VAL
1	AP	228	SER
1	AQ	152	ASP
1	AU	189	THR
1	AV	156	SER
1	AW	188	ALA
1	Aa	152	ASP
1	Ab	188	ALA
1	Ae	217	VAL
1	Ae	228	SER
1	Ag	188	ALA
1	Ak	53	GLY
1	Al	89	PRO
1	Ap	178	GLY
1	Aq	101	PRO
1	At	163	PRO
1	Ay	163	PRO
1	Az	152	ASP
1	Az	178	GLY
1	A4	228	SER
1	A5	53	GLY
1	A5	156	SER
1	A6	94	PRO
1	BA	89	PRO
1	BA	189	THR
1	BC	188	ALA
1	BF	163	PRO
1	BF	189	THR
1	BG	53	GLY
1	BG	89	PRO
1	BH	101	PRO
1	BK	228	SER
1	BL	53	GLY
1	BV	152	ASP

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Mol	Chain	Res	Type
1	BW	101	PRO
1	BZ	163	PRO
1	Ba	156	SER
1	Be	89	PRO
1	Be	163	PRO
1	Bf	53	GLY
1	Bg	95	ILE
1	Bg	101	PRO
1	Bj	189	THR
1	Bl	188	ALA
1	Bp	152	ASP
1	Bp	178	GLY
1	Bu	178	GLY
1	By	89	PRO
1	By	163	PRO
1	Bz	152	ASP
1	Bz	156	SER
1	Bz	178	GLY
1	B1	101	PRO
1	B1	188	ALA
1	B4	189	THR
1	CC	188	ALA
1	CF	189	THR
1	CL	53	GLY
1	CP	163	PRO
1	CQ	152	ASP
1	CQ	156	SER
1	CR	90	ALA
1	CU	163	PRO
1	CV	53	GLY
1	CV	151	THR
1	CV	178	GLY
1	CZ	163	PRO
1	Ca	152	ASP
1	Cb	90	ALA
1	Cb	188	ALA
1	Cg	101	PRO
1	Cg	188	ALA
1	Cj	163	PRO
1	Ck	53	GLY
1	Co	228	SER
1	Cu	178	GLY

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Mol	Chain	Res	Type
1	C5	53	GLY
1	C5	152	ASP
1	DA	163	PRO
1	DA	217	VAL
1	DB	152	ASP
1	DB	178	GLY
1	DG	53	GLY
1	DG	152	ASP
1	DK	89	PRO
1	DL	53	GLY
1	DL	152	ASP
1	DP	228	SER
1	DQ	152	ASP
1	DR	101	PRO
1	DV	152	ASP
1	DZ	163	PRO
1	DZ	189	THR
1	DZ	228	SER
1	Da	152	ASP
1	Db	188	ALA
1	De	228	SER
1	Df	152	ASP
1	Dg	101	PRO
1	Dj	163	PRO
1	Dk	53	GLY
1	Dk	156	SER
1	Do	228	SER
1	Dt	228	SER
1	Du	53	GLY
1	Dv	188	ALA
1	Dy	89	PRO
1	Dy	163	PRO
1	Dz	53	GLY
1	Dz	151	THR
1	D1	101	PRO
1	D1	188	ALA
1	D4	228	SER
1	D5	156	SER
1	D6	188	ALA
1	EA	163	PRO
1	EB	156	SER
1	EF	189	THR

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Mol	Chain	Res	Type
1	EG	152	ASP
1	EH	188	ALA
1	EL	53	GLY
1	EL	152	ASP
1	EQ	53	GLY
1	EQ	152	ASP
1	EU	163	PRO
1	EV	152	ASP
1	EW	188	ALA
1	Ea	53	GLY
1	Ee	163	PRO
1	Ef	152	ASP
1	Ej	217	VAL
1	Ej	228	SER
1	Ek	152	ASP
1	El	101	PRO
1	Eo	163	PRO
1	Et	228	SER
1	Ev	101	PRO
1	Ey	189	THR
1	Ez	152	ASP
1	E1	101	PRO
1	E4	94	PRO
1	E5	53	GLY
1	E5	152	ASP
1	E5	180	PRO
1	FK	189	THR
1	FL	151	THR
1	FM	101	PRO
1	FM	217	VAL
1	FP	189	THR
1	FQ	156	SER
1	FR	54	GLN
1	FR	101	PRO
1	FU	90	ALA
1	FU	163	PRO
1	FV	94	PRO
1	FW	89	PRO
1	FW	217	VAL
1	FZ	94	PRO
1	FZ	189	THR
1	Fa	95	ILE

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Mol	Chain	Res	Type
1	Fb	101	PRO
1	Fb	217	VAL
1	Fe	89	PRO
1	Fg	101	PRO
1	Fj	189	THR
1	Fp	90	ALA
1	Fp	151	THR
1	Fq	217	VAL
1	F1	101	PRO
1	F4	189	THR
1	F6	90	ALA
1	GF	189	THR
1	GH	101	PRO
1	GH	217	VAL
1	GK	94	PRO
1	GK	189	THR
1	GL	156	SER
1	GM	54	GLN
1	GM	101	PRO
1	GM	217	VAL
1	GU	189	THR
1	GV	151	THR
1	GW	101	PRO
1	GW	217	VAL
1	GZ	189	THR
1	Gb	217	VAL
1	Gf	94	PRO
1	Gf	151	THR
1	Gf	156	SER
1	Gj	94	PRO
1	Gj	189	THR
1	Gk	151	THR
1	Gl	217	VAL
1	Go	189	THR
1	Gq	217	VAL
1	Gu	178	GLY
1	Gv	101	PRO
1	Gy	189	THR
1	G1	217	VAL
1	G5	89	PRO
1	G5	151	THR
1	HA	189	THR

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Mol	Chain	Res	Type
1	HF	90	ALA
1	HG	151	THR
1	HH	101	PRO
1	HK	189	THR
1	HM	101	PRO
1	HP	189	THR
1	HP	228	SER
1	HR	101	PRO
1	HU	189	THR
1	HV	151	THR
1	HW	217	VAL
1	HZ	93	LYS
1	Hb	101	PRO
1	He	189	THR
1	Hg	101	PRO
1	Hg	217	VAL
1	Hj	189	THR
1	Hp	156	SER
1	Hq	101	PRO
1	Ht	189	THR
1	Hu	53	GLY
1	Hv	101	PRO
1	Hv	217	VAL
1	H1	54	GLN
1	H1	89	PRO
1	H1	101	PRO
1	H1	217	VAL
1	H5	156	SER
1	H6	101	PRO
1	IA	189	THR
1	IC	101	PRO
1	IC	217	VAL
1	IF	93	LYS
1	IK	163	PRO
1	IL	93	LYS
1	IM	217	VAL
1	IP	189	THR
1	IR	101	PRO
1	IR	217	VAL
1	IU	94	PRO
1	IW	217	VAL
1	Ia	178	GLY

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Mol	Chain	Res	Type
1	Ib	101	PRO
1	Ie	189	THR
1	Ij	189	THR
1	Ip	151	THR
1	Ip	178	GLY
1	Iq	101	PRO
1	Iu	151	THR
1	I1	101	PRO
1	I1	217	VAL
1	I4	189	THR
1	I6	90	ALA
1	I6	217	VAL
1	JA	93	LYS
1	JA	189	THR
1	JB	89	PRO
1	JB	151	THR
1	JC	101	PRO
1	JC	217	VAL
1	JH	101	PRO
1	JH	217	VAL
1	JK	189	THR
1	JL	53	GLY
1	JM	217	VAL
1	JP	189	THR
1	JQ	151	THR
1	JQ	156	SER
1	JR	217	VAL
1	JV	156	SER
1	JZ	189	THR
1	Jf	53	GLY
1	Jg	101	PRO
1	Jk	178	GLY
1	Jl	101	PRO
1	Jl	217	VAL
1	Jp	151	THR
1	Jp	156	SER
1	Jq	101	PRO
1	Jt	189	THR
1	Jt	228	SER
1	Jz	93	LYS
1	Jz	151	THR
1	Jz	178	GLY

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Mol	Chain	Res	Type
1	J1	101	PRO
1	J1	217	VAL
1	J4	94	PRO
1	J4	189	THR
1	J5	53	GLY
1	J5	93	LYS
1	J5	151	THR
1	J6	101	PRO
1	J6	217	VAL
1	AA	163	PRO
1	AB	53	GLY
1	AF	163	PRO
1	AQ	53	GLY
1	AV	152	ASP
1	Af	178	GLY
1	Ag	101	PRO
1	Ap	152	ASP
1	Au	53	GLY
1	A1	188	ALA
1	A4	163	PRO
1	A5	217	VAL
1	A6	188	ALA
1	BA	163	PRO
1	BG	152	ASP
1	BG	180	PRO
1	BL	180	PRO
1	BP	163	PRO
1	Bf	180	PRO
1	Bg	188	ALA
1	Bp	53	GLY
1	Bu	53	GLY
1	By	228	SER
1	B5	53	GLY
1	CB	53	GLY
1	CB	180	PRO
1	CF	228	SER
1	CL	156	SER
1	CM	89	PRO
1	CQ	53	GLY
1	Ck	152	ASP
1	Cl	188	ALA
1	Ct	189	THR

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Mol	Chain	Res	Type
1	Cu	53	GLY
1	Cz	217	VAL
1	C4	228	SER
1	C5	217	VAL
1	DA	189	THR
1	DB	156	SER
1	DC	188	ALA
1	DG	91	GLY
1	DH	188	ALA
1	DK	163	PRO
1	DM	188	ALA
1	DP	163	PRO
1	DW	91	GLY
1	DW	188	ALA
1	Da	178	GLY
1	De	163	PRO
1	Du	180	PRO
1	Dy	228	SER
1	D5	178	GLY
1	EB	53	GLY
1	EC	188	ALA
1	EK	163	PRO
1	ER	188	ALA
1	Ea	90	ALA
1	Ea	152	ASP
1	Ef	53	GLY
1	Eg	90	ALA
1	Ek	180	PRO
1	Eq	188	ALA
1	Et	189	THR
1	Eu	89	PRO
1	Eu	151	THR
1	Ey	163	PRO
1	Ez	90	ALA
1	FC	101	PRO
1	FC	217	VAL
1	FH	217	VAL
1	FL	93	LYS
1	FV	53	GLY
1	FW	101	PRO
1	Fg	217	VAL
1	F1	101	PRO

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Mol	Chain	Res	Type
1	Fq	93	LYS
1	Fq	101	PRO
1	Fu	53	GLY
1	Fv	101	PRO
1	Fv	217	VAL
1	F1	217	VAL
1	F6	101	PRO
1	F6	217	VAL
1	GC	101	PRO
1	GC	217	VAL
1	GR	101	PRO
1	GV	53	GLY
1	GZ	89	PRO
1	Gf	178	GLY
1	Gg	101	PRO
1	Gg	217	VAL
1	Gl	101	PRO
1	Gq	101	PRO
1	G6	217	VAL
1	HC	101	PRO
1	HC	217	VAL
1	HF	189	THR
1	HM	217	VAL
1	HR	217	VAL
1	HW	101	PRO
1	Hb	217	VAL
1	Hg	94	PRO
1	Hl	217	VAL
1	Hq	217	VAL
1	Hv	89	PRO
1	H5	89	PRO
1	H6	217	VAL
1	IH	101	PRO
1	IL	228	SER
1	IM	101	PRO
1	IW	101	PRO
1	Ib	217	VAL
1	Il	217	VAL
1	Iq	217	VAL
1	JG	93	LYS
1	JG	178	GLY
1	JM	101	PRO

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Mol	Chain	Res	Type
1	JP	89	PRO
1	JR	101	PRO
1	JW	101	PRO
1	Jb	217	VAL
1	Jv	101	PRO
1	AC	89	PRO
1	AG	53	GLY
1	AK	89	PRO
1	AK	94	PRO
1	AL	53	GLY
1	AL	217	VAL
1	AQ	94	PRO
1	Av	89	PRO
1	Az	53	GLY
1	Az	89	PRO
1	BB	53	GLY
1	BG	91	GLY
1	BQ	53	GLY
1	BQ	94	PRO
1	Bk	53	GLY
1	By	93	LYS
1	Bz	180	PRO
1	CF	163	PRO
1	CG	53	GLY
1	CV	94	PRO
1	Ca	53	GLY
1	Cf	180	PRO
1	Cp	53	GLY
1	C5	180	PRO
1	DB	217	VAL
1	DG	217	VAL
1	DV	53	GLY
1	Df	53	GLY
1	Dp	53	GLY
1	Du	217	VAL
1	Dz	180	PRO
1	EG	53	GLY
1	EQ	217	VAL
1	Ek	53	GLY
1	Eu	180	PRO
1	Eu	217	VAL
1	Ez	53	GLY

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Mol	Chain	Res	Type
1	FL	89	PRO
1	FQ	180	PRO
1	Fl	217	VAL
1	Fp	53	GLY
1	Ft	93	LYS
1	Gy	94	PRO
1	HK	89	PRO
1	Hl	101	PRO
1	IV	53	GLY
1	Ig	217	VAL
1	Ij	93	LYS
1	JW	217	VAL
1	Jb	101	PRO
1	Jt	89	PRO
1	AG	217	VAL
1	AQ	217	VAL
1	Ak	217	VAL
1	Au	217	VAL
1	BG	217	VAL
1	BL	217	VAL
1	BV	53	GLY
1	BV	217	VAL
1	Ba	53	GLY
1	Bk	178	GLY
1	Bp	217	VAL
1	Bz	217	VAL
1	B5	217	VAL
1	CL	217	VAL
1	Ce	93	LYS
1	Cf	53	GLY
1	Cu	180	PRO
1	Cu	217	VAL
1	Cz	53	GLY
1	Dk	217	VAL
1	Dp	180	PRO
1	Dz	217	VAL
1	D5	180	PRO
1	EQ	180	PRO
1	Ea	217	VAL
1	Ee	89	PRO
1	Ef	217	VAL
1	Ep	53	GLY

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Mol	Chain	Res	Type
1	Ep	217	VAL
1	E5	217	VAL
1	FP	89	PRO
1	GA	89	PRO
1	GF	89	PRO
1	Gt	217	VAL
1	G5	95	ILE
1	HQ	89	PRO
1	HQ	93	LYS
1	Ib	89	PRO
1	Il	101	PRO
1	I6	101	PRO
1	Jy	93	LYS
1	AU	93	LYS
1	AV	53	GLY
1	Aa	53	GLY
1	Ak	180	PRO
1	BQ	93	LYS
1	BQ	180	PRO
1	BQ	217	VAL
1	Bp	180	PRO
1	By	94	PRO
1	CG	217	VAL
1	CQ	217	VAL
1	CV	217	VAL
1	CZ	89	PRO
1	Ca	217	VAL
1	Cy	89	PRO
1	DQ	53	GLY
1	DV	217	VAL
1	Da	217	VAL
1	Df	180	PRO
1	Dq	95	ILE
1	EB	180	PRO
1	EV	53	GLY
1	Ek	217	VAL
1	Fu	180	PRO
1	GZ	217	VAL
1	Ga	94	PRO
1	Gy	89	PRO
1	HL	180	PRO
1	HZ	89	PRO

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Mol	Chain	Res	Type
1	I4	217	VAL
1	I5	94	PRO
1	JG	94	PRO
1	Jy	94	PRO
1	AB	217	VAL
1	AL	93	LYS
1	AV	217	VAL
1	Aa	217	VAL
1	Af	180	PRO
1	Af	217	VAL
1	Ap	217	VAL
1	Au	180	PRO
1	BB	217	VAL
1	Ba	180	PRO
1	Bf	217	VAL
1	Bu	217	VAL
1	CB	217	VAL
1	CG	89	PRO
1	DB	180	PRO
1	DQ	217	VAL
1	DV	180	PRO
1	Da	180	PRO
1	EB	217	VAL
1	EL	217	VAL
1	ER	93	LYS
1	EV	217	VAL
1	Ef	180	PRO
1	FU	89	PRO
1	Fj	89	PRO
1	Fk	180	PRO
1	GK	89	PRO
1	IG	180	PRO
1	Ig	101	PRO
1	Io	217	VAL
1	Ip	89	PRO
1	Iy	217	VAL
1	I5	180	PRO
1	Jk	94	PRO
1	Ae	93	LYS
1	Az	180	PRO
1	Bk	217	VAL
1	B5	180	PRO

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Mol	Chain	Res	Type
1	Cf	217	VAL
1	Ck	217	VAL
1	Cp	217	VAL
1	DL	180	PRO
1	EG	180	PRO
1	Ea	180	PRO
1	Ff	180	PRO
1	F5	94	PRO
1	GB	180	PRO
1	GW	89	PRO
1	HA	217	VAL
1	He	93	LYS
1	Ho	217	VAL
1	Hy	89	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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A1	186/204 (91%)	177 (95%)	9 (5%)	25 58
1	A4	160/204 (78%)	151 (94%)	9 (6%)	21 52
1	A5	162/204 (79%)	151 (93%)	11 (7%)	16 42
1	A6	186/204 (91%)	177 (95%)	9 (5%)	25 58
1	AA	160/204 (78%)	152 (95%)	8 (5%)	24 57
1	AB	162/204 (79%)	152 (94%)	10 (6%)	18 47
1	AC	186/204 (91%)	177 (95%)	9 (5%)	25 58
1	AF	160/204 (78%)	153 (96%)	7 (4%)	28 61
1	AG	162/204 (79%)	152 (94%)	10 (6%)	18 47
1	AH	186/204 (91%)	177 (95%)	9 (5%)	25 58
1	AK	160/204 (78%)	150 (94%)	10 (6%)	18 46
1	AL	162/204 (79%)	152 (94%)	10 (6%)	18 47
1	AM	186/204 (91%)	177 (95%)	9 (5%)	25 58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AP	160/204 (78%)	150 (94%)	10 (6%)	18	46
1	AQ	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	AR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	AU	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	AV	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	AW	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	AZ	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Aa	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Ab	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Ae	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Af	162/204 (79%)	150 (93%)	12 (7%)	13	38
1	Ag	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Aj	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Ak	162/204 (79%)	150 (93%)	12 (7%)	13	38
1	Al	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Ao	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Ap	162/204 (79%)	149 (92%)	13 (8%)	12	33
1	Aq	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	At	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Au	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Av	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	Ay	160/204 (78%)	150 (94%)	10 (6%)	18	46
1	Az	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	B1	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	B4	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	B5	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	B6	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	BA	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	BB	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	BC	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	BF	160/204 (78%)	150 (94%)	10 (6%)	18	46

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	BG	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	BH	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	BK	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	BL	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	BM	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	BP	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	BQ	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	BR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	BU	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	BV	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	BW	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	BZ	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Ba	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Bb	186/204 (91%)	175 (94%)	11 (6%)	19	49
1	Be	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Bf	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Bg	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Bj	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Bk	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Bl	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	Bo	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Bp	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	Bq	186/204 (91%)	175 (94%)	11 (6%)	19	49
1	Bt	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Bu	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Bv	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	By	160/204 (78%)	150 (94%)	10 (6%)	18	46
1	Bz	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	C1	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	C4	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	C5	162/204 (79%)	151 (93%)	11 (7%)	16	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C6	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	CA	160/204 (78%)	150 (94%)	10 (6%)	18	46
1	CB	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	CC	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	CF	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	CG	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	CH	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	CK	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	CL	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	CM	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	CP	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	CQ	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	CR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	CU	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	CV	162/204 (79%)	150 (93%)	12 (7%)	13	38
1	CW	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	CZ	160/204 (78%)	148 (92%)	12 (8%)	13	37
1	Ca	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	Cb	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Ce	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Cf	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	Cg	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Cj	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Ck	162/204 (79%)	150 (93%)	12 (7%)	13	38
1	Cl	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	Co	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Cp	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Cq	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Ct	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Cu	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Cv	186/204 (91%)	177 (95%)	9 (5%)	25	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Cy	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Cz	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	D1	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	D4	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	D5	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	D6	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	DA	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	DB	162/204 (79%)	150 (93%)	12 (7%)	13	38
1	DC	186/204 (91%)	175 (94%)	11 (6%)	19	49
1	DF	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	DG	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	DH	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	DK	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	DL	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	DM	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	DP	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	DQ	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	DR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	DU	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	DV	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	DW	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	DZ	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Da	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	Db	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	De	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Df	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Dg	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Dj	160/204 (78%)	149 (93%)	11 (7%)	15	41
1	Dk	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	Dl	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Do	160/204 (78%)	153 (96%)	7 (4%)	28	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Dp	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Dq	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	Dt	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Du	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Dv	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Dy	160/204 (78%)	150 (94%)	10 (6%)	18	46
1	Dz	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	E1	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	E4	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	E5	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	E6	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	EA	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	EB	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	EC	186/204 (91%)	175 (94%)	11 (6%)	19	49
1	EF	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	EG	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	EH	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	EK	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	EL	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	EM	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	EP	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	EQ	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	ER	186/204 (91%)	176 (95%)	10 (5%)	22	54
1	EU	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	EV	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	EW	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	EZ	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Ea	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	Eb	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Ee	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Ef	162/204 (79%)	152 (94%)	10 (6%)	18	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Eg	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Ej	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Ek	162/204 (79%)	153 (94%)	9 (6%)	21	52
1	El	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Eo	160/204 (78%)	151 (94%)	9 (6%)	21	52
1	Ep	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Eq	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Et	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Eu	162/204 (79%)	152 (94%)	10 (6%)	18	47
1	Ev	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	Ey	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	Ez	162/204 (79%)	151 (93%)	11 (7%)	16	42
1	F1	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	F4	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	F5	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	F6	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	FA	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	FB	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	FC	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	FF	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	FG	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	FH	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	FK	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	FL	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	FM	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	FP	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	FQ	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	FR	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	FU	160/204 (78%)	152 (95%)	8 (5%)	24	57
1	FV	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	FW	186/204 (91%)	177 (95%)	9 (5%)	25	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	FZ	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Fa	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Fb	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Fe	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Ff	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Fg	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Fj	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Fk	162/204 (79%)	157 (97%)	5 (3%)	40	74
1	Fl	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Fo	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Fp	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Fq	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Ft	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Fu	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	Fv	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Fy	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Fz	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	G1	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	G4	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	G5	162/204 (79%)	157 (97%)	5 (3%)	40	74
1	G6	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	GA	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	GB	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	GC	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	GF	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	GG	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	GH	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	GK	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	GL	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	GM	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	GP	160/204 (78%)	155 (97%)	5 (3%)	40	74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	GQ	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	GR	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	GU	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	GV	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	GW	186/204 (91%)	177 (95%)	9 (5%)	25	58
1	GZ	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Ga	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	Gb	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Ge	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Gf	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Gg	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Gj	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Gk	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Gl	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Go	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Gp	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Gq	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Gt	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Gu	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Gv	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Gy	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Gz	162/204 (79%)	157 (97%)	5 (3%)	40	74
1	H1	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	H4	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	H5	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	H6	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	HA	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	HB	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	HC	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	HF	160/204 (78%)	156 (98%)	4 (2%)	47	78
1	HG	162/204 (79%)	156 (96%)	6 (4%)	34	68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	HH	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	HK	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	HL	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	HM	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	HP	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	HQ	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	HR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	HU	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	HV	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	HW	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	HZ	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Ha	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Hb	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	He	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Hf	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Hg	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Hj	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Hk	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Hl	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Ho	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Hp	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Hq	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Ht	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Hu	162/204 (79%)	157 (97%)	5 (3%)	40	74
1	Hv	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Hy	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Hz	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	I1	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	I4	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	I5	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	I6	186/204 (91%)	179 (96%)	7 (4%)	33	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	IA	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	IB	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	IC	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	IF	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	IG	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	IH	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	IK	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	IL	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	IM	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	IP	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	IQ	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	IR	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	IU	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	IV	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	IW	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	IZ	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Ia	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	Ib	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Ie	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	If	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Ig	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Ij	160/204 (78%)	156 (98%)	4 (2%)	47	78
1	Ik	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Il	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Io	160/204 (78%)	156 (98%)	4 (2%)	47	78
1	Ip	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Iq	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	It	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Iu	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Iv	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Iy	160/204 (78%)	155 (97%)	5 (3%)	40	74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Iz	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	J1	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	J4	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	J5	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	J6	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	JA	160/204 (78%)	156 (98%)	4 (2%)	47	78
1	JB	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	JC	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	JF	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	JG	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	JH	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	JK	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	JL	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	JM	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	JP	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	JQ	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	JR	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	JU	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	JV	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	JW	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	JZ	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Ja	162/204 (79%)	157 (97%)	5 (3%)	40	74
1	Jb	186/204 (91%)	178 (96%)	8 (4%)	29	62
1	Je	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Jf	162/204 (79%)	156 (96%)	6 (4%)	34	68
1	Jg	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Jj	160/204 (78%)	154 (96%)	6 (4%)	33	67
1	Jk	162/204 (79%)	154 (95%)	8 (5%)	25	57
1	Jl	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Jo	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Jp	162/204 (79%)	154 (95%)	8 (5%)	25	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Jq	186/204 (91%)	179 (96%)	7 (4%)	33	67
1	Jt	160/204 (78%)	153 (96%)	7 (4%)	28	61
1	Ju	162/204 (79%)	155 (96%)	7 (4%)	29	62
1	Jv	186/204 (91%)	180 (97%)	6 (3%)	39	73
1	Jy	160/204 (78%)	155 (97%)	5 (3%)	40	74
1	Jz	162/204 (79%)	154 (95%)	8 (5%)	25	57
All	All	60960/73440 (83%)	58192 (96%)	2768 (4%)	27	61

All (2768) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AA	59	LEU
1	AA	61	HIS
1	AA	72	THR
1	AA	76	THR
1	AA	95	ILE
1	AA	151	THR
1	AA	161	LEU
1	AA	194	LEU
1	AB	52	GLN
1	AB	70	SER
1	AB	89	PRO
1	AB	97	SER
1	AB	150	LEU
1	AB	152	ASP
1	AB	161	LEU
1	AB	166	SER
1	AB	204	VAL
1	AB	237	ILE
1	AC	29	SER
1	AC	72	THR
1	AC	76	THR
1	AC	89	PRO
1	AC	93	LYS
1	AC	131	PRO
1	AC	144	THR
1	AC	161	LEU
1	AC	189	THR
1	AF	59	LEU
1	AF	61	HIS

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Mol	Chain	Res	Type
1	AF	76	THR
1	AF	95	ILE
1	AF	151	THR
1	AF	161	LEU
1	AF	194	LEU
1	AG	52	GLN
1	AG	60	SER
1	AG	70	SER
1	AG	97	SER
1	AG	133	ASN
1	AG	150	LEU
1	AG	161	LEU
1	AG	166	SER
1	AG	204	VAL
1	AG	237	ILE
1	AH	29	SER
1	AH	72	THR
1	AH	76	THR
1	AH	97	SER
1	AH	130	THR
1	AH	131	PRO
1	AH	144	THR
1	AH	161	LEU
1	AH	189	THR
1	AK	59	LEU
1	AK	61	HIS
1	AK	76	THR
1	AK	83	ILE
1	AK	88	VAL
1	AK	89	PRO
1	AK	95	ILE
1	AK	151	THR
1	AK	161	LEU
1	AK	194	LEU
1	AL	52	GLN
1	AL	70	SER
1	AL	97	SER
1	AL	133	ASN
1	AL	150	LEU
1	AL	152	ASP
1	AL	161	LEU
1	AL	166	SER

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Mol	Chain	Res	Type
1	AL	204	VAL
1	AL	237	ILE
1	AM	29	SER
1	AM	72	THR
1	AM	76	THR
1	AM	97	SER
1	AM	130	THR
1	AM	131	PRO
1	AM	144	THR
1	AM	161	LEU
1	AM	189	THR
1	AP	57	GLN
1	AP	59	LEU
1	AP	61	HIS
1	AP	76	THR
1	AP	83	ILE
1	AP	88	VAL
1	AP	95	ILE
1	AP	151	THR
1	AP	161	LEU
1	AP	194	LEU
1	AQ	52	GLN
1	AQ	70	SER
1	AQ	88	VAL
1	AQ	89	PRO
1	AQ	97	SER
1	AQ	133	ASN
1	AQ	150	LEU
1	AQ	161	LEU
1	AQ	166	SER
1	AQ	237	ILE
1	AR	29	SER
1	AR	72	THR
1	AR	76	THR
1	AR	94	PRO
1	AR	131	PRO
1	AR	144	THR
1	AR	161	LEU
1	AR	189	THR
1	AU	59	LEU
1	AU	61	HIS
1	AU	76	THR

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Mol	Chain	Res	Type
1	AU	95	ILE
1	AU	151	THR
1	AU	161	LEU
1	AU	194	LEU
1	AV	52	GLN
1	AV	70	SER
1	AV	97	SER
1	AV	133	ASN
1	AV	150	LEU
1	AV	152	ASP
1	AV	161	LEU
1	AV	166	SER
1	AV	204	VAL
1	AV	237	ILE
1	AW	29	SER
1	AW	72	THR
1	AW	76	THR
1	AW	131	PRO
1	AW	144	THR
1	AW	161	LEU
1	AW	189	THR
1	AZ	59	LEU
1	AZ	61	HIS
1	AZ	76	THR
1	AZ	88	VAL
1	AZ	95	ILE
1	AZ	151	THR
1	AZ	161	LEU
1	AZ	194	LEU
1	Aa	52	GLN
1	Aa	70	SER
1	Aa	97	SER
1	Aa	133	ASN
1	Aa	150	LEU
1	Aa	161	LEU
1	Aa	166	SER
1	Aa	204	VAL
1	Aa	237	ILE
1	Ab	29	SER
1	Ab	72	THR
1	Ab	76	THR
1	Ab	131	PRO

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Mol	Chain	Res	Type
1	Ab	144	THR
1	Ab	161	LEU
1	Ab	189	THR
1	Ae	59	LEU
1	Ae	61	HIS
1	Ae	76	THR
1	Ae	83	ILE
1	Ae	95	ILE
1	Ae	151	THR
1	Ae	161	LEU
1	Ae	194	LEU
1	Af	52	GLN
1	Af	70	SER
1	Af	88	VAL
1	Af	89	PRO
1	Af	97	SER
1	Af	133	ASN
1	Af	150	LEU
1	Af	152	ASP
1	Af	161	LEU
1	Af	166	SER
1	Af	204	VAL
1	Af	237	ILE
1	Ag	29	SER
1	Ag	72	THR
1	Ag	76	THR
1	Ag	97	SER
1	Ag	130	THR
1	Ag	131	PRO
1	Ag	144	THR
1	Ag	161	LEU
1	Ag	189	THR
1	Aj	59	LEU
1	Aj	61	HIS
1	Aj	76	THR
1	Aj	83	ILE
1	Aj	95	ILE
1	Aj	151	THR
1	Aj	161	LEU
1	Aj	194	LEU
1	Ak	52	GLN
1	Ak	70	SER

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Mol	Chain	Res	Type
1	Ak	89	PRO
1	Ak	95	ILE
1	Ak	97	SER
1	Ak	133	ASN
1	Ak	150	LEU
1	Ak	152	ASP
1	Ak	161	LEU
1	Ak	166	SER
1	Ak	204	VAL
1	Ak	237	ILE
1	Al	29	SER
1	Al	72	THR
1	Al	76	THR
1	Al	92	ASP
1	Al	131	PRO
1	Al	144	THR
1	Al	161	LEU
1	Al	189	THR
1	Ao	59	LEU
1	Ao	61	HIS
1	Ao	76	THR
1	Ao	83	ILE
1	Ao	92	ASP
1	Ao	95	ILE
1	Ao	151	THR
1	Ao	161	LEU
1	Ao	194	LEU
1	Ap	52	GLN
1	Ap	70	SER
1	Ap	88	VAL
1	Ap	89	PRO
1	Ap	95	ILE
1	Ap	97	SER
1	Ap	133	ASN
1	Ap	150	LEU
1	Ap	152	ASP
1	Ap	161	LEU
1	Ap	166	SER
1	Ap	189	THR
1	Ap	237	ILE
1	Aq	29	SER
1	Aq	31	GLU

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Mol	Chain	Res	Type
1	Aq	72	THR
1	Aq	76	THR
1	Aq	89	PRO
1	Aq	95	ILE
1	Aq	131	PRO
1	Aq	144	THR
1	Aq	161	LEU
1	Aq	189	THR
1	At	59	LEU
1	At	61	HIS
1	At	76	THR
1	At	88	VAL
1	At	151	THR
1	At	161	LEU
1	At	194	LEU
1	Au	52	GLN
1	Au	70	SER
1	Au	97	SER
1	Au	133	ASN
1	Au	150	LEU
1	Au	161	LEU
1	Au	166	SER
1	Au	204	VAL
1	Au	237	ILE
1	Av	29	SER
1	Av	72	THR
1	Av	76	THR
1	Av	88	VAL
1	Av	97	SER
1	Av	130	THR
1	Av	131	PRO
1	Av	144	THR
1	Av	161	LEU
1	Av	189	THR
1	Ay	59	LEU
1	Ay	61	HIS
1	Ay	72	THR
1	Ay	76	THR
1	Ay	83	ILE
1	Ay	88	VAL
1	Ay	95	ILE
1	Ay	151	THR

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Mol	Chain	Res	Type
1	Ay	161	LEU
1	Ay	194	LEU
1	Az	52	GLN
1	Az	70	SER
1	Az	88	VAL
1	Az	97	SER
1	Az	133	ASN
1	Az	150	LEU
1	Az	161	LEU
1	Az	166	SER
1	Az	204	VAL
1	Az	237	ILE
1	A1	29	SER
1	A1	72	THR
1	A1	76	THR
1	A1	94	PRO
1	A1	130	THR
1	A1	131	PRO
1	A1	144	THR
1	A1	161	LEU
1	A1	189	THR
1	A4	59	LEU
1	A4	61	HIS
1	A4	76	THR
1	A4	83	ILE
1	A4	92	ASP
1	A4	95	ILE
1	A4	151	THR
1	A4	161	LEU
1	A4	194	LEU
1	A5	52	GLN
1	A5	70	SER
1	A5	88	VAL
1	A5	89	PRO
1	A5	97	SER
1	A5	133	ASN
1	A5	150	LEU
1	A5	161	LEU
1	A5	166	SER
1	A5	204	VAL
1	A5	237	ILE
1	A6	29	SER

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Mol	Chain	Res	Type
1	A6	72	THR
1	A6	76	THR
1	A6	94	PRO
1	A6	130	THR
1	A6	131	PRO
1	A6	144	THR
1	A6	161	LEU
1	A6	189	THR
1	BA	59	LEU
1	BA	61	HIS
1	BA	76	THR
1	BA	88	VAL
1	BA	95	ILE
1	BA	151	THR
1	BA	161	LEU
1	BA	194	LEU
1	BB	52	GLN
1	BB	70	SER
1	BB	94	PRO
1	BB	97	SER
1	BB	133	ASN
1	BB	150	LEU
1	BB	152	ASP
1	BB	161	LEU
1	BB	166	SER
1	BB	237	ILE
1	BC	29	SER
1	BC	72	THR
1	BC	76	THR
1	BC	97	SER
1	BC	101	PRO
1	BC	130	THR
1	BC	131	PRO
1	BC	144	THR
1	BC	161	LEU
1	BC	189	THR
1	BF	59	LEU
1	BF	61	HIS
1	BF	72	THR
1	BF	76	THR
1	BF	83	ILE
1	BF	93	LYS

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Mol	Chain	Res	Type
1	BF	95	ILE
1	BF	151	THR
1	BF	161	LEU
1	BF	194	LEU
1	BG	52	GLN
1	BG	70	SER
1	BG	88	VAL
1	BG	89	PRO
1	BG	97	SER
1	BG	133	ASN
1	BG	150	LEU
1	BG	161	LEU
1	BG	166	SER
1	BG	237	ILE
1	BH	29	SER
1	BH	72	THR
1	BH	76	THR
1	BH	130	THR
1	BH	131	PRO
1	BH	144	THR
1	BH	161	LEU
1	BH	189	THR
1	BK	59	LEU
1	BK	61	HIS
1	BK	76	THR
1	BK	89	PRO
1	BK	92	ASP
1	BK	151	THR
1	BK	161	LEU
1	BK	194	LEU
1	BL	52	GLN
1	BL	70	SER
1	BL	97	SER
1	BL	133	ASN
1	BL	150	LEU
1	BL	161	LEU
1	BL	166	SER
1	BL	204	VAL
1	BL	237	ILE
1	BM	29	SER
1	BM	72	THR
1	BM	76	THR

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Mol	Chain	Res	Type
1	BM	97	SER
1	BM	130	THR
1	BM	131	PRO
1	BM	144	THR
1	BM	161	LEU
1	BM	189	THR
1	BP	59	LEU
1	BP	61	HIS
1	BP	76	THR
1	BP	83	ILE
1	BP	88	VAL
1	BP	95	ILE
1	BP	151	THR
1	BP	161	LEU
1	BP	194	LEU
1	BQ	70	SER
1	BQ	89	PRO
1	BQ	97	SER
1	BQ	133	ASN
1	BQ	150	LEU
1	BQ	152	ASP
1	BQ	161	LEU
1	BQ	166	SER
1	BQ	189	THR
1	BQ	204	VAL
1	BQ	237	ILE
1	BR	29	SER
1	BR	72	THR
1	BR	76	THR
1	BR	130	THR
1	BR	131	PRO
1	BR	144	THR
1	BR	161	LEU
1	BR	189	THR
1	BU	59	LEU
1	BU	61	HIS
1	BU	76	THR
1	BU	88	VAL
1	BU	95	ILE
1	BU	151	THR
1	BU	161	LEU
1	BU	194	LEU

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Mol	Chain	Res	Type
1	BV	52	GLN
1	BV	70	SER
1	BV	97	SER
1	BV	133	ASN
1	BV	150	LEU
1	BV	161	LEU
1	BV	166	SER
1	BV	204	VAL
1	BV	237	ILE
1	BW	29	SER
1	BW	72	THR
1	BW	76	THR
1	BW	97	SER
1	BW	131	PRO
1	BW	144	THR
1	BW	161	LEU
1	BW	189	THR
1	BZ	59	LEU
1	BZ	61	HIS
1	BZ	76	THR
1	BZ	83	ILE
1	BZ	95	ILE
1	BZ	151	THR
1	BZ	161	LEU
1	BZ	194	LEU
1	Ba	52	GLN
1	Ba	70	SER
1	Ba	97	SER
1	Ba	133	ASN
1	Ba	150	LEU
1	Ba	161	LEU
1	Ba	166	SER
1	Ba	204	VAL
1	Ba	237	ILE
1	Bb	29	SER
1	Bb	31	GLU
1	Bb	72	THR
1	Bb	76	THR
1	Bb	97	SER
1	Bb	101	PRO
1	Bb	130	THR
1	Bb	131	PRO

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Mol	Chain	Res	Type
1	Bb	144	THR
1	Bb	161	LEU
1	Bb	189	THR
1	Be	59	LEU
1	Be	61	HIS
1	Be	76	THR
1	Be	88	VAL
1	Be	95	ILE
1	Be	151	THR
1	Be	161	LEU
1	Be	194	LEU
1	Bf	52	GLN
1	Bf	70	SER
1	Bf	97	SER
1	Bf	133	ASN
1	Bf	150	LEU
1	Bf	161	LEU
1	Bf	166	SER
1	Bf	204	VAL
1	Bf	237	ILE
1	Bg	29	SER
1	Bg	72	THR
1	Bg	76	THR
1	Bg	97	SER
1	Bg	130	THR
1	Bg	131	PRO
1	Bg	144	THR
1	Bg	161	LEU
1	Bg	189	THR
1	Bj	59	LEU
1	Bj	61	HIS
1	Bj	76	THR
1	Bj	83	ILE
1	Bj	95	ILE
1	Bj	151	THR
1	Bj	161	LEU
1	Bj	194	LEU
1	Bk	52	GLN
1	Bk	70	SER
1	Bk	97	SER
1	Bk	133	ASN
1	Bk	150	LEU

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Mol	Chain	Res	Type
1	Bk	161	LEU
1	Bk	166	SER
1	Bk	204	VAL
1	Bk	237	ILE
1	Bl	29	SER
1	Bl	72	THR
1	Bl	76	THR
1	Bl	97	SER
1	Bl	101	PRO
1	Bl	130	THR
1	Bl	131	PRO
1	Bl	144	THR
1	Bl	161	LEU
1	Bl	189	THR
1	Bo	59	LEU
1	Bo	61	HIS
1	Bo	76	THR
1	Bo	83	ILE
1	Bo	88	VAL
1	Bo	95	ILE
1	Bo	151	THR
1	Bo	161	LEU
1	Bo	194	LEU
1	Bp	52	GLN
1	Bp	60	SER
1	Bp	70	SER
1	Bp	93	LYS
1	Bp	97	SER
1	Bp	133	ASN
1	Bp	150	LEU
1	Bp	161	LEU
1	Bp	166	SER
1	Bp	204	VAL
1	Bp	237	ILE
1	Bq	29	SER
1	Bq	72	THR
1	Bq	76	THR
1	Bq	88	VAL
1	Bq	95	ILE
1	Bq	97	SER
1	Bq	130	THR
1	Bq	131	PRO

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Mol	Chain	Res	Type
1	Bq	144	THR
1	Bq	161	LEU
1	Bq	189	THR
1	Bt	59	LEU
1	Bt	61	HIS
1	Bt	76	THR
1	Bt	151	THR
1	Bt	161	LEU
1	Bt	194	LEU
1	Bu	52	GLN
1	Bu	70	SER
1	Bu	97	SER
1	Bu	133	ASN
1	Bu	150	LEU
1	Bu	161	LEU
1	Bu	166	SER
1	Bu	204	VAL
1	Bu	237	ILE
1	Bv	29	SER
1	Bv	72	THR
1	Bv	76	THR
1	Bv	97	SER
1	Bv	130	THR
1	Bv	131	PRO
1	Bv	144	THR
1	Bv	161	LEU
1	Bv	189	THR
1	By	59	LEU
1	By	61	HIS
1	By	72	THR
1	By	76	THR
1	By	83	ILE
1	By	88	VAL
1	By	95	ILE
1	By	151	THR
1	By	161	LEU
1	By	194	LEU
1	Bz	52	GLN
1	Bz	70	SER
1	Bz	97	SER
1	Bz	133	ASN
1	Bz	150	LEU

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Mol	Chain	Res	Type
1	Bz	152	ASP
1	Bz	161	LEU
1	Bz	166	SER
1	Bz	189	THR
1	Bz	204	VAL
1	Bz	237	ILE
1	B1	29	SER
1	B1	72	THR
1	B1	76	THR
1	B1	131	PRO
1	B1	144	THR
1	B1	161	LEU
1	B1	189	THR
1	B4	59	LEU
1	B4	61	HIS
1	B4	76	THR
1	B4	95	ILE
1	B4	151	THR
1	B4	161	LEU
1	B4	194	LEU
1	B5	52	GLN
1	B5	70	SER
1	B5	97	SER
1	B5	133	ASN
1	B5	150	LEU
1	B5	161	LEU
1	B5	166	SER
1	B5	204	VAL
1	B5	237	ILE
1	B6	29	SER
1	B6	72	THR
1	B6	76	THR
1	B6	130	THR
1	B6	131	PRO
1	B6	144	THR
1	B6	161	LEU
1	B6	189	THR
1	CA	59	LEU
1	CA	61	HIS
1	CA	76	THR
1	CA	83	ILE
1	CA	89	PRO

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Mol	Chain	Res	Type
1	CA	92	ASP
1	CA	95	ILE
1	CA	151	THR
1	CA	161	LEU
1	CA	194	LEU
1	CB	52	GLN
1	CB	70	SER
1	CB	94	PRO
1	CB	97	SER
1	CB	133	ASN
1	CB	150	LEU
1	CB	161	LEU
1	CB	166	SER
1	CB	204	VAL
1	CB	237	ILE
1	CC	29	SER
1	CC	72	THR
1	CC	76	THR
1	CC	97	SER
1	CC	130	THR
1	CC	131	PRO
1	CC	144	THR
1	CC	161	LEU
1	CC	189	THR
1	CF	59	LEU
1	CF	61	HIS
1	CF	72	THR
1	CF	76	THR
1	CF	95	ILE
1	CF	151	THR
1	CF	161	LEU
1	CF	194	LEU
1	CG	52	GLN
1	CG	70	SER
1	CG	89	PRO
1	CG	97	SER
1	CG	150	LEU
1	CG	161	LEU
1	CG	166	SER
1	CG	204	VAL
1	CG	237	ILE
1	CH	29	SER

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Mol	Chain	Res	Type
1	CH	31	GLU
1	CH	72	THR
1	CH	97	SER
1	CH	130	THR
1	CH	131	PRO
1	CH	144	THR
1	CH	161	LEU
1	CH	189	THR
1	CK	59	LEU
1	CK	61	HIS
1	CK	76	THR
1	CK	88	VAL
1	CK	95	ILE
1	CK	151	THR
1	CK	161	LEU
1	CK	194	LEU
1	CL	52	GLN
1	CL	60	SER
1	CL	70	SER
1	CL	97	SER
1	CL	133	ASN
1	CL	150	LEU
1	CL	161	LEU
1	CL	166	SER
1	CL	204	VAL
1	CL	237	ILE
1	CM	29	SER
1	CM	72	THR
1	CM	76	THR
1	CM	97	SER
1	CM	130	THR
1	CM	131	PRO
1	CM	144	THR
1	CM	161	LEU
1	CM	189	THR
1	CP	59	LEU
1	CP	61	HIS
1	CP	76	THR
1	CP	83	ILE
1	CP	151	THR
1	CP	161	LEU
1	CP	194	LEU

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Mol	Chain	Res	Type
1	CQ	52	GLN
1	CQ	70	SER
1	CQ	97	SER
1	CQ	133	ASN
1	CQ	150	LEU
1	CQ	161	LEU
1	CQ	166	SER
1	CQ	237	ILE
1	CR	29	SER
1	CR	72	THR
1	CR	101	PRO
1	CR	130	THR
1	CR	131	PRO
1	CR	144	THR
1	CR	161	LEU
1	CR	189	THR
1	CU	59	LEU
1	CU	61	HIS
1	CU	72	THR
1	CU	76	THR
1	CU	83	ILE
1	CU	95	ILE
1	CU	151	THR
1	CU	161	LEU
1	CU	194	LEU
1	CV	52	GLN
1	CV	70	SER
1	CV	88	VAL
1	CV	95	ILE
1	CV	97	SER
1	CV	133	ASN
1	CV	150	LEU
1	CV	152	ASP
1	CV	161	LEU
1	CV	166	SER
1	CV	204	VAL
1	CV	237	ILE
1	CW	29	SER
1	CW	72	THR
1	CW	76	THR
1	CW	130	THR
1	CW	131	PRO

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Mol	Chain	Res	Type
1	CW	144	THR
1	CW	161	LEU
1	CW	189	THR
1	CZ	59	LEU
1	CZ	61	HIS
1	CZ	72	THR
1	CZ	76	THR
1	CZ	83	ILE
1	CZ	88	VAL
1	CZ	89	PRO
1	CZ	92	ASP
1	CZ	95	ILE
1	CZ	151	THR
1	CZ	161	LEU
1	CZ	194	LEU
1	Ca	52	GLN
1	Ca	70	SER
1	Ca	92	ASP
1	Ca	95	ILE
1	Ca	97	SER
1	Ca	133	ASN
1	Ca	150	LEU
1	Ca	161	LEU
1	Ca	166	SER
1	Ca	204	VAL
1	Ca	237	ILE
1	Cb	29	SER
1	Cb	72	THR
1	Cb	76	THR
1	Cb	131	PRO
1	Cb	144	THR
1	Cb	161	LEU
1	Cb	189	THR
1	Ce	59	LEU
1	Ce	61	HIS
1	Ce	76	THR
1	Ce	151	THR
1	Ce	161	LEU
1	Ce	194	LEU
1	Cf	52	GLN
1	Cf	70	SER
1	Cf	95	ILE

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Mol	Chain	Res	Type
1	Cf	97	SER
1	Cf	133	ASN
1	Cf	150	LEU
1	Cf	152	ASP
1	Cf	161	LEU
1	Cf	166	SER
1	Cf	204	VAL
1	Cf	237	ILE
1	Cg	29	SER
1	Cg	72	THR
1	Cg	76	THR
1	Cg	97	SER
1	Cg	131	PRO
1	Cg	144	THR
1	Cg	161	LEU
1	Cg	189	THR
1	Cj	59	LEU
1	Cj	61	HIS
1	Cj	76	THR
1	Cj	83	ILE
1	Cj	95	ILE
1	Cj	151	THR
1	Cj	161	LEU
1	Cj	194	LEU
1	Ck	52	GLN
1	Ck	70	SER
1	Ck	88	VAL
1	Ck	97	SER
1	Ck	133	ASN
1	Ck	150	LEU
1	Ck	152	ASP
1	Ck	161	LEU
1	Ck	166	SER
1	Ck	189	THR
1	Ck	204	VAL
1	Ck	237	ILE
1	Cl	29	SER
1	Cl	72	THR
1	Cl	76	THR
1	Cl	89	PRO
1	Cl	97	SER
1	Cl	130	THR

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Mol	Chain	Res	Type
1	Cl	131	PRO
1	Cl	144	THR
1	Cl	161	LEU
1	Cl	189	THR
1	Co	59	LEU
1	Co	61	HIS
1	Co	76	THR
1	Co	151	THR
1	Co	161	LEU
1	Co	194	LEU
1	Cp	52	GLN
1	Cp	70	SER
1	Cp	97	SER
1	Cp	133	ASN
1	Cp	150	LEU
1	Cp	161	LEU
1	Cp	166	SER
1	Cp	204	VAL
1	Cp	237	ILE
1	Cq	29	SER
1	Cq	72	THR
1	Cq	76	THR
1	Cq	130	THR
1	Cq	131	PRO
1	Cq	144	THR
1	Cq	161	LEU
1	Cq	189	THR
1	Ct	59	LEU
1	Ct	61	HIS
1	Ct	76	THR
1	Ct	89	PRO
1	Ct	151	THR
1	Ct	161	LEU
1	Ct	194	LEU
1	Cu	52	GLN
1	Cu	60	SER
1	Cu	70	SER
1	Cu	97	SER
1	Cu	133	ASN
1	Cu	150	LEU
1	Cu	161	LEU
1	Cu	166	SER

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Mol	Chain	Res	Type
1	Cu	204	VAL
1	Cu	237	ILE
1	Cv	29	SER
1	Cv	72	THR
1	Cv	76	THR
1	Cv	97	SER
1	Cv	130	THR
1	Cv	131	PRO
1	Cv	144	THR
1	Cv	161	LEU
1	Cv	189	THR
1	Cy	59	LEU
1	Cy	61	HIS
1	Cy	72	THR
1	Cy	76	THR
1	Cy	88	VAL
1	Cy	95	ILE
1	Cy	151	THR
1	Cy	161	LEU
1	Cy	194	LEU
1	Cz	52	GLN
1	Cz	60	SER
1	Cz	70	SER
1	Cz	97	SER
1	Cz	133	ASN
1	Cz	150	LEU
1	Cz	152	ASP
1	Cz	161	LEU
1	Cz	166	SER
1	Cz	204	VAL
1	Cz	237	ILE
1	C1	29	SER
1	C1	72	THR
1	C1	76	THR
1	C1	130	THR
1	C1	131	PRO
1	C1	144	THR
1	C1	161	LEU
1	C1	189	THR
1	C4	57	GLN
1	C4	59	LEU
1	C4	61	HIS

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Mol	Chain	Res	Type
1	C4	76	THR
1	C4	89	PRO
1	C4	95	ILE
1	C4	151	THR
1	C4	161	LEU
1	C4	194	LEU
1	C5	52	GLN
1	C5	60	SER
1	C5	70	SER
1	C5	97	SER
1	C5	133	ASN
1	C5	150	LEU
1	C5	161	LEU
1	C5	166	SER
1	C5	189	THR
1	C5	204	VAL
1	C5	237	ILE
1	C6	29	SER
1	C6	72	THR
1	C6	76	THR
1	C6	97	SER
1	C6	130	THR
1	C6	131	PRO
1	C6	144	THR
1	C6	161	LEU
1	C6	189	THR
1	DA	57	GLN
1	DA	59	LEU
1	DA	61	HIS
1	DA	76	THR
1	DA	95	ILE
1	DA	151	THR
1	DA	161	LEU
1	DA	194	LEU
1	DB	52	GLN
1	DB	70	SER
1	DB	88	VAL
1	DB	92	ASP
1	DB	94	PRO
1	DB	97	SER
1	DB	133	ASN
1	DB	150	LEU

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Mol	Chain	Res	Type
1	DB	161	LEU
1	DB	166	SER
1	DB	204	VAL
1	DB	237	ILE
1	DC	29	SER
1	DC	72	THR
1	DC	76	THR
1	DC	92	ASP
1	DC	94	PRO
1	DC	97	SER
1	DC	130	THR
1	DC	131	PRO
1	DC	144	THR
1	DC	161	LEU
1	DC	189	THR
1	DF	59	LEU
1	DF	61	HIS
1	DF	76	THR
1	DF	95	ILE
1	DF	151	THR
1	DF	161	LEU
1	DF	194	LEU
1	DG	52	GLN
1	DG	70	SER
1	DG	97	SER
1	DG	133	ASN
1	DG	150	LEU
1	DG	152	ASP
1	DG	161	LEU
1	DG	166	SER
1	DG	204	VAL
1	DG	237	ILE
1	DH	29	SER
1	DH	72	THR
1	DH	76	THR
1	DH	131	PRO
1	DH	144	THR
1	DH	161	LEU
1	DH	189	THR
1	DK	59	LEU
1	DK	61	HIS
1	DK	76	THR

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Mol	Chain	Res	Type
1	DK	89	PRO
1	DK	92	ASP
1	DK	95	ILE
1	DK	151	THR
1	DK	161	LEU
1	DK	194	LEU
1	DL	52	GLN
1	DL	70	SER
1	DL	97	SER
1	DL	133	ASN
1	DL	150	LEU
1	DL	161	LEU
1	DL	166	SER
1	DL	204	VAL
1	DL	237	ILE
1	DM	29	SER
1	DM	72	THR
1	DM	76	THR
1	DM	93	LYS
1	DM	97	SER
1	DM	130	THR
1	DM	131	PRO
1	DM	144	THR
1	DM	161	LEU
1	DM	189	THR
1	DP	59	LEU
1	DP	61	HIS
1	DP	76	THR
1	DP	95	ILE
1	DP	151	THR
1	DP	161	LEU
1	DP	194	LEU
1	DQ	52	GLN
1	DQ	70	SER
1	DQ	88	VAL
1	DQ	97	SER
1	DQ	133	ASN
1	DQ	150	LEU
1	DQ	161	LEU
1	DQ	166	SER
1	DQ	204	VAL
1	DQ	237	ILE

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Mol	Chain	Res	Type
1	DR	29	SER
1	DR	72	THR
1	DR	76	THR
1	DR	130	THR
1	DR	131	PRO
1	DR	144	THR
1	DR	161	LEU
1	DR	189	THR
1	DU	59	LEU
1	DU	61	HIS
1	DU	76	THR
1	DU	83	ILE
1	DU	88	VAL
1	DU	95	ILE
1	DU	151	THR
1	DU	161	LEU
1	DU	194	LEU
1	DV	52	GLN
1	DV	70	SER
1	DV	89	PRO
1	DV	97	SER
1	DV	133	ASN
1	DV	150	LEU
1	DV	152	ASP
1	DV	161	LEU
1	DV	166	SER
1	DV	237	ILE
1	DW	29	SER
1	DW	72	THR
1	DW	76	THR
1	DW	130	THR
1	DW	131	PRO
1	DW	144	THR
1	DW	161	LEU
1	DW	189	THR
1	DZ	59	LEU
1	DZ	61	HIS
1	DZ	72	THR
1	DZ	76	THR
1	DZ	83	ILE
1	DZ	95	ILE
1	DZ	151	THR

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Mol	Chain	Res	Type
1	DZ	161	LEU
1	DZ	194	LEU
1	Da	52	GLN
1	Da	70	SER
1	Da	89	PRO
1	Da	97	SER
1	Da	133	ASN
1	Da	150	LEU
1	Da	152	ASP
1	Da	161	LEU
1	Da	166	SER
1	Da	189	THR
1	Da	237	ILE
1	Db	29	SER
1	Db	72	THR
1	Db	76	THR
1	Db	97	SER
1	Db	130	THR
1	Db	131	PRO
1	Db	144	THR
1	Db	161	LEU
1	Db	189	THR
1	De	59	LEU
1	De	61	HIS
1	De	76	THR
1	De	83	ILE
1	De	93	LYS
1	De	151	THR
1	De	161	LEU
1	De	194	LEU
1	Df	52	GLN
1	Df	70	SER
1	Df	97	SER
1	Df	133	ASN
1	Df	150	LEU
1	Df	152	ASP
1	Df	161	LEU
1	Df	166	SER
1	Df	204	VAL
1	Df	237	ILE
1	Dg	29	SER
1	Dg	72	THR

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Mol	Chain	Res	Type
1	Dg	76	THR
1	Dg	130	THR
1	Dg	131	PRO
1	Dg	144	THR
1	Dg	161	LEU
1	Dg	189	THR
1	Dj	57	GLN
1	Dj	59	LEU
1	Dj	61	HIS
1	Dj	72	THR
1	Dj	76	THR
1	Dj	83	ILE
1	Dj	92	ASP
1	Dj	95	ILE
1	Dj	151	THR
1	Dj	161	LEU
1	Dj	194	LEU
1	Dk	52	GLN
1	Dk	70	SER
1	Dk	97	SER
1	Dk	133	ASN
1	Dk	150	LEU
1	Dk	161	LEU
1	Dk	166	SER
1	Dk	237	ILE
1	Dl	29	SER
1	Dl	72	THR
1	Dl	76	THR
1	Dl	95	ILE
1	Dl	130	THR
1	Dl	131	PRO
1	Dl	144	THR
1	Dl	161	LEU
1	Dl	189	THR
1	Do	59	LEU
1	Do	61	HIS
1	Do	76	THR
1	Do	95	ILE
1	Do	151	THR
1	Do	161	LEU
1	Do	194	LEU
1	Dp	52	GLN

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Mol	Chain	Res	Type
1	Dp	70	SER
1	Dp	88	VAL
1	Dp	97	SER
1	Dp	133	ASN
1	Dp	150	LEU
1	Dp	161	LEU
1	Dp	166	SER
1	Dp	204	VAL
1	Dp	237	ILE
1	Dq	29	SER
1	Dq	72	THR
1	Dq	76	THR
1	Dq	95	ILE
1	Dq	97	SER
1	Dq	130	THR
1	Dq	131	PRO
1	Dq	144	THR
1	Dq	161	LEU
1	Dq	189	THR
1	Dt	59	LEU
1	Dt	61	HIS
1	Dt	76	THR
1	Dt	88	VAL
1	Dt	92	ASP
1	Dt	95	ILE
1	Dt	151	THR
1	Dt	161	LEU
1	Dt	194	LEU
1	Du	52	GLN
1	Du	70	SER
1	Du	97	SER
1	Du	133	ASN
1	Du	150	LEU
1	Du	152	ASP
1	Du	161	LEU
1	Du	166	SER
1	Du	204	VAL
1	Du	237	ILE
1	Dv	29	SER
1	Dv	72	THR
1	Dv	76	THR
1	Dv	88	VAL

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Mol	Chain	Res	Type
1	Dv	97	SER
1	Dv	131	PRO
1	Dv	144	THR
1	Dv	161	LEU
1	Dv	189	THR
1	Dy	59	LEU
1	Dy	61	HIS
1	Dy	72	THR
1	Dy	76	THR
1	Dy	88	VAL
1	Dy	89	PRO
1	Dy	95	ILE
1	Dy	151	THR
1	Dy	161	LEU
1	Dy	194	LEU
1	Dz	52	GLN
1	Dz	70	SER
1	Dz	89	PRO
1	Dz	97	SER
1	Dz	133	ASN
1	Dz	150	LEU
1	Dz	152	ASP
1	Dz	161	LEU
1	Dz	166	SER
1	Dz	204	VAL
1	Dz	237	ILE
1	D1	29	SER
1	D1	72	THR
1	D1	76	THR
1	D1	97	SER
1	D1	130	THR
1	D1	131	PRO
1	D1	144	THR
1	D1	161	LEU
1	D1	189	THR
1	D4	59	LEU
1	D4	61	HIS
1	D4	76	THR
1	D4	83	ILE
1	D4	92	ASP
1	D4	95	ILE
1	D4	151	THR

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Mol	Chain	Res	Type
1	D4	161	LEU
1	D4	194	LEU
1	D5	52	GLN
1	D5	70	SER
1	D5	97	SER
1	D5	133	ASN
1	D5	150	LEU
1	D5	161	LEU
1	D5	166	SER
1	D5	204	VAL
1	D5	237	ILE
1	D6	29	SER
1	D6	72	THR
1	D6	76	THR
1	D6	130	THR
1	D6	131	PRO
1	D6	144	THR
1	D6	161	LEU
1	D6	189	THR
1	EA	59	LEU
1	EA	61	HIS
1	EA	76	THR
1	EA	83	ILE
1	EA	95	ILE
1	EA	151	THR
1	EA	161	LEU
1	EA	194	LEU
1	EB	52	GLN
1	EB	70	SER
1	EB	88	VAL
1	EB	92	ASP
1	EB	97	SER
1	EB	133	ASN
1	EB	150	LEU
1	EB	161	LEU
1	EB	166	SER
1	EB	204	VAL
1	EB	237	ILE
1	EC	29	SER
1	EC	72	THR
1	EC	76	THR
1	EC	89	PRO

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Mol	Chain	Res	Type
1	EC	95	ILE
1	EC	97	SER
1	EC	130	THR
1	EC	131	PRO
1	EC	144	THR
1	EC	161	LEU
1	EC	189	THR
1	EF	59	LEU
1	EF	61	HIS
1	EF	76	THR
1	EF	151	THR
1	EF	161	LEU
1	EF	194	LEU
1	EG	52	GLN
1	EG	70	SER
1	EG	97	SER
1	EG	133	ASN
1	EG	150	LEU
1	EG	161	LEU
1	EG	166	SER
1	EG	204	VAL
1	EG	237	ILE
1	EH	29	SER
1	EH	72	THR
1	EH	76	THR
1	EH	95	ILE
1	EH	131	PRO
1	EH	144	THR
1	EH	161	LEU
1	EH	189	THR
1	EK	59	LEU
1	EK	61	HIS
1	EK	72	THR
1	EK	76	THR
1	EK	151	THR
1	EK	161	LEU
1	EK	194	LEU
1	EL	52	GLN
1	EL	60	SER
1	EL	70	SER
1	EL	97	SER
1	EL	133	ASN

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Mol	Chain	Res	Type
1	EL	150	LEU
1	EL	161	LEU
1	EL	166	SER
1	EL	204	VAL
1	EL	237	ILE
1	EM	29	SER
1	EM	72	THR
1	EM	76	THR
1	EM	95	ILE
1	EM	97	SER
1	EM	130	THR
1	EM	131	PRO
1	EM	144	THR
1	EM	161	LEU
1	EM	189	THR
1	EP	59	LEU
1	EP	61	HIS
1	EP	76	THR
1	EP	88	VAL
1	EP	95	ILE
1	EP	151	THR
1	EP	161	LEU
1	EP	194	LEU
1	EQ	52	GLN
1	EQ	70	SER
1	EQ	97	SER
1	EQ	133	ASN
1	EQ	150	LEU
1	EQ	161	LEU
1	EQ	166	SER
1	EQ	237	ILE
1	ER	29	SER
1	ER	72	THR
1	ER	76	THR
1	ER	97	SER
1	ER	101	PRO
1	ER	130	THR
1	ER	131	PRO
1	ER	144	THR
1	ER	161	LEU
1	ER	189	THR
1	EU	59	LEU

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Mol	Chain	Res	Type
1	EU	61	HIS
1	EU	76	THR
1	EU	83	ILE
1	EU	88	VAL
1	EU	95	ILE
1	EU	151	THR
1	EU	161	LEU
1	EU	194	LEU
1	EV	52	GLN
1	EV	60	SER
1	EV	70	SER
1	EV	97	SER
1	EV	133	ASN
1	EV	150	LEU
1	EV	161	LEU
1	EV	166	SER
1	EV	204	VAL
1	EV	237	ILE
1	EW	29	SER
1	EW	72	THR
1	EW	76	THR
1	EW	88	VAL
1	EW	97	SER
1	EW	131	PRO
1	EW	144	THR
1	EW	161	LEU
1	EW	189	THR
1	EZ	59	LEU
1	EZ	61	HIS
1	EZ	72	THR
1	EZ	76	THR
1	EZ	88	VAL
1	EZ	95	ILE
1	EZ	151	THR
1	EZ	161	LEU
1	EZ	194	LEU
1	Ea	52	GLN
1	Ea	70	SER
1	Ea	97	SER
1	Ea	133	ASN
1	Ea	150	LEU
1	Ea	161	LEU

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Mol	Chain	Res	Type
1	Ea	166	SER
1	Ea	204	VAL
1	Ea	237	ILE
1	Eb	29	SER
1	Eb	72	THR
1	Eb	76	THR
1	Eb	97	SER
1	Eb	130	THR
1	Eb	131	PRO
1	Eb	144	THR
1	Eb	161	LEU
1	Eb	189	THR
1	Ee	59	LEU
1	Ee	61	HIS
1	Ee	76	THR
1	Ee	92	ASP
1	Ee	151	THR
1	Ee	161	LEU
1	Ee	194	LEU
1	Ef	52	GLN
1	Ef	70	SER
1	Ef	92	ASP
1	Ef	97	SER
1	Ef	133	ASN
1	Ef	150	LEU
1	Ef	161	LEU
1	Ef	166	SER
1	Ef	204	VAL
1	Ef	237	ILE
1	Eg	29	SER
1	Eg	72	THR
1	Eg	76	THR
1	Eg	131	PRO
1	Eg	144	THR
1	Eg	161	LEU
1	Eg	189	THR
1	Ej	59	LEU
1	Ej	61	HIS
1	Ej	76	THR
1	Ej	83	ILE
1	Ej	95	ILE
1	Ej	151	THR

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Mol	Chain	Res	Type
1	Ej	161	LEU
1	Ej	194	LEU
1	Ek	52	GLN
1	Ek	70	SER
1	Ek	97	SER
1	Ek	133	ASN
1	Ek	150	LEU
1	Ek	161	LEU
1	Ek	166	SER
1	Ek	204	VAL
1	Ek	237	ILE
1	El	29	SER
1	El	72	THR
1	El	76	THR
1	El	131	PRO
1	El	144	THR
1	El	161	LEU
1	El	189	THR
1	Eo	59	LEU
1	Eo	61	HIS
1	Eo	76	THR
1	Eo	83	ILE
1	Eo	88	VAL
1	Eo	95	ILE
1	Eo	151	THR
1	Eo	161	LEU
1	Eo	194	LEU
1	Ep	52	GLN
1	Ep	70	SER
1	Ep	89	PRO
1	Ep	97	SER
1	Ep	133	ASN
1	Ep	150	LEU
1	Ep	161	LEU
1	Ep	166	SER
1	Ep	189	THR
1	Ep	237	ILE
1	Eq	29	SER
1	Eq	72	THR
1	Eq	76	THR
1	Eq	89	PRO
1	Eq	130	THR

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Mol	Chain	Res	Type
1	Eq	131	PRO
1	Eq	144	THR
1	Eq	161	LEU
1	Eq	189	THR
1	Et	59	LEU
1	Et	61	HIS
1	Et	76	THR
1	Et	95	ILE
1	Et	151	THR
1	Et	161	LEU
1	Et	194	LEU
1	Eu	70	SER
1	Eu	92	ASP
1	Eu	95	ILE
1	Eu	97	SER
1	Eu	133	ASN
1	Eu	150	LEU
1	Eu	161	LEU
1	Eu	166	SER
1	Eu	204	VAL
1	Eu	237	ILE
1	Ev	29	SER
1	Ev	31	GLU
1	Ev	72	THR
1	Ev	76	THR
1	Ev	92	ASP
1	Ev	131	PRO
1	Ev	144	THR
1	Ev	161	LEU
1	Ev	189	THR
1	Ey	59	LEU
1	Ey	61	HIS
1	Ey	76	THR
1	Ey	83	ILE
1	Ey	88	VAL
1	Ey	151	THR
1	Ey	161	LEU
1	Ey	194	LEU
1	Ez	52	GLN
1	Ez	60	SER
1	Ez	70	SER
1	Ez	97	SER

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Mol	Chain	Res	Type
1	Ez	133	ASN
1	Ez	150	LEU
1	Ez	152	ASP
1	Ez	161	LEU
1	Ez	166	SER
1	Ez	204	VAL
1	Ez	237	ILE
1	E1	29	SER
1	E1	72	THR
1	E1	76	THR
1	E1	97	SER
1	E1	130	THR
1	E1	131	PRO
1	E1	144	THR
1	E1	161	LEU
1	E1	189	THR
1	E4	59	LEU
1	E4	61	HIS
1	E4	72	THR
1	E4	76	THR
1	E4	95	ILE
1	E4	151	THR
1	E4	161	LEU
1	E4	194	LEU
1	E5	60	SER
1	E5	70	SER
1	E5	97	SER
1	E5	133	ASN
1	E5	150	LEU
1	E5	161	LEU
1	E5	166	SER
1	E5	204	VAL
1	E5	237	ILE
1	E6	29	SER
1	E6	72	THR
1	E6	76	THR
1	E6	97	SER
1	E6	131	PRO
1	E6	144	THR
1	E6	161	LEU
1	E6	189	THR
1	FA	61	HIS

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Mol	Chain	Res	Type
1	FA	62	GLU
1	FA	76	THR
1	FA	88	VAL
1	FA	89	PRO
1	FA	161	LEU
1	FB	97	SER
1	FB	150	LEU
1	FB	152	ASP
1	FB	161	LEU
1	FB	166	SER
1	FB	189	THR
1	FC	29	SER
1	FC	72	THR
1	FC	76	THR
1	FC	144	THR
1	FC	161	LEU
1	FC	189	THR
1	FF	57	GLN
1	FF	61	HIS
1	FF	62	GLU
1	FF	76	THR
1	FF	131	PRO
1	FF	161	LEU
1	FG	70	SER
1	FG	97	SER
1	FG	152	ASP
1	FG	161	LEU
1	FG	166	SER
1	FG	189	THR
1	FH	29	SER
1	FH	72	THR
1	FH	76	THR
1	FH	144	THR
1	FH	161	LEU
1	FH	189	THR
1	FK	61	HIS
1	FK	62	GLU
1	FK	76	THR
1	FK	95	ILE
1	FK	161	LEU
1	FL	70	SER
1	FL	97	SER

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Mol	Chain	Res	Type
1	FL	150	LEU
1	FL	152	ASP
1	FL	161	LEU
1	FL	166	SER
1	FL	189	THR
1	FM	29	SER
1	FM	72	THR
1	FM	76	THR
1	FM	92	ASP
1	FM	131	PRO
1	FM	144	THR
1	FM	161	LEU
1	FM	189	THR
1	FP	61	HIS
1	FP	62	GLU
1	FP	76	THR
1	FP	92	ASP
1	FP	161	LEU
1	FQ	97	SER
1	FQ	150	LEU
1	FQ	152	ASP
1	FQ	161	LEU
1	FQ	166	SER
1	FQ	189	THR
1	FR	29	SER
1	FR	72	THR
1	FR	76	THR
1	FR	144	THR
1	FR	161	LEU
1	FR	189	THR
1	FU	61	HIS
1	FU	62	GLU
1	FU	76	THR
1	FU	88	VAL
1	FU	92	ASP
1	FU	95	ILE
1	FU	131	PRO
1	FU	161	LEU
1	FV	92	ASP
1	FV	95	ILE
1	FV	97	SER
1	FV	150	LEU

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Mol	Chain	Res	Type
1	FV	152	ASP
1	FV	161	LEU
1	FV	166	SER
1	FV	189	THR
1	FW	29	SER
1	FW	72	THR
1	FW	76	THR
1	FW	88	VAL
1	FW	101	PRO
1	FW	131	PRO
1	FW	144	THR
1	FW	161	LEU
1	FW	189	THR
1	FZ	61	HIS
1	FZ	62	GLU
1	FZ	76	THR
1	FZ	95	ILE
1	FZ	161	LEU
1	Fa	92	ASP
1	Fa	97	SER
1	Fa	152	ASP
1	Fa	161	LEU
1	Fa	166	SER
1	Fa	189	THR
1	Fb	29	SER
1	Fb	72	THR
1	Fb	76	THR
1	Fb	144	THR
1	Fb	161	LEU
1	Fb	189	THR
1	Fe	61	HIS
1	Fe	62	GLU
1	Fe	76	THR
1	Fe	89	PRO
1	Fe	161	LEU
1	Ff	70	SER
1	Ff	97	SER
1	Ff	150	LEU
1	Ff	152	ASP
1	Ff	161	LEU
1	Ff	166	SER
1	Ff	189	THR

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Mol	Chain	Res	Type
1	Fg	29	SER
1	Fg	72	THR
1	Fg	76	THR
1	Fg	144	THR
1	Fg	161	LEU
1	Fg	189	THR
1	Fj	61	HIS
1	Fj	62	GLU
1	Fj	76	THR
1	Fj	88	VAL
1	Fj	92	ASP
1	Fj	95	ILE
1	Fj	161	LEU
1	Fk	97	SER
1	Fk	152	ASP
1	Fk	161	LEU
1	Fk	166	SER
1	Fk	189	THR
1	Fl	29	SER
1	Fl	72	THR
1	Fl	76	THR
1	Fl	88	VAL
1	Fl	144	THR
1	Fl	161	LEU
1	Fl	189	THR
1	Fo	61	HIS
1	Fo	62	GLU
1	Fo	76	THR
1	Fo	93	LYS
1	Fo	95	ILE
1	Fo	161	LEU
1	Fp	88	VAL
1	Fp	97	SER
1	Fp	152	ASP
1	Fp	161	LEU
1	Fp	166	SER
1	Fp	189	THR
1	Fq	29	SER
1	Fq	72	THR
1	Fq	76	THR
1	Fq	88	VAL
1	Fq	89	PRO

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Mol	Chain	Res	Type
1	Fq	144	THR
1	Fq	161	LEU
1	Fq	189	THR
1	Ft	61	HIS
1	Ft	62	GLU
1	Ft	76	THR
1	Ft	88	VAL
1	Ft	92	ASP
1	Ft	131	PRO
1	Ft	161	LEU
1	Fu	70	SER
1	Fu	94	PRO
1	Fu	97	SER
1	Fu	150	LEU
1	Fu	152	ASP
1	Fu	161	LEU
1	Fu	166	SER
1	Fu	189	THR
1	Fv	29	SER
1	Fv	72	THR
1	Fv	76	THR
1	Fv	88	VAL
1	Fv	144	THR
1	Fv	161	LEU
1	Fv	189	THR
1	Fy	61	HIS
1	Fy	62	GLU
1	Fy	76	THR
1	Fy	131	PRO
1	Fy	161	LEU
1	Fz	88	VAL
1	Fz	97	SER
1	Fz	150	LEU
1	Fz	152	ASP
1	Fz	161	LEU
1	Fz	166	SER
1	Fz	189	THR
1	F1	29	SER
1	F1	72	THR
1	F1	76	THR
1	F1	95	ILE
1	F1	144	THR

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Mol	Chain	Res	Type
1	F1	161	LEU
1	F1	189	THR
1	F4	61	HIS
1	F4	62	GLU
1	F4	76	THR
1	F4	89	PRO
1	F4	161	LEU
1	F5	70	SER
1	F5	97	SER
1	F5	150	LEU
1	F5	152	ASP
1	F5	161	LEU
1	F5	166	SER
1	F5	189	THR
1	F6	29	SER
1	F6	72	THR
1	F6	76	THR
1	F6	131	PRO
1	F6	144	THR
1	F6	161	LEU
1	F6	189	THR
1	GA	61	HIS
1	GA	62	GLU
1	GA	76	THR
1	GA	95	ILE
1	GA	161	LEU
1	GB	70	SER
1	GB	94	PRO
1	GB	97	SER
1	GB	150	LEU
1	GB	152	ASP
1	GB	161	LEU
1	GB	166	SER
1	GB	189	THR
1	GC	29	SER
1	GC	72	THR
1	GC	76	THR
1	GC	144	THR
1	GC	161	LEU
1	GC	189	THR
1	GF	61	HIS
1	GF	62	GLU

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Mol	Chain	Res	Type
1	GF	76	THR
1	GF	95	ILE
1	GF	131	PRO
1	GF	161	LEU
1	GG	88	VAL
1	GG	97	SER
1	GG	150	LEU
1	GG	152	ASP
1	GG	161	LEU
1	GG	166	SER
1	GG	189	THR
1	GH	29	SER
1	GH	72	THR
1	GH	76	THR
1	GH	144	THR
1	GH	161	LEU
1	GH	189	THR
1	GK	61	HIS
1	GK	62	GLU
1	GK	76	THR
1	GK	131	PRO
1	GK	161	LEU
1	GL	97	SER
1	GL	150	LEU
1	GL	152	ASP
1	GL	161	LEU
1	GL	166	SER
1	GL	189	THR
1	GM	29	SER
1	GM	72	THR
1	GM	76	THR
1	GM	88	VAL
1	GM	144	THR
1	GM	161	LEU
1	GM	189	THR
1	GP	61	HIS
1	GP	62	GLU
1	GP	76	THR
1	GP	95	ILE
1	GP	161	LEU
1	GQ	70	SER
1	GQ	95	ILE

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Mol	Chain	Res	Type
1	GQ	97	SER
1	GQ	150	LEU
1	GQ	152	ASP
1	GQ	161	LEU
1	GQ	166	SER
1	GQ	189	THR
1	GR	29	SER
1	GR	72	THR
1	GR	76	THR
1	GR	144	THR
1	GR	161	LEU
1	GR	189	THR
1	GU	61	HIS
1	GU	62	GLU
1	GU	76	THR
1	GU	95	ILE
1	GU	131	PRO
1	GU	161	LEU
1	GV	70	SER
1	GV	95	ILE
1	GV	97	SER
1	GV	152	ASP
1	GV	161	LEU
1	GV	166	SER
1	GV	189	THR
1	GW	29	SER
1	GW	72	THR
1	GW	76	THR
1	GW	88	VAL
1	GW	89	PRO
1	GW	131	PRO
1	GW	144	THR
1	GW	161	LEU
1	GW	189	THR
1	GZ	61	HIS
1	GZ	62	GLU
1	GZ	76	THR
1	GZ	95	ILE
1	GZ	131	PRO
1	GZ	161	LEU
1	Ga	88	VAL
1	Ga	95	ILE

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Mol	Chain	Res	Type
1	Ga	97	SER
1	Ga	150	LEU
1	Ga	152	ASP
1	Ga	161	LEU
1	Ga	166	SER
1	Ga	189	THR
1	Gb	29	SER
1	Gb	72	THR
1	Gb	76	THR
1	Gb	144	THR
1	Gb	161	LEU
1	Gb	189	THR
1	Ge	61	HIS
1	Ge	62	GLU
1	Ge	76	THR
1	Ge	131	PRO
1	Ge	161	LEU
1	Gf	88	VAL
1	Gf	97	SER
1	Gf	129	THR
1	Gf	152	ASP
1	Gf	161	LEU
1	Gf	166	SER
1	Gf	189	THR
1	Gg	29	SER
1	Gg	72	THR
1	Gg	76	THR
1	Gg	88	VAL
1	Gg	92	ASP
1	Gg	144	THR
1	Gg	161	LEU
1	Gg	189	THR
1	Gj	61	HIS
1	Gj	62	GLU
1	Gj	76	THR
1	Gj	88	VAL
1	Gj	95	ILE
1	Gj	161	LEU
1	Gk	70	SER
1	Gk	97	SER
1	Gk	150	LEU
1	Gk	152	ASP

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Mol	Chain	Res	Type
1	Gk	161	LEU
1	Gk	166	SER
1	Gk	189	THR
1	Gl	29	SER
1	Gl	72	THR
1	Gl	76	THR
1	Gl	144	THR
1	Gl	161	LEU
1	Gl	189	THR
1	Go	61	HIS
1	Go	62	GLU
1	Go	76	THR
1	Go	89	PRO
1	Go	92	ASP
1	Go	161	LEU
1	Gp	97	SER
1	Gp	150	LEU
1	Gp	152	ASP
1	Gp	161	LEU
1	Gp	166	SER
1	Gp	189	THR
1	Gq	29	SER
1	Gq	72	THR
1	Gq	76	THR
1	Gq	144	THR
1	Gq	161	LEU
1	Gq	189	THR
1	Gt	61	HIS
1	Gt	62	GLU
1	Gt	76	THR
1	Gt	95	ILE
1	Gt	131	PRO
1	Gt	161	LEU
1	Gu	88	VAL
1	Gu	97	SER
1	Gu	150	LEU
1	Gu	152	ASP
1	Gu	161	LEU
1	Gu	166	SER
1	Gu	189	THR
1	Gv	29	SER
1	Gv	72	THR

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Mol	Chain	Res	Type
1	Gv	76	THR
1	Gv	89	PRO
1	Gv	144	THR
1	Gv	161	LEU
1	Gv	189	THR
1	Gy	61	HIS
1	Gy	62	GLU
1	Gy	76	THR
1	Gy	88	VAL
1	Gy	95	ILE
1	Gy	131	PRO
1	Gy	161	LEU
1	Gz	92	ASP
1	Gz	152	ASP
1	Gz	161	LEU
1	Gz	166	SER
1	Gz	189	THR
1	G1	29	SER
1	G1	72	THR
1	G1	76	THR
1	G1	144	THR
1	G1	161	LEU
1	G1	189	THR
1	G4	61	HIS
1	G4	62	GLU
1	G4	76	THR
1	G4	95	ILE
1	G4	161	LEU
1	G5	97	SER
1	G5	152	ASP
1	G5	161	LEU
1	G5	166	SER
1	G5	189	THR
1	G6	29	SER
1	G6	72	THR
1	G6	76	THR
1	G6	95	ILE
1	G6	144	THR
1	G6	161	LEU
1	G6	189	THR
1	HA	61	HIS
1	HA	62	GLU

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Mol	Chain	Res	Type
1	HA	76	THR
1	HA	88	VAL
1	HA	95	ILE
1	HA	161	LEU
1	HB	70	SER
1	HB	89	PRO
1	HB	97	SER
1	HB	152	ASP
1	HB	161	LEU
1	HB	166	SER
1	HB	189	THR
1	HC	29	SER
1	HC	72	THR
1	HC	76	THR
1	HC	95	ILE
1	HC	144	THR
1	HC	161	LEU
1	HC	189	THR
1	HF	61	HIS
1	HF	62	GLU
1	HF	76	THR
1	HF	161	LEU
1	HG	70	SER
1	HG	97	SER
1	HG	152	ASP
1	HG	161	LEU
1	HG	166	SER
1	HG	189	THR
1	HH	29	SER
1	HH	72	THR
1	HH	76	THR
1	HH	95	ILE
1	HH	131	PRO
1	HH	144	THR
1	HH	161	LEU
1	HH	189	THR
1	HK	61	HIS
1	HK	62	GLU
1	HK	76	THR
1	HK	95	ILE
1	HK	161	LEU
1	HL	97	SER

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Mol	Chain	Res	Type
1	HL	150	LEU
1	HL	152	ASP
1	HL	161	LEU
1	HL	166	SER
1	HL	189	THR
1	HM	29	SER
1	HM	72	THR
1	HM	76	THR
1	HM	131	PRO
1	HM	144	THR
1	HM	161	LEU
1	HM	189	THR
1	HP	61	HIS
1	HP	62	GLU
1	HP	76	THR
1	HP	95	ILE
1	HP	161	LEU
1	HQ	70	SER
1	HQ	97	SER
1	HQ	150	LEU
1	HQ	152	ASP
1	HQ	161	LEU
1	HQ	166	SER
1	HQ	189	THR
1	HR	29	SER
1	HR	72	THR
1	HR	76	THR
1	HR	92	ASP
1	HR	131	PRO
1	HR	144	THR
1	HR	161	LEU
1	HR	189	THR
1	HU	61	HIS
1	HU	62	GLU
1	HU	76	THR
1	HU	92	ASP
1	HU	131	PRO
1	HU	161	LEU
1	HV	70	SER
1	HV	97	SER
1	HV	152	ASP
1	HV	161	LEU

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Mol	Chain	Res	Type
1	HV	166	SER
1	HV	189	THR
1	HW	29	SER
1	HW	72	THR
1	HW	76	THR
1	HW	88	VAL
1	HW	95	ILE
1	HW	144	THR
1	HW	161	LEU
1	HW	189	THR
1	HZ	61	HIS
1	HZ	62	GLU
1	HZ	76	THR
1	HZ	88	VAL
1	HZ	92	ASP
1	HZ	95	ILE
1	HZ	161	LEU
1	Ha	89	PRO
1	Ha	97	SER
1	Ha	152	ASP
1	Ha	161	LEU
1	Ha	166	SER
1	Ha	189	THR
1	Hb	29	SER
1	Hb	72	THR
1	Hb	76	THR
1	Hb	144	THR
1	Hb	161	LEU
1	Hb	189	THR
1	He	61	HIS
1	He	62	GLU
1	He	76	THR
1	He	95	ILE
1	He	131	PRO
1	He	161	LEU
1	Hf	97	SER
1	Hf	150	LEU
1	Hf	152	ASP
1	Hf	161	LEU
1	Hf	166	SER
1	Hf	189	THR
1	Hg	29	SER

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Mol	Chain	Res	Type
1	Hg	72	THR
1	Hg	76	THR
1	Hg	92	ASP
1	Hg	144	THR
1	Hg	161	LEU
1	Hg	189	THR
1	Hj	61	HIS
1	Hj	62	GLU
1	Hj	76	THR
1	Hj	95	ILE
1	Hj	161	LEU
1	Hk	70	SER
1	Hk	97	SER
1	Hk	150	LEU
1	Hk	152	ASP
1	Hk	161	LEU
1	Hk	166	SER
1	Hk	189	THR
1	Hl	29	SER
1	Hl	72	THR
1	Hl	76	THR
1	Hl	88	VAL
1	Hl	89	PRO
1	Hl	144	THR
1	Hl	161	LEU
1	Hl	189	THR
1	Ho	61	HIS
1	Ho	62	GLU
1	Ho	76	THR
1	Ho	95	ILE
1	Ho	161	LEU
1	Hp	97	SER
1	Hp	150	LEU
1	Hp	152	ASP
1	Hp	161	LEU
1	Hp	166	SER
1	Hp	189	THR
1	Hq	29	SER
1	Hq	76	THR
1	Hq	94	PRO
1	Hq	131	PRO
1	Hq	144	THR

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Mol	Chain	Res	Type
1	Hq	161	LEU
1	Hq	189	THR
1	Ht	61	HIS
1	Ht	62	GLU
1	Ht	76	THR
1	Ht	92	ASP
1	Ht	131	PRO
1	Ht	161	LEU
1	Hu	95	ILE
1	Hu	152	ASP
1	Hu	161	LEU
1	Hu	166	SER
1	Hu	189	THR
1	Hv	29	SER
1	Hv	72	THR
1	Hv	76	THR
1	Hv	95	ILE
1	Hv	144	THR
1	Hv	161	LEU
1	Hv	189	THR
1	Hy	61	HIS
1	Hy	62	GLU
1	Hy	76	THR
1	Hy	95	ILE
1	Hy	161	LEU
1	Hz	93	LYS
1	Hz	97	SER
1	Hz	152	ASP
1	Hz	161	LEU
1	Hz	166	SER
1	Hz	189	THR
1	H1	29	SER
1	H1	72	THR
1	H1	76	THR
1	H1	101	PRO
1	H1	144	THR
1	H1	161	LEU
1	H1	189	THR
1	H4	61	HIS
1	H4	62	GLU
1	H4	76	THR
1	H4	92	ASP

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Mol	Chain	Res	Type
1	H4	95	ILE
1	H4	161	LEU
1	H5	70	SER
1	H5	89	PRO
1	H5	95	ILE
1	H5	97	SER
1	H5	152	ASP
1	H5	161	LEU
1	H5	166	SER
1	H5	189	THR
1	H6	29	SER
1	H6	72	THR
1	H6	76	THR
1	H6	144	THR
1	H6	161	LEU
1	H6	189	THR
1	IA	61	HIS
1	IA	62	GLU
1	IA	76	THR
1	IA	88	VAL
1	IA	95	ILE
1	IA	161	LEU
1	IB	97	SER
1	IB	150	LEU
1	IB	152	ASP
1	IB	161	LEU
1	IB	166	SER
1	IB	189	THR
1	IC	29	SER
1	IC	72	THR
1	IC	76	THR
1	IC	88	VAL
1	IC	144	THR
1	IC	161	LEU
1	IC	189	THR
1	IF	61	HIS
1	IF	62	GLU
1	IF	76	THR
1	IF	88	VAL
1	IF	161	LEU
1	IG	97	SER
1	IG	150	LEU

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Mol	Chain	Res	Type
1	IG	152	ASP
1	IG	161	LEU
1	IG	166	SER
1	IG	189	THR
1	IH	29	SER
1	IH	72	THR
1	IH	76	THR
1	IH	144	THR
1	IH	161	LEU
1	IH	189	THR
1	IK	61	HIS
1	IK	62	GLU
1	IK	76	THR
1	IK	95	ILE
1	IK	161	LEU
1	IL	97	SER
1	IL	150	LEU
1	IL	152	ASP
1	IL	161	LEU
1	IL	166	SER
1	IL	189	THR
1	IM	29	SER
1	IM	72	THR
1	IM	76	THR
1	IM	144	THR
1	IM	161	LEU
1	IM	189	THR
1	IP	61	HIS
1	IP	62	GLU
1	IP	76	THR
1	IP	131	PRO
1	IP	161	LEU
1	IQ	70	SER
1	IQ	88	VAL
1	IQ	97	SER
1	IQ	152	ASP
1	IQ	161	LEU
1	IQ	166	SER
1	IQ	189	THR
1	IR	29	SER
1	IR	72	THR
1	IR	76	THR

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Mol	Chain	Res	Type
1	IR	92	ASP
1	IR	131	PRO
1	IR	144	THR
1	IR	161	LEU
1	IR	189	THR
1	IU	61	HIS
1	IU	62	GLU
1	IU	76	THR
1	IU	89	PRO
1	IU	92	ASP
1	IU	131	PRO
1	IU	161	LEU
1	IV	70	SER
1	IV	94	PRO
1	IV	97	SER
1	IV	150	LEU
1	IV	152	ASP
1	IV	161	LEU
1	IV	166	SER
1	IV	189	THR
1	IW	29	SER
1	IW	72	THR
1	IW	76	THR
1	IW	88	VAL
1	IW	131	PRO
1	IW	144	THR
1	IW	161	LEU
1	IW	189	THR
1	IZ	61	HIS
1	IZ	62	GLU
1	IZ	76	THR
1	IZ	88	VAL
1	IZ	95	ILE
1	IZ	131	PRO
1	IZ	161	LEU
1	Ia	70	SER
1	Ia	97	SER
1	Ia	129	THR
1	Ia	150	LEU
1	Ia	152	ASP
1	Ia	161	LEU
1	Ia	166	SER

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Mol	Chain	Res	Type
1	Ia	189	THR
1	Ib	29	SER
1	Ib	72	THR
1	Ib	76	THR
1	Ib	88	VAL
1	Ib	130	THR
1	Ib	144	THR
1	Ib	161	LEU
1	Ib	189	THR
1	Ie	61	HIS
1	Ie	62	GLU
1	Ie	76	THR
1	Ie	92	ASP
1	Ie	95	ILE
1	Ie	161	LEU
1	If	97	SER
1	If	150	LEU
1	If	152	ASP
1	If	161	LEU
1	If	166	SER
1	If	189	THR
1	Ig	29	SER
1	Ig	72	THR
1	Ig	76	THR
1	Ig	144	THR
1	Ig	161	LEU
1	Ig	189	THR
1	Ij	61	HIS
1	Ij	62	GLU
1	Ij	76	THR
1	Ij	161	LEU
1	Ik	70	SER
1	Ik	93	LYS
1	Ik	150	LEU
1	Ik	152	ASP
1	Ik	161	LEU
1	Ik	166	SER
1	Ik	189	THR
1	Il	29	SER
1	Il	72	THR
1	Il	76	THR
1	Il	92	ASP

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Mol	Chain	Res	Type
1	Il	144	THR
1	Il	161	LEU
1	Il	189	THR
1	Io	61	HIS
1	Io	62	GLU
1	Io	76	THR
1	Io	161	LEU
1	Ip	70	SER
1	Ip	89	PRO
1	Ip	97	SER
1	Ip	152	ASP
1	Ip	161	LEU
1	Ip	166	SER
1	Ip	189	THR
1	Iq	29	SER
1	Iq	72	THR
1	Iq	76	THR
1	Iq	144	THR
1	Iq	161	LEU
1	Iq	189	THR
1	It	61	HIS
1	It	62	GLU
1	It	76	THR
1	It	95	ILE
1	It	161	LEU
1	Iu	70	SER
1	Iu	88	VAL
1	Iu	97	SER
1	Iu	152	ASP
1	Iu	161	LEU
1	Iu	166	SER
1	Iu	189	THR
1	Iv	29	SER
1	Iv	72	THR
1	Iv	76	THR
1	Iv	94	PRO
1	Iv	131	PRO
1	Iv	144	THR
1	Iv	161	LEU
1	Iv	189	THR
1	Iy	61	HIS
1	Iy	62	GLU

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Mol	Chain	Res	Type
1	Iy	76	THR
1	Iy	95	ILE
1	Iy	161	LEU
1	Iz	92	ASP
1	Iz	97	SER
1	Iz	150	LEU
1	Iz	152	ASP
1	Iz	161	LEU
1	Iz	166	SER
1	Iz	189	THR
1	I1	29	SER
1	I1	72	THR
1	I1	76	THR
1	I1	144	THR
1	I1	161	LEU
1	I1	189	THR
1	I4	61	HIS
1	I4	62	GLU
1	I4	76	THR
1	I4	131	PRO
1	I4	161	LEU
1	I4	163	PRO
1	I5	97	SER
1	I5	150	LEU
1	I5	152	ASP
1	I5	161	LEU
1	I5	166	SER
1	I5	189	THR
1	I6	29	SER
1	I6	72	THR
1	I6	76	THR
1	I6	131	PRO
1	I6	144	THR
1	I6	161	LEU
1	I6	189	THR
1	JA	61	HIS
1	JA	62	GLU
1	JA	76	THR
1	JA	161	LEU
1	JB	70	SER
1	JB	92	ASP
1	JB	97	SER

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Mol	Chain	Res	Type
1	JB	152	ASP
1	JB	161	LEU
1	JB	166	SER
1	JB	189	THR
1	JC	29	SER
1	JC	72	THR
1	JC	76	THR
1	JC	144	THR
1	JC	161	LEU
1	JC	189	THR
1	JF	61	HIS
1	JF	62	GLU
1	JF	76	THR
1	JF	95	ILE
1	JF	131	PRO
1	JF	161	LEU
1	JG	88	VAL
1	JG	97	SER
1	JG	152	ASP
1	JG	161	LEU
1	JG	166	SER
1	JG	189	THR
1	JH	29	SER
1	JH	72	THR
1	JH	76	THR
1	JH	89	PRO
1	JH	92	ASP
1	JH	144	THR
1	JH	161	LEU
1	JH	189	THR
1	JK	61	HIS
1	JK	62	GLU
1	JK	76	THR
1	JK	131	PRO
1	JK	161	LEU
1	JL	97	SER
1	JL	150	LEU
1	JL	152	ASP
1	JL	161	LEU
1	JL	166	SER
1	JL	189	THR
1	JM	29	SER

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Mol	Chain	Res	Type
1	JM	72	THR
1	JM	76	THR
1	JM	131	PRO
1	JM	144	THR
1	JM	161	LEU
1	JM	189	THR
1	JP	61	HIS
1	JP	62	GLU
1	JP	76	THR
1	JP	95	ILE
1	JP	161	LEU
1	JQ	97	SER
1	JQ	150	LEU
1	JQ	152	ASP
1	JQ	161	LEU
1	JQ	166	SER
1	JQ	189	THR
1	JR	29	SER
1	JR	72	THR
1	JR	76	THR
1	JR	144	THR
1	JR	161	LEU
1	JR	189	THR
1	JU	61	HIS
1	JU	62	GLU
1	JU	76	THR
1	JU	95	ILE
1	JU	161	LEU
1	JV	70	SER
1	JV	88	VAL
1	JV	94	PRO
1	JV	97	SER
1	JV	152	ASP
1	JV	161	LEU
1	JV	166	SER
1	JV	189	THR
1	JW	29	SER
1	JW	72	THR
1	JW	76	THR
1	JW	144	THR
1	JW	161	LEU
1	JW	189	THR

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Mol	Chain	Res	Type
1	JZ	61	HIS
1	JZ	62	GLU
1	JZ	76	THR
1	JZ	131	PRO
1	JZ	161	LEU
1	Ja	97	SER
1	Ja	152	ASP
1	Ja	161	LEU
1	Ja	166	SER
1	Ja	189	THR
1	Jb	29	SER
1	Jb	72	THR
1	Jb	76	THR
1	Jb	88	VAL
1	Jb	131	PRO
1	Jb	144	THR
1	Jb	161	LEU
1	Jb	189	THR
1	Je	61	HIS
1	Je	62	GLU
1	Je	76	THR
1	Je	95	ILE
1	Je	161	LEU
1	Jf	92	ASP
1	Jf	97	SER
1	Jf	152	ASP
1	Jf	161	LEU
1	Jf	166	SER
1	Jf	189	THR
1	Jg	29	SER
1	Jg	72	THR
1	Jg	76	THR
1	Jg	144	THR
1	Jg	161	LEU
1	Jg	189	THR
1	Jj	61	HIS
1	Jj	62	GLU
1	Jj	76	THR
1	Jj	88	VAL
1	Jj	95	ILE
1	Jj	161	LEU
1	Jk	88	VAL

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Mol	Chain	Res	Type
1	Jk	92	ASP
1	Jk	97	SER
1	Jk	150	LEU
1	Jk	152	ASP
1	Jk	161	LEU
1	Jk	166	SER
1	Jk	189	THR
1	Jl	29	SER
1	Jl	72	THR
1	Jl	76	THR
1	Jl	144	THR
1	Jl	161	LEU
1	Jl	189	THR
1	Jo	61	HIS
1	Jo	62	GLU
1	Jo	76	THR
1	Jo	95	ILE
1	Jo	161	LEU
1	Jp	70	SER
1	Jp	89	PRO
1	Jp	92	ASP
1	Jp	97	SER
1	Jp	152	ASP
1	Jp	161	LEU
1	Jp	166	SER
1	Jp	189	THR
1	Jq	29	SER
1	Jq	72	THR
1	Jq	76	THR
1	Jq	131	PRO
1	Jq	144	THR
1	Jq	161	LEU
1	Jq	189	THR
1	Jt	61	HIS
1	Jt	62	GLU
1	Jt	76	THR
1	Jt	88	VAL
1	Jt	93	LYS
1	Jt	95	ILE
1	Jt	161	LEU
1	Ju	70	SER
1	Ju	97	SER

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Mol	Chain	Res	Type
1	Ju	150	LEU
1	Ju	152	ASP
1	Ju	161	LEU
1	Ju	166	SER
1	Ju	189	THR
1	Jv	29	SER
1	Jv	72	THR
1	Jv	76	THR
1	Jv	144	THR
1	Jv	161	LEU
1	Jv	189	THR
1	Jy	61	HIS
1	Jy	62	GLU
1	Jy	76	THR
1	Jy	95	ILE
1	Jy	161	LEU
1	Jz	70	SER
1	Jz	92	ASP
1	Jz	97	SER
1	Jz	150	LEU
1	Jz	152	ASP
1	Jz	161	LEU
1	Jz	166	SER
1	Jz	189	THR
1	J1	29	SER
1	J1	72	THR
1	J1	76	THR
1	J1	92	ASP
1	J1	144	THR
1	J1	161	LEU
1	J1	189	THR
1	J4	61	HIS
1	J4	62	GLU
1	J4	76	THR
1	J4	92	ASP
1	J4	161	LEU
1	J5	88	VAL
1	J5	95	ILE
1	J5	97	SER
1	J5	144	THR
1	J5	152	ASP
1	J5	161	LEU

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Mol	Chain	Res	Type
1	J5	166	SER
1	J5	189	THR
1	J6	29	SER
1	J6	72	THR
1	J6	76	THR
1	J6	88	VAL
1	J6	144	THR
1	J6	161	LEU
1	J6	189	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1669) such sidechains are listed below:

Mol	Chain	Res	Type
1	AA	67	GLN
1	AA	113	HIS
1	AA	219	GLN
1	AB	52	GLN
1	AB	67	GLN
1	AB	113	HIS
1	AC	38	GLN
1	AC	52	GLN
1	AC	57	GLN
1	AC	61	HIS
1	AC	69	ASN
1	AC	78	GLN
1	AF	57	GLN
1	AF	61	HIS
1	AF	67	GLN
1	AF	113	HIS
1	AF	219	GLN
1	AG	52	GLN
1	AG	67	GLN
1	AG	113	HIS
1	AH	38	GLN
1	AH	52	GLN
1	AH	57	GLN
1	AH	61	HIS
1	AH	69	ASN
1	AH	78	GLN
1	AH	133	ASN
1	AK	57	GLN
1	AK	61	HIS

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Mol	Chain	Res	Type
1	AK	67	GLN
1	AK	113	HIS
1	AK	133	ASN
1	AK	219	GLN
1	AL	52	GLN
1	AL	67	GLN
1	AL	113	HIS
1	AM	38	GLN
1	AM	52	GLN
1	AM	57	GLN
1	AM	61	HIS
1	AM	69	ASN
1	AM	78	GLN
1	AP	61	HIS
1	AP	67	GLN
1	AP	113	HIS
1	AP	219	GLN
1	AQ	52	GLN
1	AQ	67	GLN
1	AQ	113	HIS
1	AR	38	GLN
1	AR	52	GLN
1	AR	57	GLN
1	AR	61	HIS
1	AR	69	ASN
1	AR	78	GLN
1	AR	133	ASN
1	AU	57	GLN
1	AU	67	GLN
1	AU	113	HIS
1	AU	133	ASN
1	AU	219	GLN
1	AV	52	GLN
1	AV	67	GLN
1	AV	113	HIS
1	AW	38	GLN
1	AW	52	GLN
1	AW	57	GLN
1	AW	61	HIS
1	AW	67	GLN
1	AW	69	ASN
1	AW	78	GLN

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Mol	Chain	Res	Type
1	AZ	57	GLN
1	AZ	61	HIS
1	AZ	67	GLN
1	AZ	113	HIS
1	AZ	133	ASN
1	AZ	219	GLN
1	Aa	52	GLN
1	Aa	67	GLN
1	Aa	113	HIS
1	Ab	38	GLN
1	Ab	52	GLN
1	Ab	57	GLN
1	Ab	61	HIS
1	Ab	69	ASN
1	Ae	57	GLN
1	Ae	61	HIS
1	Ae	67	GLN
1	Ae	113	HIS
1	Ae	133	ASN
1	Ae	219	GLN
1	Af	52	GLN
1	Af	67	GLN
1	Af	113	HIS
1	Ag	38	GLN
1	Ag	52	GLN
1	Ag	57	GLN
1	Ag	61	HIS
1	Ag	69	ASN
1	Ag	78	GLN
1	Ag	133	ASN
1	Aj	57	GLN
1	Aj	67	GLN
1	Aj	113	HIS
1	Aj	133	ASN
1	Aj	219	GLN
1	Ak	52	GLN
1	Ak	67	GLN
1	Ak	113	HIS
1	Al	38	GLN
1	Al	52	GLN
1	Al	57	GLN
1	Al	61	HIS

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Mol	Chain	Res	Type
1	Al	69	ASN
1	Al	78	GLN
1	Al	133	ASN
1	Ao	57	GLN
1	Ao	67	GLN
1	Ao	113	HIS
1	Ao	219	GLN
1	Ap	52	GLN
1	Ap	67	GLN
1	Ap	113	HIS
1	Aq	38	GLN
1	Aq	52	GLN
1	Aq	57	GLN
1	Aq	61	HIS
1	Aq	69	ASN
1	Aq	78	GLN
1	Aq	133	ASN
1	At	57	GLN
1	At	67	GLN
1	At	113	HIS
1	At	133	ASN
1	At	219	GLN
1	Au	52	GLN
1	Au	67	GLN
1	Au	113	HIS
1	Av	38	GLN
1	Av	52	GLN
1	Av	57	GLN
1	Av	61	HIS
1	Av	69	ASN
1	Av	78	GLN
1	Av	133	ASN
1	Ay	61	HIS
1	Ay	67	GLN
1	Ay	113	HIS
1	Ay	219	GLN
1	Az	52	GLN
1	Az	67	GLN
1	Az	113	HIS
1	A1	38	GLN
1	A1	52	GLN
1	A1	57	GLN

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Mol	Chain	Res	Type
1	A1	61	HIS
1	A1	69	ASN
1	A1	78	GLN
1	A1	133	ASN
1	A4	57	GLN
1	A4	67	GLN
1	A4	113	HIS
1	A4	133	ASN
1	A4	219	GLN
1	A5	52	GLN
1	A5	67	GLN
1	A5	113	HIS
1	A5	219	GLN
1	A6	38	GLN
1	A6	52	GLN
1	A6	57	GLN
1	A6	61	HIS
1	A6	69	ASN
1	A6	78	GLN
1	BA	57	GLN
1	BA	61	HIS
1	BA	67	GLN
1	BA	113	HIS
1	BA	219	GLN
1	BB	52	GLN
1	BB	67	GLN
1	BB	113	HIS
1	BC	38	GLN
1	BC	52	GLN
1	BC	57	GLN
1	BC	61	HIS
1	BC	69	ASN
1	BC	78	GLN
1	BF	61	HIS
1	BF	67	GLN
1	BF	113	HIS
1	BF	219	GLN
1	BG	52	GLN
1	BG	67	GLN
1	BG	113	HIS
1	BH	38	GLN
1	BH	52	GLN

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Mol	Chain	Res	Type
1	BH	57	GLN
1	BH	61	HIS
1	BH	69	ASN
1	BH	78	GLN
1	BH	133	ASN
1	BK	61	HIS
1	BK	67	GLN
1	BK	113	HIS
1	BK	219	GLN
1	BL	52	GLN
1	BL	67	GLN
1	BL	113	HIS
1	BL	219	GLN
1	BM	38	GLN
1	BM	52	GLN
1	BM	57	GLN
1	BM	61	HIS
1	BM	69	ASN
1	BM	78	GLN
1	BP	57	GLN
1	BP	67	GLN
1	BP	113	HIS
1	BP	133	ASN
1	BP	219	GLN
1	BQ	52	GLN
1	BQ	67	GLN
1	BQ	113	HIS
1	BR	38	GLN
1	BR	52	GLN
1	BR	57	GLN
1	BR	61	HIS
1	BR	69	ASN
1	BR	78	GLN
1	BU	57	GLN
1	BU	61	HIS
1	BU	67	GLN
1	BU	113	HIS
1	BU	219	GLN
1	BV	52	GLN
1	BV	67	GLN
1	BV	113	HIS
1	BW	38	GLN

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Mol	Chain	Res	Type
1	BW	52	GLN
1	BW	57	GLN
1	BW	61	HIS
1	BW	67	GLN
1	BW	69	ASN
1	BW	78	GLN
1	BZ	57	GLN
1	BZ	67	GLN
1	BZ	113	HIS
1	BZ	133	ASN
1	BZ	219	GLN
1	Ba	52	GLN
1	Ba	67	GLN
1	Ba	113	HIS
1	Bb	38	GLN
1	Bb	52	GLN
1	Bb	57	GLN
1	Bb	61	HIS
1	Bb	69	ASN
1	Bb	78	GLN
1	Be	61	HIS
1	Be	67	GLN
1	Be	113	HIS
1	Be	219	GLN
1	Bf	52	GLN
1	Bf	67	GLN
1	Bf	113	HIS
1	Bg	38	GLN
1	Bg	52	GLN
1	Bg	57	GLN
1	Bg	61	HIS
1	Bg	69	ASN
1	Bg	78	GLN
1	Bj	57	GLN
1	Bj	61	HIS
1	Bj	67	GLN
1	Bj	113	HIS
1	Bj	133	ASN
1	Bj	219	GLN
1	Bk	52	GLN
1	Bk	67	GLN
1	Bk	113	HIS

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Mol	Chain	Res	Type
1	B1	38	GLN
1	B1	52	GLN
1	B1	57	GLN
1	B1	61	HIS
1	B1	69	ASN
1	B1	78	GLN
1	B0	57	GLN
1	B0	67	GLN
1	B0	113	HIS
1	B0	133	ASN
1	B0	219	GLN
1	Bp	52	GLN
1	Bp	67	GLN
1	Bp	113	HIS
1	Bq	38	GLN
1	Bq	52	GLN
1	Bq	57	GLN
1	Bq	61	HIS
1	Bq	69	ASN
1	Bq	78	GLN
1	Bq	133	ASN
1	Bt	57	GLN
1	Bt	67	GLN
1	Bt	113	HIS
1	Bt	219	GLN
1	Bu	52	GLN
1	Bu	67	GLN
1	Bu	113	HIS
1	Bv	38	GLN
1	Bv	52	GLN
1	Bv	57	GLN
1	Bv	61	HIS
1	Bv	69	ASN
1	Bv	78	GLN
1	By	57	GLN
1	By	61	HIS
1	By	67	GLN
1	By	113	HIS
1	By	219	GLN
1	Bz	52	GLN
1	Bz	67	GLN
1	Bz	113	HIS

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Mol	Chain	Res	Type
1	B1	38	GLN
1	B1	52	GLN
1	B1	57	GLN
1	B1	61	HIS
1	B1	69	ASN
1	B1	78	GLN
1	B1	133	ASN
1	B4	57	GLN
1	B4	61	HIS
1	B4	67	GLN
1	B4	113	HIS
1	B4	133	ASN
1	B4	219	GLN
1	B5	52	GLN
1	B5	67	GLN
1	B5	113	HIS
1	B6	38	GLN
1	B6	52	GLN
1	B6	57	GLN
1	B6	61	HIS
1	B6	69	ASN
1	B6	78	GLN
1	B6	133	ASN
1	CA	113	HIS
1	CB	52	GLN
1	CB	67	GLN
1	CB	113	HIS
1	CC	38	GLN
1	CC	52	GLN
1	CC	57	GLN
1	CC	61	HIS
1	CC	69	ASN
1	CC	78	GLN
1	CC	133	ASN
1	CF	57	GLN
1	CF	61	HIS
1	CF	67	GLN
1	CF	113	HIS
1	CF	133	ASN
1	CF	219	GLN
1	CG	52	GLN
1	CG	67	GLN

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Mol	Chain	Res	Type
1	CG	113	HIS
1	CG	219	GLN
1	CH	38	GLN
1	CH	52	GLN
1	CH	57	GLN
1	CH	61	HIS
1	CH	69	ASN
1	CH	78	GLN
1	CH	133	ASN
1	CK	57	GLN
1	CK	67	GLN
1	CK	113	HIS
1	CK	133	ASN
1	CK	219	GLN
1	CL	52	GLN
1	CL	67	GLN
1	CL	113	HIS
1	CM	38	GLN
1	CM	52	GLN
1	CM	57	GLN
1	CM	61	HIS
1	CM	69	ASN
1	CM	78	GLN
1	CM	113	HIS
1	CM	133	ASN
1	CP	67	GLN
1	CP	113	HIS
1	CP	219	GLN
1	CQ	52	GLN
1	CQ	67	GLN
1	CQ	113	HIS
1	CR	38	GLN
1	CR	52	GLN
1	CR	57	GLN
1	CR	61	HIS
1	CR	69	ASN
1	CR	78	GLN
1	CU	57	GLN
1	CU	67	GLN
1	CU	113	HIS
1	CU	133	ASN
1	CU	219	GLN

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Mol	Chain	Res	Type
1	CV	52	GLN
1	CV	67	GLN
1	CV	113	HIS
1	CW	38	GLN
1	CW	52	GLN
1	CW	57	GLN
1	CW	61	HIS
1	CW	69	ASN
1	CW	78	GLN
1	CZ	57	GLN
1	CZ	61	HIS
1	CZ	67	GLN
1	CZ	113	HIS
1	CZ	133	ASN
1	CZ	219	GLN
1	Ca	52	GLN
1	Ca	67	GLN
1	Ca	113	HIS
1	Cb	38	GLN
1	Cb	52	GLN
1	Cb	57	GLN
1	Cb	61	HIS
1	Cb	67	GLN
1	Cb	69	ASN
1	Cb	78	GLN
1	Cb	133	ASN
1	Ce	57	GLN
1	Ce	67	GLN
1	Ce	113	HIS
1	Ce	133	ASN
1	Ce	219	GLN
1	Cf	52	GLN
1	Cf	67	GLN
1	Cf	113	HIS
1	Cg	38	GLN
1	Cg	52	GLN
1	Cg	57	GLN
1	Cg	61	HIS
1	Cg	69	ASN
1	Cg	78	GLN
1	Cj	57	GLN
1	Cj	67	GLN

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Mol	Chain	Res	Type
1	Cj	113	HIS
1	Cj	133	ASN
1	Cj	219	GLN
1	Ck	52	GLN
1	Ck	67	GLN
1	Ck	113	HIS
1	Cl	38	GLN
1	Cl	52	GLN
1	Cl	57	GLN
1	Cl	61	HIS
1	Cl	69	ASN
1	Cl	133	ASN
1	Co	57	GLN
1	Co	61	HIS
1	Co	67	GLN
1	Co	113	HIS
1	Co	133	ASN
1	Co	219	GLN
1	Cp	52	GLN
1	Cp	67	GLN
1	Cp	113	HIS
1	Cq	38	GLN
1	Cq	52	GLN
1	Cq	57	GLN
1	Cq	61	HIS
1	Cq	69	ASN
1	Cq	78	GLN
1	Cq	133	ASN
1	Ct	57	GLN
1	Ct	67	GLN
1	Ct	113	HIS
1	Ct	219	GLN
1	Cu	52	GLN
1	Cu	67	GLN
1	Cu	113	HIS
1	Cv	38	GLN
1	Cv	52	GLN
1	Cv	57	GLN
1	Cv	61	HIS
1	Cv	69	ASN
1	Cv	78	GLN
1	Cy	57	GLN

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Mol	Chain	Res	Type
1	Cy	67	GLN
1	Cy	113	HIS
1	Cy	133	ASN
1	Cy	219	GLN
1	Cz	52	GLN
1	Cz	67	GLN
1	Cz	113	HIS
1	C1	38	GLN
1	C1	52	GLN
1	C1	57	GLN
1	C1	61	HIS
1	C1	69	ASN
1	C1	78	GLN
1	C1	133	ASN
1	C4	57	GLN
1	C4	67	GLN
1	C4	113	HIS
1	C4	133	ASN
1	C4	219	GLN
1	C5	52	GLN
1	C5	67	GLN
1	C5	113	HIS
1	C6	38	GLN
1	C6	52	GLN
1	C6	57	GLN
1	C6	61	HIS
1	C6	67	GLN
1	C6	69	ASN
1	C6	78	GLN
1	C6	133	ASN
1	DA	57	GLN
1	DA	61	HIS
1	DA	67	GLN
1	DA	113	HIS
1	DA	219	GLN
1	DB	52	GLN
1	DB	67	GLN
1	DB	113	HIS
1	DB	219	GLN
1	DC	38	GLN
1	DC	52	GLN
1	DC	57	GLN

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Mol	Chain	Res	Type
1	DC	61	HIS
1	DC	69	ASN
1	DC	78	GLN
1	DF	57	GLN
1	DF	61	HIS
1	DF	67	GLN
1	DF	113	HIS
1	DF	133	ASN
1	DF	219	GLN
1	DG	52	GLN
1	DG	67	GLN
1	DG	113	HIS
1	DG	219	GLN
1	DH	38	GLN
1	DH	52	GLN
1	DH	57	GLN
1	DH	61	HIS
1	DH	69	ASN
1	DH	78	GLN
1	DK	57	GLN
1	DK	61	HIS
1	DK	67	GLN
1	DK	113	HIS
1	DK	133	ASN
1	DK	219	GLN
1	DL	52	GLN
1	DL	67	GLN
1	DL	113	HIS
1	DL	219	GLN
1	DM	38	GLN
1	DM	52	GLN
1	DM	57	GLN
1	DM	61	HIS
1	DM	69	ASN
1	DM	78	GLN
1	DM	133	ASN
1	DP	57	GLN
1	DP	67	GLN
1	DP	113	HIS
1	DP	133	ASN
1	DP	219	GLN
1	DQ	52	GLN

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Mol	Chain	Res	Type
1	DQ	67	GLN
1	DQ	113	HIS
1	DR	38	GLN
1	DR	52	GLN
1	DR	57	GLN
1	DR	61	HIS
1	DR	67	GLN
1	DR	69	ASN
1	DR	78	GLN
1	DR	133	ASN
1	DU	57	GLN
1	DU	67	GLN
1	DU	113	HIS
1	DU	133	ASN
1	DU	219	GLN
1	DV	52	GLN
1	DV	67	GLN
1	DV	113	HIS
1	DW	38	GLN
1	DW	52	GLN
1	DW	57	GLN
1	DW	61	HIS
1	DW	69	ASN
1	DW	78	GLN
1	DZ	57	GLN
1	DZ	61	HIS
1	DZ	67	GLN
1	DZ	113	HIS
1	DZ	219	GLN
1	Da	52	GLN
1	Da	67	GLN
1	Da	113	HIS
1	Db	38	GLN
1	Db	52	GLN
1	Db	57	GLN
1	Db	61	HIS
1	Db	69	ASN
1	Db	78	GLN
1	De	57	GLN
1	De	67	GLN
1	De	113	HIS
1	De	133	ASN

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Mol	Chain	Res	Type
1	De	219	GLN
1	Df	52	GLN
1	Df	67	GLN
1	Df	113	HIS
1	Df	219	GLN
1	Dg	38	GLN
1	Dg	52	GLN
1	Dg	57	GLN
1	Dg	61	HIS
1	Dg	69	ASN
1	Dg	78	GLN
1	Dj	57	GLN
1	Dj	67	GLN
1	Dj	113	HIS
1	Dj	219	GLN
1	Dk	52	GLN
1	Dk	67	GLN
1	Dk	113	HIS
1	Dl	38	GLN
1	Dl	52	GLN
1	Dl	57	GLN
1	Dl	61	HIS
1	Dl	69	ASN
1	Dl	78	GLN
1	Do	57	GLN
1	Do	67	GLN
1	Do	113	HIS
1	Do	133	ASN
1	Do	219	GLN
1	Dp	52	GLN
1	Dp	67	GLN
1	Dp	113	HIS
1	Dq	38	GLN
1	Dq	52	GLN
1	Dq	57	GLN
1	Dq	61	HIS
1	Dq	69	ASN
1	Dq	78	GLN
1	Dq	133	ASN
1	Dt	57	GLN
1	Dt	67	GLN
1	Dt	113	HIS

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Mol	Chain	Res	Type
1	Dt	133	ASN
1	Dt	219	GLN
1	Du	52	GLN
1	Du	67	GLN
1	Du	113	HIS
1	Dv	38	GLN
1	Dv	52	GLN
1	Dv	57	GLN
1	Dv	61	HIS
1	Dv	69	ASN
1	Dv	78	GLN
1	Dv	133	ASN
1	Dy	67	GLN
1	Dy	113	HIS
1	Dy	133	ASN
1	Dy	219	GLN
1	Dz	52	GLN
1	Dz	67	GLN
1	Dz	113	HIS
1	D1	38	GLN
1	D1	52	GLN
1	D1	57	GLN
1	D1	61	HIS
1	D1	69	ASN
1	D1	78	GLN
1	D1	133	ASN
1	D4	67	GLN
1	D4	113	HIS
1	D4	219	GLN
1	D5	52	GLN
1	D5	67	GLN
1	D5	113	HIS
1	D6	38	GLN
1	D6	52	GLN
1	D6	57	GLN
1	D6	61	HIS
1	D6	69	ASN
1	D6	78	GLN
1	D6	133	ASN
1	EA	57	GLN
1	EA	67	GLN
1	EA	113	HIS

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Mol	Chain	Res	Type
1	EA	133	ASN
1	EA	219	GLN
1	EB	52	GLN
1	EB	67	GLN
1	EB	113	HIS
1	EB	219	GLN
1	EC	38	GLN
1	EC	52	GLN
1	EC	57	GLN
1	EC	61	HIS
1	EC	69	ASN
1	EC	78	GLN
1	EC	133	ASN
1	EF	57	GLN
1	EF	61	HIS
1	EF	67	GLN
1	EF	113	HIS
1	EF	133	ASN
1	EF	219	GLN
1	EG	52	GLN
1	EG	67	GLN
1	EG	113	HIS
1	EH	38	GLN
1	EH	52	GLN
1	EH	57	GLN
1	EH	61	HIS
1	EH	69	ASN
1	EH	78	GLN
1	EK	57	GLN
1	EK	67	GLN
1	EK	113	HIS
1	EK	219	GLN
1	EL	52	GLN
1	EL	67	GLN
1	EL	113	HIS
1	EM	38	GLN
1	EM	52	GLN
1	EM	57	GLN
1	EM	61	HIS
1	EM	69	ASN
1	EM	78	GLN
1	EM	133	ASN

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Mol	Chain	Res	Type
1	EP	57	GLN
1	EP	67	GLN
1	EP	113	HIS
1	EP	133	ASN
1	EP	219	GLN
1	EQ	52	GLN
1	EQ	67	GLN
1	EQ	113	HIS
1	ER	38	GLN
1	ER	52	GLN
1	ER	57	GLN
1	ER	61	HIS
1	ER	69	ASN
1	ER	78	GLN
1	ER	133	ASN
1	EU	57	GLN
1	EU	67	GLN
1	EU	113	HIS
1	EU	133	ASN
1	EU	219	GLN
1	EV	52	GLN
1	EV	67	GLN
1	EV	113	HIS
1	EW	38	GLN
1	EW	52	GLN
1	EW	57	GLN
1	EW	61	HIS
1	EW	69	ASN
1	EW	78	GLN
1	EW	133	ASN
1	EZ	57	GLN
1	EZ	67	GLN
1	EZ	113	HIS
1	EZ	133	ASN
1	EZ	219	GLN
1	Ea	52	GLN
1	Ea	67	GLN
1	Ea	113	HIS
1	Eb	38	GLN
1	Eb	52	GLN
1	Eb	57	GLN
1	Eb	61	HIS

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Mol	Chain	Res	Type
1	Eb	69	ASN
1	Eb	78	GLN
1	Ee	57	GLN
1	Ee	61	HIS
1	Ee	67	GLN
1	Ee	113	HIS
1	Ee	219	GLN
1	Ef	52	GLN
1	Ef	67	GLN
1	Ef	113	HIS
1	Eg	38	GLN
1	Eg	52	GLN
1	Eg	57	GLN
1	Eg	61	HIS
1	Eg	69	ASN
1	Eg	78	GLN
1	Ej	57	GLN
1	Ej	61	HIS
1	Ej	67	GLN
1	Ej	113	HIS
1	Ej	133	ASN
1	Ej	219	GLN
1	Ek	52	GLN
1	Ek	67	GLN
1	Ek	113	HIS
1	El	38	GLN
1	El	52	GLN
1	El	57	GLN
1	El	61	HIS
1	El	69	ASN
1	El	78	GLN
1	Eo	57	GLN
1	Eo	67	GLN
1	Eo	113	HIS
1	Eo	133	ASN
1	Eo	219	GLN
1	Ep	52	GLN
1	Ep	67	GLN
1	Ep	113	HIS
1	Eq	38	GLN
1	Eq	52	GLN
1	Eq	57	GLN

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Mol	Chain	Res	Type
1	Eq	61	HIS
1	Eq	69	ASN
1	Eq	78	GLN
1	Eq	133	ASN
1	Et	61	HIS
1	Et	67	GLN
1	Et	113	HIS
1	Et	133	ASN
1	Et	219	GLN
1	Eu	52	GLN
1	Eu	67	GLN
1	Eu	113	HIS
1	Ev	38	GLN
1	Ev	52	GLN
1	Ev	57	GLN
1	Ev	61	HIS
1	Ev	69	ASN
1	Ev	78	GLN
1	Ey	57	GLN
1	Ey	67	GLN
1	Ey	113	HIS
1	Ey	133	ASN
1	Ey	219	GLN
1	Ez	52	GLN
1	Ez	67	GLN
1	Ez	113	HIS
1	E1	38	GLN
1	E1	52	GLN
1	E1	57	GLN
1	E1	61	HIS
1	E1	69	ASN
1	E1	78	GLN
1	E4	57	GLN
1	E4	67	GLN
1	E4	113	HIS
1	E4	219	GLN
1	E5	52	GLN
1	E5	67	GLN
1	E5	113	HIS
1	E6	38	GLN
1	E6	52	GLN
1	E6	57	GLN

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Mol	Chain	Res	Type
1	E6	61	HIS
1	E6	69	ASN
1	E6	78	GLN
1	E6	133	ASN
1	FA	57	GLN
1	FA	61	HIS
1	FA	113	HIS
1	FB	52	GLN
1	FB	67	GLN
1	FB	113	HIS
1	FC	52	GLN
1	FC	57	GLN
1	FC	61	HIS
1	FC	69	ASN
1	FC	78	GLN
1	FC	113	HIS
1	FC	133	ASN
1	FF	61	HIS
1	FF	113	HIS
1	FG	52	GLN
1	FG	67	GLN
1	FG	113	HIS
1	FH	52	GLN
1	FH	57	GLN
1	FH	61	HIS
1	FH	69	ASN
1	FH	78	GLN
1	FH	113	HIS
1	FK	57	GLN
1	FK	67	GLN
1	FK	113	HIS
1	FK	219	GLN
1	FL	52	GLN
1	FL	67	GLN
1	FL	113	HIS
1	FM	52	GLN
1	FM	57	GLN
1	FM	61	HIS
1	FM	69	ASN
1	FM	78	GLN
1	FM	113	HIS
1	FM	133	ASN

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Mol	Chain	Res	Type
1	FP	61	HIS
1	FP	113	HIS
1	FQ	52	GLN
1	FQ	67	GLN
1	FQ	113	HIS
1	FR	52	GLN
1	FR	57	GLN
1	FR	61	HIS
1	FR	69	ASN
1	FR	78	GLN
1	FR	113	HIS
1	FR	133	ASN
1	FU	113	HIS
1	FU	133	ASN
1	FV	52	GLN
1	FV	67	GLN
1	FV	113	HIS
1	FW	52	GLN
1	FW	57	GLN
1	FW	61	HIS
1	FW	69	ASN
1	FW	78	GLN
1	FW	113	HIS
1	FZ	57	GLN
1	FZ	61	HIS
1	FZ	113	HIS
1	Fa	52	GLN
1	Fa	67	GLN
1	Fa	113	HIS
1	Fb	52	GLN
1	Fb	57	GLN
1	Fb	61	HIS
1	Fb	69	ASN
1	Fb	78	GLN
1	Fb	113	HIS
1	Fe	57	GLN
1	Fe	61	HIS
1	Fe	113	HIS
1	Fe	133	ASN
1	Ff	52	GLN
1	Ff	67	GLN
1	Ff	113	HIS

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Mol	Chain	Res	Type
1	Fg	52	GLN
1	Fg	57	GLN
1	Fg	61	HIS
1	Fg	69	ASN
1	Fg	78	GLN
1	Fg	113	HIS
1	Fj	57	GLN
1	Fj	61	HIS
1	Fj	67	GLN
1	Fj	113	HIS
1	Fj	219	GLN
1	Fk	52	GLN
1	Fk	113	HIS
1	Fl	38	GLN
1	Fl	52	GLN
1	Fl	57	GLN
1	Fl	61	HIS
1	Fl	69	ASN
1	Fl	78	GLN
1	Fl	113	HIS
1	Fo	57	GLN
1	Fo	61	HIS
1	Fo	67	GLN
1	Fo	113	HIS
1	Fo	133	ASN
1	Fo	219	GLN
1	Fp	52	GLN
1	Fp	67	GLN
1	Fp	113	HIS
1	Fq	52	GLN
1	Fq	57	GLN
1	Fq	61	HIS
1	Fq	69	ASN
1	Fq	78	GLN
1	Fq	113	HIS
1	Fq	133	ASN
1	Ft	57	GLN
1	Ft	61	HIS
1	Ft	67	GLN
1	Ft	113	HIS
1	Ft	219	GLN
1	Fu	52	GLN

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Mol	Chain	Res	Type
1	Fu	67	GLN
1	Fu	113	HIS
1	Fv	52	GLN
1	Fv	57	GLN
1	Fv	61	HIS
1	Fv	69	ASN
1	Fv	78	GLN
1	Fv	113	HIS
1	Fy	57	GLN
1	Fy	61	HIS
1	Fy	67	GLN
1	Fy	113	HIS
1	Fy	133	ASN
1	Fy	219	GLN
1	Fz	52	GLN
1	Fz	67	GLN
1	Fz	113	HIS
1	F1	52	GLN
1	F1	57	GLN
1	F1	61	HIS
1	F1	69	ASN
1	F1	78	GLN
1	F1	113	HIS
1	F4	57	GLN
1	F4	67	GLN
1	F4	113	HIS
1	F4	219	GLN
1	F5	52	GLN
1	F5	67	GLN
1	F5	113	HIS
1	F6	52	GLN
1	F6	57	GLN
1	F6	61	HIS
1	F6	69	ASN
1	F6	78	GLN
1	F6	113	HIS
1	F6	133	ASN
1	GA	61	HIS
1	GA	113	HIS
1	GA	133	ASN
1	GB	52	GLN
1	GB	113	HIS

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Mol	Chain	Res	Type
1	GC	52	GLN
1	GC	57	GLN
1	GC	61	HIS
1	GC	69	ASN
1	GC	78	GLN
1	GC	113	HIS
1	GF	57	GLN
1	GF	113	HIS
1	GG	52	GLN
1	GG	67	GLN
1	GG	113	HIS
1	GH	52	GLN
1	GH	57	GLN
1	GH	61	HIS
1	GH	69	ASN
1	GH	78	GLN
1	GH	113	HIS
1	GK	57	GLN
1	GK	61	HIS
1	GK	67	GLN
1	GK	113	HIS
1	GK	133	ASN
1	GK	219	GLN
1	GL	52	GLN
1	GL	67	GLN
1	GL	113	HIS
1	GM	52	GLN
1	GM	57	GLN
1	GM	61	HIS
1	GM	69	ASN
1	GM	78	GLN
1	GM	113	HIS
1	GP	57	GLN
1	GP	67	GLN
1	GP	113	HIS
1	GP	133	ASN
1	GP	185	ASN
1	GP	219	GLN
1	GQ	52	GLN
1	GQ	67	GLN
1	GQ	113	HIS
1	GR	52	GLN

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Mol	Chain	Res	Type
1	GR	57	GLN
1	GR	61	HIS
1	GR	69	ASN
1	GR	78	GLN
1	GR	113	HIS
1	GU	57	GLN
1	GU	67	GLN
1	GU	113	HIS
1	GU	219	GLN
1	GV	52	GLN
1	GV	113	HIS
1	GW	38	GLN
1	GW	52	GLN
1	GW	57	GLN
1	GW	61	HIS
1	GW	69	ASN
1	GW	78	GLN
1	GW	113	HIS
1	GZ	57	GLN
1	GZ	61	HIS
1	GZ	67	GLN
1	GZ	113	HIS
1	GZ	219	GLN
1	Ga	52	GLN
1	Ga	67	GLN
1	Ga	113	HIS
1	Gb	38	GLN
1	Gb	52	GLN
1	Gb	57	GLN
1	Gb	61	HIS
1	Gb	69	ASN
1	Gb	78	GLN
1	Gb	113	HIS
1	Ge	57	GLN
1	Ge	61	HIS
1	Ge	67	GLN
1	Ge	113	HIS
1	Ge	133	ASN
1	Ge	219	GLN
1	Gf	52	GLN
1	Gf	67	GLN
1	Gf	113	HIS

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Mol	Chain	Res	Type
1	Gg	52	GLN
1	Gg	57	GLN
1	Gg	61	HIS
1	Gg	69	ASN
1	Gg	78	GLN
1	Gg	113	HIS
1	Gj	61	HIS
1	Gj	67	GLN
1	Gj	113	HIS
1	Gj	219	GLN
1	Gk	52	GLN
1	Gk	67	GLN
1	Gk	113	HIS
1	Gl	38	GLN
1	Gl	52	GLN
1	Gl	57	GLN
1	Gl	61	HIS
1	Gl	69	ASN
1	Gl	78	GLN
1	Gl	113	HIS
1	Go	57	GLN
1	Go	61	HIS
1	Go	113	HIS
1	Gp	52	GLN
1	Gp	67	GLN
1	Gp	113	HIS
1	Gq	38	GLN
1	Gq	52	GLN
1	Gq	57	GLN
1	Gq	61	HIS
1	Gq	69	ASN
1	Gq	78	GLN
1	Gq	113	HIS
1	Gq	133	ASN
1	Gt	57	GLN
1	Gt	67	GLN
1	Gt	113	HIS
1	Gt	219	GLN
1	Gu	52	GLN
1	Gu	67	GLN
1	Gu	113	HIS
1	Gv	52	GLN

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Mol	Chain	Res	Type
1	Gv	57	GLN
1	Gv	61	HIS
1	Gv	69	ASN
1	Gv	78	GLN
1	Gv	113	HIS
1	Gy	57	GLN
1	Gy	61	HIS
1	Gy	67	GLN
1	Gy	113	HIS
1	Gy	133	ASN
1	Gy	219	GLN
1	Gz	52	GLN
1	Gz	67	GLN
1	Gz	113	HIS
1	G1	38	GLN
1	G1	52	GLN
1	G1	57	GLN
1	G1	61	HIS
1	G1	69	ASN
1	G1	78	GLN
1	G1	113	HIS
1	G4	61	HIS
1	G4	67	GLN
1	G4	113	HIS
1	G4	219	GLN
1	G5	52	GLN
1	G5	67	GLN
1	G5	113	HIS
1	G6	52	GLN
1	G6	57	GLN
1	G6	61	HIS
1	G6	69	ASN
1	G6	78	GLN
1	G6	113	HIS
1	HA	57	GLN
1	HA	61	HIS
1	HA	113	HIS
1	HB	52	GLN
1	HB	67	GLN
1	HB	113	HIS
1	HC	38	GLN
1	HC	52	GLN

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Mol	Chain	Res	Type
1	HC	57	GLN
1	HC	61	HIS
1	HC	69	ASN
1	HC	78	GLN
1	HC	113	HIS
1	HF	57	GLN
1	HF	67	GLN
1	HF	113	HIS
1	HF	133	ASN
1	HF	219	GLN
1	HG	52	GLN
1	HG	67	GLN
1	HG	113	HIS
1	HH	38	GLN
1	HH	52	GLN
1	HH	57	GLN
1	HH	61	HIS
1	HH	69	ASN
1	HH	78	GLN
1	HH	113	HIS
1	HK	61	HIS
1	HK	113	HIS
1	HL	52	GLN
1	HL	67	GLN
1	HL	113	HIS
1	HM	38	GLN
1	HM	52	GLN
1	HM	57	GLN
1	HM	61	HIS
1	HM	69	ASN
1	HM	78	GLN
1	HM	113	HIS
1	HP	57	GLN
1	HP	113	HIS
1	HP	133	ASN
1	HQ	52	GLN
1	HQ	67	GLN
1	HQ	113	HIS
1	HR	52	GLN
1	HR	57	GLN
1	HR	61	HIS
1	HR	69	ASN

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Mol	Chain	Res	Type
1	HR	78	GLN
1	HR	113	HIS
1	HU	57	GLN
1	HU	113	HIS
1	HV	52	GLN
1	HV	67	GLN
1	HV	113	HIS
1	HW	38	GLN
1	HW	52	GLN
1	HW	57	GLN
1	HW	61	HIS
1	HW	69	ASN
1	HW	78	GLN
1	HW	113	HIS
1	HZ	57	GLN
1	HZ	61	HIS
1	HZ	67	GLN
1	HZ	113	HIS
1	HZ	219	GLN
1	Ha	52	GLN
1	Ha	113	HIS
1	Hb	52	GLN
1	Hb	57	GLN
1	Hb	61	HIS
1	Hb	69	ASN
1	Hb	78	GLN
1	Hb	113	HIS
1	He	57	GLN
1	He	61	HIS
1	He	113	HIS
1	He	133	ASN
1	Hf	52	GLN
1	Hf	67	GLN
1	Hf	113	HIS
1	Hg	52	GLN
1	Hg	57	GLN
1	Hg	61	HIS
1	Hg	69	ASN
1	Hg	78	GLN
1	Hg	113	HIS
1	Hj	57	GLN
1	Hj	67	GLN

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Mol	Chain	Res	Type
1	Hj	113	HIS
1	Hj	133	ASN
1	Hj	219	GLN
1	Hk	52	GLN
1	Hk	67	GLN
1	Hk	113	HIS
1	Hl	52	GLN
1	Hl	57	GLN
1	Hl	61	HIS
1	Hl	69	ASN
1	Hl	78	GLN
1	Hl	113	HIS
1	Ho	61	HIS
1	Ho	113	HIS
1	Hp	52	GLN
1	Hp	67	GLN
1	Hp	113	HIS
1	Hq	38	GLN
1	Hq	52	GLN
1	Hq	57	GLN
1	Hq	61	HIS
1	Hq	69	ASN
1	Hq	78	GLN
1	Hq	113	HIS
1	Ht	57	GLN
1	Ht	67	GLN
1	Ht	113	HIS
1	Ht	219	GLN
1	Hu	52	GLN
1	Hu	67	GLN
1	Hu	113	HIS
1	Hv	38	GLN
1	Hv	52	GLN
1	Hv	57	GLN
1	Hv	61	HIS
1	Hv	69	ASN
1	Hv	78	GLN
1	Hv	113	HIS
1	Hy	57	GLN
1	Hy	61	HIS
1	Hy	67	GLN
1	Hy	113	HIS

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Mol	Chain	Res	Type
1	Hy	219	GLN
1	Hx	52	GLN
1	Hx	113	HIS
1	H1	52	GLN
1	H1	57	GLN
1	H1	61	HIS
1	H1	69	ASN
1	H1	78	GLN
1	H1	113	HIS
1	H4	113	HIS
1	H4	133	ASN
1	H4	185	ASN
1	H5	52	GLN
1	H5	67	GLN
1	H5	113	HIS
1	H6	38	GLN
1	H6	52	GLN
1	H6	57	GLN
1	H6	61	HIS
1	H6	69	ASN
1	H6	78	GLN
1	H6	113	HIS
1	H6	133	ASN
1	IA	57	GLN
1	IA	61	HIS
1	IA	67	GLN
1	IA	113	HIS
1	IA	219	GLN
1	IB	52	GLN
1	IB	67	GLN
1	IB	113	HIS
1	IC	38	GLN
1	IC	52	GLN
1	IC	57	GLN
1	IC	61	HIS
1	IC	69	ASN
1	IC	78	GLN
1	IC	113	HIS
1	IF	57	GLN
1	IF	61	HIS
1	IF	113	HIS
1	IG	52	GLN

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Mol	Chain	Res	Type
1	IG	67	GLN
1	IG	113	HIS
1	IH	52	GLN
1	IH	57	GLN
1	IH	61	HIS
1	IH	69	ASN
1	IH	78	GLN
1	IH	113	HIS
1	IH	133	ASN
1	IK	57	GLN
1	IK	113	HIS
1	IL	52	GLN
1	IL	67	GLN
1	IL	113	HIS
1	IM	38	GLN
1	IM	52	GLN
1	IM	57	GLN
1	IM	61	HIS
1	IM	69	ASN
1	IM	78	GLN
1	IM	113	HIS
1	IP	113	HIS
1	IP	133	ASN
1	IQ	52	GLN
1	IQ	67	GLN
1	IQ	113	HIS
1	IR	38	GLN
1	IR	52	GLN
1	IR	57	GLN
1	IR	61	HIS
1	IR	69	ASN
1	IR	78	GLN
1	IR	113	HIS
1	IU	57	GLN
1	IU	61	HIS
1	IU	113	HIS
1	IV	52	GLN
1	IV	67	GLN
1	IV	102	HIS
1	IV	113	HIS
1	IW	52	GLN
1	IW	57	GLN

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Mol	Chain	Res	Type
1	IW	61	HIS
1	IW	69	ASN
1	IW	78	GLN
1	IW	113	HIS
1	IZ	61	HIS
1	IZ	113	HIS
1	IZ	133	ASN
1	Ia	52	GLN
1	Ia	67	GLN
1	Ia	113	HIS
1	Ib	38	GLN
1	Ib	52	GLN
1	Ib	57	GLN
1	Ib	61	HIS
1	Ib	69	ASN
1	Ib	78	GLN
1	Ib	113	HIS
1	Ie	57	GLN
1	Ie	67	GLN
1	Ie	113	HIS
1	Ie	219	GLN
1	If	52	GLN
1	If	67	GLN
1	If	113	HIS
1	Ig	38	GLN
1	Ig	52	GLN
1	Ig	57	GLN
1	Ig	61	HIS
1	Ig	69	ASN
1	Ig	78	GLN
1	Ig	113	HIS
1	Ig	133	ASN
1	Ij	57	GLN
1	Ij	113	HIS
1	Ij	133	ASN
1	Ik	52	GLN
1	Ik	113	HIS
1	Il	52	GLN
1	Il	57	GLN
1	Il	61	HIS
1	Il	69	ASN
1	Il	78	GLN

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Mol	Chain	Res	Type
1	Il	113	HIS
1	Io	67	GLN
1	Io	113	HIS
1	Io	219	GLN
1	Ip	52	GLN
1	Ip	67	GLN
1	Ip	113	HIS
1	Iq	52	GLN
1	Iq	57	GLN
1	Iq	61	HIS
1	Iq	69	ASN
1	Iq	78	GLN
1	Iq	113	HIS
1	It	57	GLN
1	It	61	HIS
1	It	67	GLN
1	It	113	HIS
1	It	133	ASN
1	It	219	GLN
1	Iu	52	GLN
1	Iu	67	GLN
1	Iu	113	HIS
1	Iv	38	GLN
1	Iv	52	GLN
1	Iv	57	GLN
1	Iv	61	HIS
1	Iv	69	ASN
1	Iv	78	GLN
1	Iv	113	HIS
1	Iv	133	ASN
1	Iy	57	GLN
1	Iy	61	HIS
1	Iy	113	HIS
1	Iz	52	GLN
1	Iz	67	GLN
1	Iz	113	HIS
1	I1	38	GLN
1	I1	52	GLN
1	I1	57	GLN
1	I1	61	HIS
1	I1	69	ASN
1	I1	78	GLN

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Mol	Chain	Res	Type
1	I1	113	HIS
1	I4	57	GLN
1	I4	113	HIS
1	I5	52	GLN
1	I5	67	GLN
1	I5	113	HIS
1	I6	52	GLN
1	I6	57	GLN
1	I6	61	HIS
1	I6	69	ASN
1	I6	78	GLN
1	I6	113	HIS
1	JA	67	GLN
1	JA	113	HIS
1	JA	133	ASN
1	JA	219	GLN
1	JB	52	GLN
1	JB	67	GLN
1	JB	113	HIS
1	JC	52	GLN
1	JC	57	GLN
1	JC	61	HIS
1	JC	69	ASN
1	JC	78	GLN
1	JC	113	HIS
1	JF	57	GLN
1	JF	61	HIS
1	JF	113	HIS
1	JF	133	ASN
1	JG	52	GLN
1	JG	67	GLN
1	JG	113	HIS
1	JH	52	GLN
1	JH	57	GLN
1	JH	61	HIS
1	JH	69	ASN
1	JH	78	GLN
1	JH	113	HIS
1	JK	57	GLN
1	JK	61	HIS
1	JK	67	GLN
1	JK	113	HIS

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Mol	Chain	Res	Type
1	JK	219	GLN
1	JL	52	GLN
1	JL	67	GLN
1	JL	113	HIS
1	JM	52	GLN
1	JM	57	GLN
1	JM	61	HIS
1	JM	69	ASN
1	JM	78	GLN
1	JM	113	HIS
1	JP	57	GLN
1	JP	61	HIS
1	JP	113	HIS
1	JP	133	ASN
1	JQ	52	GLN
1	JQ	67	GLN
1	JQ	113	HIS
1	JR	38	GLN
1	JR	52	GLN
1	JR	57	GLN
1	JR	61	HIS
1	JR	69	ASN
1	JR	78	GLN
1	JR	113	HIS
1	JU	57	GLN
1	JU	61	HIS
1	JU	113	HIS
1	JU	133	ASN
1	JV	52	GLN
1	JV	67	GLN
1	JV	113	HIS
1	JW	52	GLN
1	JW	57	GLN
1	JW	61	HIS
1	JW	69	ASN
1	JW	78	GLN
1	JW	113	HIS
1	JZ	57	GLN
1	JZ	61	HIS
1	JZ	113	HIS
1	Ja	52	GLN
1	Ja	67	GLN

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Mol	Chain	Res	Type
1	Ja	113	HIS
1	Jb	52	GLN
1	Jb	57	GLN
1	Jb	61	HIS
1	Jb	69	ASN
1	Jb	78	GLN
1	Jb	113	HIS
1	Je	61	HIS
1	Je	113	HIS
1	Jf	52	GLN
1	Jf	67	GLN
1	Jf	113	HIS
1	Jg	38	GLN
1	Jg	52	GLN
1	Jg	57	GLN
1	Jg	61	HIS
1	Jg	69	ASN
1	Jg	78	GLN
1	Jg	113	HIS
1	Jj	57	GLN
1	Jj	67	GLN
1	Jj	113	HIS
1	Jj	219	GLN
1	Jk	52	GLN
1	Jk	67	GLN
1	Jk	113	HIS
1	Jl	52	GLN
1	Jl	57	GLN
1	Jl	61	HIS
1	Jl	69	ASN
1	Jl	78	GLN
1	Jl	113	HIS
1	Jl	133	ASN
1	Jo	61	HIS
1	Jo	113	HIS
1	Jp	52	GLN
1	Jp	67	GLN
1	Jp	113	HIS
1	Jq	52	GLN
1	Jq	57	GLN
1	Jq	61	HIS
1	Jq	69	ASN

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Mol	Chain	Res	Type
1	Jq	78	GLN
1	Jq	113	HIS
1	Jt	57	GLN
1	Jt	61	HIS
1	Jt	67	GLN
1	Jt	113	HIS
1	Jt	133	ASN
1	Jt	219	GLN
1	Ju	52	GLN
1	Ju	67	GLN
1	Ju	113	HIS
1	Jv	52	GLN
1	Jv	57	GLN
1	Jv	61	HIS
1	Jv	69	ASN
1	Jv	78	GLN
1	Jv	113	HIS
1	Jy	61	HIS
1	Jy	113	HIS
1	Jy	133	ASN
1	Jz	52	GLN
1	Jz	113	HIS
1	J1	52	GLN
1	J1	57	GLN
1	J1	61	HIS
1	J1	69	ASN
1	J1	78	GLN
1	J1	113	HIS
1	J4	57	GLN
1	J4	61	HIS
1	J4	67	GLN
1	J4	113	HIS
1	J4	133	ASN
1	J4	219	GLN
1	J5	52	GLN
1	J5	67	GLN
1	J5	113	HIS
1	J6	38	GLN
1	J6	52	GLN
1	J6	57	GLN
1	J6	61	HIS
1	J6	69	ASN

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Mol	Chain	Res	Type
1	J6	78	GLN
1	J6	113	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	A2	16/17 (94%)	3 (18%)	3 (18%)
2	A7	16/17 (94%)	3 (18%)	3 (18%)
2	AD	16/17 (94%)	3 (18%)	3 (18%)
2	AI	16/17 (94%)	3 (18%)	3 (18%)
2	AN	16/17 (94%)	3 (18%)	3 (18%)
2	AS	16/17 (94%)	3 (18%)	3 (18%)
2	AX	16/17 (94%)	3 (18%)	3 (18%)
2	Ac	16/17 (94%)	3 (18%)	0
2	Ah	16/17 (94%)	3 (18%)	0
2	Am	16/17 (94%)	3 (18%)	0
2	Ar	16/17 (94%)	3 (18%)	0
2	Aw	16/17 (94%)	3 (18%)	0
2	B2	16/17 (94%)	3 (18%)	3 (18%)
2	B7	16/17 (94%)	3 (18%)	3 (18%)
2	BD	16/17 (94%)	3 (18%)	3 (18%)
2	BI	16/17 (94%)	3 (18%)	3 (18%)
2	BN	16/17 (94%)	3 (18%)	3 (18%)
2	BS	16/17 (94%)	3 (18%)	3 (18%)
2	BX	16/17 (94%)	3 (18%)	3 (18%)
2	Bc	16/17 (94%)	3 (18%)	0
2	Bh	16/17 (94%)	3 (18%)	0
2	Bm	16/17 (94%)	3 (18%)	0
2	Br	16/17 (94%)	3 (18%)	0
2	Bw	16/17 (94%)	3 (18%)	0
2	C2	16/17 (94%)	3 (18%)	3 (18%)
2	C7	16/17 (94%)	3 (18%)	3 (18%)
2	CD	16/17 (94%)	3 (18%)	3 (18%)
2	CI	16/17 (94%)	3 (18%)	3 (18%)
2	CN	16/17 (94%)	3 (18%)	3 (18%)
2	CS	16/17 (94%)	3 (18%)	3 (18%)
2	CX	16/17 (94%)	3 (18%)	3 (18%)
2	Cc	16/17 (94%)	3 (18%)	0
2	Ch	16/17 (94%)	3 (18%)	0
2	Cm	16/17 (94%)	3 (18%)	0
2	Cr	16/17 (94%)	3 (18%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	Cw	16/17 (94%)	3 (18%)	0
2	D2	16/17 (94%)	3 (18%)	3 (18%)
2	D7	16/17 (94%)	3 (18%)	3 (18%)
2	DD	16/17 (94%)	3 (18%)	3 (18%)
2	DI	16/17 (94%)	3 (18%)	3 (18%)
2	DN	16/17 (94%)	3 (18%)	3 (18%)
2	DS	16/17 (94%)	3 (18%)	3 (18%)
2	DX	16/17 (94%)	3 (18%)	3 (18%)
2	Dc	16/17 (94%)	3 (18%)	0
2	Dh	16/17 (94%)	3 (18%)	0
2	Dm	16/17 (94%)	3 (18%)	0
2	Dr	16/17 (94%)	3 (18%)	0
2	Dw	16/17 (94%)	3 (18%)	0
2	E2	16/17 (94%)	3 (18%)	3 (18%)
2	E7	16/17 (94%)	3 (18%)	3 (18%)
2	ED	16/17 (94%)	3 (18%)	3 (18%)
2	EI	16/17 (94%)	3 (18%)	3 (18%)
2	EN	16/17 (94%)	3 (18%)	3 (18%)
2	ES	16/17 (94%)	3 (18%)	3 (18%)
2	EX	16/17 (94%)	3 (18%)	3 (18%)
2	Ec	16/17 (94%)	3 (18%)	0
2	Eh	16/17 (94%)	3 (18%)	0
2	Em	16/17 (94%)	3 (18%)	0
2	Er	16/17 (94%)	3 (18%)	0
2	Ew	16/17 (94%)	3 (18%)	0
2	F2	16/17 (94%)	3 (18%)	3 (18%)
2	F7	16/17 (94%)	3 (18%)	3 (18%)
2	FD	16/17 (94%)	3 (18%)	3 (18%)
2	FI	16/17 (94%)	3 (18%)	3 (18%)
2	FN	16/17 (94%)	3 (18%)	3 (18%)
2	FS	16/17 (94%)	3 (18%)	3 (18%)
2	FX	16/17 (94%)	3 (18%)	3 (18%)
2	Fc	16/17 (94%)	3 (18%)	0
2	Fh	16/17 (94%)	3 (18%)	0
2	Fm	16/17 (94%)	3 (18%)	0
2	Fr	16/17 (94%)	3 (18%)	0
2	Fw	16/17 (94%)	3 (18%)	0
2	G2	16/17 (94%)	3 (18%)	3 (18%)
2	G7	16/17 (94%)	3 (18%)	3 (18%)
2	GD	16/17 (94%)	3 (18%)	3 (18%)
2	GI	16/17 (94%)	3 (18%)	3 (18%)
2	GN	16/17 (94%)	3 (18%)	3 (18%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	GS	16/17 (94%)	3 (18%)	3 (18%)
2	GX	16/17 (94%)	3 (18%)	3 (18%)
2	Gc	16/17 (94%)	3 (18%)	0
2	Gh	16/17 (94%)	3 (18%)	0
2	Gm	16/17 (94%)	3 (18%)	0
2	Gr	16/17 (94%)	3 (18%)	0
2	Gw	16/17 (94%)	3 (18%)	0
2	H2	16/17 (94%)	3 (18%)	3 (18%)
2	H7	16/17 (94%)	3 (18%)	3 (18%)
2	HD	16/17 (94%)	3 (18%)	3 (18%)
2	HI	16/17 (94%)	3 (18%)	3 (18%)
2	HN	16/17 (94%)	3 (18%)	3 (18%)
2	HS	16/17 (94%)	3 (18%)	3 (18%)
2	HX	16/17 (94%)	3 (18%)	3 (18%)
2	Hc	16/17 (94%)	3 (18%)	0
2	Hh	16/17 (94%)	3 (18%)	0
2	Hm	16/17 (94%)	3 (18%)	0
2	Hr	16/17 (94%)	3 (18%)	0
2	Hw	16/17 (94%)	3 (18%)	0
2	I2	16/17 (94%)	3 (18%)	3 (18%)
2	I7	16/17 (94%)	3 (18%)	3 (18%)
2	ID	16/17 (94%)	3 (18%)	3 (18%)
2	II	16/17 (94%)	3 (18%)	3 (18%)
2	IN	16/17 (94%)	3 (18%)	3 (18%)
2	IS	16/17 (94%)	3 (18%)	3 (18%)
2	IX	16/17 (94%)	3 (18%)	3 (18%)
2	Ic	16/17 (94%)	3 (18%)	0
2	Ih	16/17 (94%)	3 (18%)	0
2	Im	16/17 (94%)	3 (18%)	0
2	Ir	16/17 (94%)	3 (18%)	0
2	Iw	16/17 (94%)	3 (18%)	0
2	J2	16/17 (94%)	3 (18%)	3 (18%)
2	J7	16/17 (94%)	3 (18%)	3 (18%)
2	JD	16/17 (94%)	3 (18%)	3 (18%)
2	JI	16/17 (94%)	3 (18%)	3 (18%)
2	JN	16/17 (94%)	3 (18%)	3 (18%)
2	JS	16/17 (94%)	3 (18%)	3 (18%)
2	JX	16/17 (94%)	3 (18%)	3 (18%)
2	Jc	16/17 (94%)	3 (18%)	0
2	Jh	16/17 (94%)	3 (18%)	0
2	Jm	16/17 (94%)	3 (18%)	0
2	Jr	16/17 (94%)	3 (18%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	Jw	16/17 (94%)	3 (18%)	0
All	All	1920/2040 (94%)	360 (18%)	210 (10%)

All (360) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	AD	9	U
2	AD	10	U
2	AD	11	U
2	AI	9	U
2	AI	10	U
2	AI	11	U
2	AN	9	U
2	AN	10	U
2	AN	11	U
2	AS	9	U
2	AS	10	U
2	AS	11	U
2	AX	9	U
2	AX	10	U
2	AX	11	U
2	Ac	9	U
2	Ac	10	U
2	Ac	11	U
2	Ah	9	U
2	Ah	10	U
2	Ah	11	U
2	Am	9	U
2	Am	10	U
2	Am	11	U
2	Ar	9	U
2	Ar	10	U
2	Ar	11	U
2	Aw	9	U
2	Aw	10	U
2	Aw	11	U
2	A2	9	U
2	A2	10	U
2	A2	11	U
2	A7	9	U
2	A7	10	U
2	A7	11	U

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Mol	Chain	Res	Type
2	BD	9	U
2	BD	10	U
2	BD	11	U
2	BI	9	U
2	BI	10	U
2	BI	11	U
2	BN	9	U
2	BN	10	U
2	BN	11	U
2	BS	9	U
2	BS	10	U
2	BS	11	U
2	BX	9	U
2	BX	10	U
2	BX	11	U
2	Bc	9	U
2	Bc	10	U
2	Bc	11	U
2	Bh	9	U
2	Bh	10	U
2	Bh	11	U
2	Bm	9	U
2	Bm	10	U
2	Bm	11	U
2	Br	9	U
2	Br	10	U
2	Br	11	U
2	Bw	9	U
2	Bw	10	U
2	Bw	11	U
2	B2	9	U
2	B2	10	U
2	B2	11	U
2	B7	9	U
2	B7	10	U
2	B7	11	U
2	CD	9	U
2	CD	10	U
2	CD	11	U
2	CI	9	U
2	CI	10	U
2	CI	11	U

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Mol	Chain	Res	Type
2	CN	9	U
2	CN	10	U
2	CN	11	U
2	CS	9	U
2	CS	10	U
2	CS	11	U
2	CX	9	U
2	CX	10	U
2	CX	11	U
2	Cc	9	U
2	Cc	10	U
2	Cc	11	U
2	Ch	9	U
2	Ch	10	U
2	Ch	11	U
2	Cm	9	U
2	Cm	10	U
2	Cm	11	U
2	Cr	9	U
2	Cr	10	U
2	Cr	11	U
2	Cw	9	U
2	Cw	10	U
2	Cw	11	U
2	C2	9	U
2	C2	10	U
2	C2	11	U
2	C7	9	U
2	C7	10	U
2	C7	11	U
2	DD	9	U
2	DD	10	U
2	DD	11	U
2	DI	9	U
2	DI	10	U
2	DI	11	U
2	DN	9	U
2	DN	10	U
2	DN	11	U
2	DS	9	U
2	DS	10	U
2	DS	11	U

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Mol	Chain	Res	Type
2	DX	9	U
2	DX	10	U
2	DX	11	U
2	Dc	9	U
2	Dc	10	U
2	Dc	11	U
2	Dh	9	U
2	Dh	10	U
2	Dh	11	U
2	Dm	9	U
2	Dm	10	U
2	Dm	11	U
2	Dr	9	U
2	Dr	10	U
2	Dr	11	U
2	Dw	9	U
2	Dw	10	U
2	Dw	11	U
2	D2	9	U
2	D2	10	U
2	D2	11	U
2	D7	9	U
2	D7	10	U
2	D7	11	U
2	ED	9	U
2	ED	10	U
2	ED	11	U
2	EI	9	U
2	EI	10	U
2	EI	11	U
2	EN	9	U
2	EN	10	U
2	EN	11	U
2	ES	9	U
2	ES	10	U
2	ES	11	U
2	EX	9	U
2	EX	10	U
2	EX	11	U
2	Ec	9	U
2	Ec	10	U
2	Ec	11	U

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Mol	Chain	Res	Type
2	Eh	9	U
2	Eh	10	U
2	Eh	11	U
2	Em	9	U
2	Em	10	U
2	Em	11	U
2	Er	9	U
2	Er	10	U
2	Er	11	U
2	Ew	9	U
2	Ew	10	U
2	Ew	11	U
2	E2	9	U
2	E2	10	U
2	E2	11	U
2	E7	9	U
2	E7	10	U
2	E7	11	U
2	FD	9	U
2	FD	10	U
2	FD	11	U
2	FI	9	U
2	FI	10	U
2	FI	11	U
2	FN	9	U
2	FN	10	U
2	FN	11	U
2	FS	9	U
2	FS	10	U
2	FS	11	U
2	FX	9	U
2	FX	10	U
2	FX	11	U
2	Fc	9	U
2	Fc	10	U
2	Fc	11	U
2	Fh	9	U
2	Fh	10	U
2	Fh	11	U
2	Fm	9	U
2	Fm	10	U
2	Fm	11	U

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Mol	Chain	Res	Type
2	Fr	9	U
2	Fr	10	U
2	Fr	11	U
2	Fw	9	U
2	Fw	10	U
2	Fw	11	U
2	F2	9	U
2	F2	10	U
2	F2	11	U
2	F7	9	U
2	F7	10	U
2	F7	11	U
2	GD	9	U
2	GD	10	U
2	GD	11	U
2	GI	9	U
2	GI	10	U
2	GI	11	U
2	GN	9	U
2	GN	10	U
2	GN	11	U
2	GS	9	U
2	GS	10	U
2	GS	11	U
2	GX	9	U
2	GX	10	U
2	GX	11	U
2	Gc	9	U
2	Gc	10	U
2	Gc	11	U
2	Gh	9	U
2	Gh	10	U
2	Gh	11	U
2	Gm	9	U
2	Gm	10	U
2	Gm	11	U
2	Gr	9	U
2	Gr	10	U
2	Gr	11	U
2	Gw	9	U
2	Gw	10	U
2	Gw	11	U

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Mol	Chain	Res	Type
2	G2	9	U
2	G2	10	U
2	G2	11	U
2	G7	9	U
2	G7	10	U
2	G7	11	U
2	HD	9	U
2	HD	10	U
2	HD	11	U
2	HI	9	U
2	HI	10	U
2	HI	11	U
2	HN	9	U
2	HN	10	U
2	HN	11	U
2	HS	9	U
2	HS	10	U
2	HS	11	U
2	HX	9	U
2	HX	10	U
2	HX	11	U
2	Hc	9	U
2	Hc	10	U
2	Hc	11	U
2	Hh	9	U
2	Hh	10	U
2	Hh	11	U
2	Hm	9	U
2	Hm	10	U
2	Hm	11	U
2	Hr	9	U
2	Hr	10	U
2	Hr	11	U
2	Hw	9	U
2	Hw	10	U
2	Hw	11	U
2	H2	9	U
2	H2	10	U
2	H2	11	U
2	H7	9	U
2	H7	10	U
2	H7	11	U

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Mol	Chain	Res	Type
2	ID	9	U
2	ID	10	U
2	ID	11	U
2	II	9	U
2	II	10	U
2	II	11	U
2	IN	9	U
2	IN	10	U
2	IN	11	U
2	IS	9	U
2	IS	10	U
2	IS	11	U
2	IX	9	U
2	IX	10	U
2	IX	11	U
2	Ic	9	U
2	Ic	10	U
2	Ic	11	U
2	Ih	9	U
2	Ih	10	U
2	Ih	11	U
2	Im	9	U
2	Im	10	U
2	Im	11	U
2	Ir	9	U
2	Ir	10	U
2	Ir	11	U
2	Iw	9	U
2	Iw	10	U
2	Iw	11	U
2	I2	9	U
2	I2	10	U
2	I2	11	U
2	I7	9	U
2	I7	10	U
2	I7	11	U
2	JD	9	U
2	JD	10	U
2	JD	11	U
2	JI	9	U
2	JI	10	U
2	JI	11	U

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Mol	Chain	Res	Type
2	JN	9	U
2	JN	10	U
2	JN	11	U
2	JS	9	U
2	JS	10	U
2	JS	11	U
2	JX	9	U
2	JX	10	U
2	JX	11	U
2	Jc	9	U
2	Jc	10	U
2	Jc	11	U
2	Jh	9	U
2	Jh	10	U
2	Jh	11	U
2	Jm	9	U
2	Jm	10	U
2	Jm	11	U
2	Jr	9	U
2	Jr	10	U
2	Jr	11	U
2	Jw	9	U
2	Jw	10	U
2	Jw	11	U
2	J2	9	U
2	J2	10	U
2	J2	11	U
2	J7	9	U
2	J7	10	U
2	J7	11	U

All (210) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	AD	8	U
2	AD	9	U
2	AD	10	U
2	AI	8	U
2	AI	9	U
2	AI	10	U
2	AN	8	U
2	AN	9	U

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Mol	Chain	Res	Type
2	AN	10	U
2	AS	8	U
2	AS	9	U
2	AS	10	U
2	AX	8	U
2	AX	9	U
2	AX	10	U
2	A2	8	U
2	A2	9	U
2	A2	10	U
2	A7	8	U
2	A7	9	U
2	A7	10	U
2	BD	8	U
2	BD	9	U
2	BD	10	U
2	BI	8	U
2	BI	9	U
2	BI	10	U
2	BN	8	U
2	BN	9	U
2	BN	10	U
2	BS	8	U
2	BS	9	U
2	BS	10	U
2	BX	8	U
2	BX	9	U
2	BX	10	U
2	B2	8	U
2	B2	9	U
2	B2	10	U
2	B7	8	U
2	B7	9	U
2	B7	10	U
2	CD	8	U
2	CD	9	U
2	CD	10	U
2	CI	8	U
2	CI	9	U
2	CI	10	U
2	CN	8	U
2	CN	9	U

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Mol	Chain	Res	Type
2	CN	10	U
2	CS	8	U
2	CS	9	U
2	CS	10	U
2	CX	8	U
2	CX	9	U
2	CX	10	U
2	C2	8	U
2	C2	9	U
2	C2	10	U
2	C7	8	U
2	C7	9	U
2	C7	10	U
2	DD	8	U
2	DD	9	U
2	DD	10	U
2	DI	8	U
2	DI	9	U
2	DI	10	U
2	DN	8	U
2	DN	9	U
2	DN	10	U
2	DS	8	U
2	DS	9	U
2	DS	10	U
2	DX	8	U
2	DX	9	U
2	DX	10	U
2	D2	8	U
2	D2	9	U
2	D2	10	U
2	D7	8	U
2	D7	9	U
2	D7	10	U
2	ED	8	U
2	ED	9	U
2	ED	10	U
2	EI	8	U
2	EI	9	U
2	EI	10	U
2	EN	8	U
2	EN	9	U

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Mol	Chain	Res	Type
2	EN	10	U
2	ES	8	U
2	ES	9	U
2	ES	10	U
2	EX	8	U
2	EX	9	U
2	EX	10	U
2	E2	8	U
2	E2	9	U
2	E2	10	U
2	E7	8	U
2	E7	9	U
2	E7	10	U
2	FD	8	U
2	FD	9	U
2	FD	10	U
2	FI	8	U
2	FI	9	U
2	FI	10	U
2	FN	8	U
2	FN	9	U
2	FN	10	U
2	FS	8	U
2	FS	9	U
2	FS	10	U
2	FX	8	U
2	FX	9	U
2	FX	10	U
2	F2	8	U
2	F2	9	U
2	F2	10	U
2	F7	8	U
2	F7	9	U
2	F7	10	U
2	GD	8	U
2	GD	9	U
2	GD	10	U
2	GI	8	U
2	GI	9	U
2	GI	10	U
2	GN	8	U
2	GN	9	U

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Mol	Chain	Res	Type
2	GN	10	U
2	GS	8	U
2	GS	9	U
2	GS	10	U
2	GX	8	U
2	GX	9	U
2	GX	10	U
2	G2	8	U
2	G2	9	U
2	G2	10	U
2	G7	8	U
2	G7	9	U
2	G7	10	U
2	HD	8	U
2	HD	9	U
2	HD	10	U
2	HI	8	U
2	HI	9	U
2	HI	10	U
2	HN	8	U
2	HN	9	U
2	HN	10	U
2	HS	8	U
2	HS	9	U
2	HS	10	U
2	HX	8	U
2	HX	9	U
2	HX	10	U
2	H2	8	U
2	H2	9	U
2	H2	10	U
2	H7	8	U
2	H7	9	U
2	H7	10	U
2	ID	8	U
2	ID	9	U
2	ID	10	U
2	II	8	U
2	II	9	U
2	II	10	U
2	IN	8	U
2	IN	9	U

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Mol	Chain	Res	Type
2	IN	10	U
2	IS	8	U
2	IS	9	U
2	IS	10	U
2	IX	8	U
2	IX	9	U
2	IX	10	U
2	I2	8	U
2	I2	9	U
2	I2	10	U
2	I7	8	U
2	I7	9	U
2	I7	10	U
2	JD	8	U
2	JD	9	U
2	JD	10	U
2	JI	8	U
2	JI	9	U
2	JI	10	U
2	JN	8	U
2	JN	9	U
2	JN	10	U
2	JS	8	U
2	JS	9	U
2	JS	10	U
2	JX	8	U
2	JX	9	U
2	JX	10	U
2	J2	8	U
2	J2	9	U
2	J2	10	U
2	J7	8	U
2	J7	9	U
2	J7	10	U

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 [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 120 ligands modelled in this entry, 120 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A1	217/242 (89%)	-0.14	5 (2%) 60 58	26, 56, 111, 194	0
1	A4	185/242 (76%)	-0.23	1 (0%) 91 91	23, 52, 88, 132	0
1	A5	189/242 (78%)	-0.31	2 (1%) 80 80	18, 52, 92, 153	0
1	A6	217/242 (89%)	-0.15	8 (3%) 41 37	20, 53, 107, 200	0
1	AA	185/242 (76%)	-0.38	0 100 100	29, 54, 87, 113	0
1	AB	189/242 (78%)	-0.38	2 (1%) 80 80	25, 49, 90, 154	0
1	AC	217/242 (89%)	-0.16	7 (3%) 47 43	21, 50, 108, 201	0
1	AF	185/242 (76%)	-0.43	0 100 100	22, 48, 85, 115	0
1	AG	189/242 (78%)	-0.50	1 (0%) 91 91	17, 42, 85, 140	0
1	AH	217/242 (89%)	-0.23	7 (3%) 47 43	21, 50, 114, 203	0
1	AK	185/242 (76%)	-0.34	1 (0%) 91 91	17, 51, 88, 123	0
1	AL	189/242 (78%)	-0.39	2 (1%) 80 80	24, 47, 91, 137	0
1	AM	217/242 (89%)	-0.24	6 (2%) 53 49	19, 48, 106, 200	0
1	AP	185/242 (76%)	-0.40	0 100 100	21, 47, 87, 124	0
1	AQ	189/242 (78%)	-0.45	2 (1%) 80 80	17, 47, 87, 127	0
1	AR	217/242 (89%)	-0.24	6 (2%) 53 49	17, 48, 103, 199	0
1	AU	185/242 (76%)	-0.29	0 100 100	36, 61, 96, 124	0
1	AV	189/242 (78%)	-0.36	3 (1%) 72 71	35, 58, 91, 153	0
1	AW	217/242 (89%)	-0.07	8 (3%) 41 37	27, 58, 108, 201	0
1	AZ	185/242 (76%)	-0.54	0 100 100	14, 38, 69, 107	0
1	Aa	189/242 (78%)	-0.46	0 100 100	14, 37, 79, 138	0
1	Ab	217/242 (89%)	-0.17	6 (2%) 53 49	16, 43, 107, 197	0
1	Ae	185/242 (76%)	-0.47	0 100 100	17, 48, 92, 113	0
1	Af	189/242 (78%)	-0.38	2 (1%) 80 80	19, 44, 87, 140	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Ag	217/242 (89%)	-0.26	6 (2%) 53 49	18, 48, 95, 199	0
1	Aj	185/242 (76%)	-0.44	0 100 100	15, 48, 82, 114	0
1	Ak	189/242 (78%)	-0.39	0 100 100	21, 47, 85, 136	0
1	Al	217/242 (89%)	-0.19	6 (2%) 53 49	19, 44, 104, 191	0
1	Ao	185/242 (76%)	-0.28	3 (1%) 72 71	20, 46, 79, 105	0
1	Ap	189/242 (78%)	-0.50	0 100 100	19, 44, 80, 137	0
1	Aq	217/242 (89%)	-0.19	6 (2%) 53 49	16, 46, 100, 197	0
1	At	185/242 (76%)	-0.49	0 100 100	19, 45, 81, 112	0
1	Au	189/242 (78%)	-0.47	0 100 100	9, 41, 85, 128	0
1	Av	217/242 (89%)	-0.10	6 (2%) 53 49	10, 45, 106, 196	0
1	Ay	185/242 (76%)	-0.30	0 100 100	26, 57, 89, 119	0
1	Az	189/242 (78%)	-0.40	0 100 100	27, 54, 96, 132	0
1	B1	217/242 (89%)	-0.31	6 (2%) 53 49	18, 44, 101, 188	0
1	B4	185/242 (76%)	-0.30	0 100 100	36, 61, 85, 117	0
1	B5	189/242 (78%)	-0.30	2 (1%) 80 80	29, 55, 93, 145	0
1	B6	217/242 (89%)	-0.13	7 (3%) 47 43	26, 54, 116, 209	0
1	BA	185/242 (76%)	-0.31	1 (0%) 91 91	17, 56, 91, 116	0
1	BB	189/242 (78%)	-0.36	1 (0%) 91 91	22, 50, 92, 146	0
1	BC	217/242 (89%)	-0.18	7 (3%) 47 43	8, 50, 108, 193	0
1	BF	185/242 (76%)	-0.42	0 100 100	18, 45, 81, 116	0
1	BG	189/242 (78%)	-0.55	2 (1%) 80 80	10, 38, 85, 127	0
1	BH	217/242 (89%)	-0.18	6 (2%) 53 49	13, 40, 95, 200	0
1	BK	185/242 (76%)	-0.33	0 100 100	12, 48, 87, 133	0
1	BL	189/242 (78%)	-0.40	0 100 100	17, 47, 86, 130	0
1	BM	217/242 (89%)	-0.18	7 (3%) 47 43	21, 48, 107, 209	0
1	BP	185/242 (76%)	-0.44	0 100 100	22, 48, 84, 109	0
1	BQ	189/242 (78%)	-0.44	0 100 100	27, 48, 84, 139	0
1	BR	217/242 (89%)	-0.30	6 (2%) 53 49	15, 46, 101, 202	0
1	BU	185/242 (76%)	-0.27	2 (1%) 80 80	29, 59, 97, 130	0
1	BV	189/242 (78%)	-0.42	0 100 100	26, 54, 93, 137	0
1	BW	217/242 (89%)	-0.12	7 (3%) 47 43	27, 59, 110, 219	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	BZ	185/242 (76%)	-0.46	0 100 100	15, 43, 81, 120	0
1	Ba	189/242 (78%)	-0.48	0 100 100	22, 46, 88, 121	0
1	Bb	217/242 (89%)	-0.27	6 (2%) 53 49	19, 45, 111, 192	0
1	Be	185/242 (76%)	-0.44	0 100 100	17, 44, 83, 112	0
1	Bf	189/242 (78%)	-0.46	0 100 100	14, 41, 86, 119	0
1	Bg	217/242 (89%)	-0.29	7 (3%) 47 43	18, 45, 105, 176	0
1	Bj	185/242 (76%)	-0.42	0 100 100	19, 46, 79, 117	0
1	Bk	189/242 (78%)	-0.46	0 100 100	18, 47, 88, 127	0
1	Bl	217/242 (89%)	-0.21	7 (3%) 47 43	16, 48, 101, 206	0
1	Bo	185/242 (76%)	-0.36	0 100 100	20, 50, 77, 121	0
1	Bp	189/242 (78%)	-0.40	0 100 100	21, 46, 92, 129	0
1	Bq	217/242 (89%)	-0.22	6 (2%) 53 49	26, 48, 106, 189	0
1	Bt	185/242 (76%)	-0.19	2 (1%) 80 80	33, 60, 94, 120	0
1	Bu	189/242 (78%)	-0.33	0 100 100	20, 51, 94, 133	0
1	Bv	217/242 (89%)	-0.09	8 (3%) 41 37	25, 56, 111, 187	0
1	By	185/242 (76%)	-0.41	0 100 100	14, 46, 84, 123	0
1	Bz	189/242 (78%)	-0.54	1 (0%) 91 91	14, 40, 80, 139	0
1	C1	217/242 (89%)	-0.12	6 (2%) 53 49	12, 39, 104, 212	0
1	C4	185/242 (76%)	-0.36	0 100 100	19, 55, 92, 112	0
1	C5	189/242 (78%)	-0.42	1 (0%) 91 91	23, 51, 89, 164	0
1	C6	217/242 (89%)	-0.16	6 (2%) 53 49	24, 52, 109, 189	0
1	CA	185/242 (76%)	-0.28	1 (0%) 91 91	28, 52, 94, 114	0
1	CB	189/242 (78%)	-0.38	1 (0%) 91 91	18, 50, 81, 123	0
1	CC	217/242 (89%)	-0.12	7 (3%) 47 43	22, 51, 107, 181	0
1	CF	185/242 (76%)	-0.52	1 (0%) 91 91	15, 37, 79, 119	0
1	CG	189/242 (78%)	-0.53	1 (0%) 91 91	9, 36, 82, 131	0
1	CH	217/242 (89%)	-0.27	6 (2%) 53 49	15, 35, 90, 195	0
1	CK	185/242 (76%)	-0.27	2 (1%) 80 80	23, 53, 82, 125	0
1	CL	189/242 (78%)	-0.37	1 (0%) 91 91	13, 47, 84, 149	0
1	CM	217/242 (89%)	-0.12	6 (2%) 53 49	16, 50, 108, 206	0
1	CP	185/242 (76%)	-0.36	1 (0%) 91 91	23, 49, 77, 129	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	CQ	189/242 (78%)	-0.42	1 (0%) 91 91	16, 44, 92, 126	0
1	CR	217/242 (89%)	-0.20	6 (2%) 53 49	24, 50, 106, 195	0
1	CU	185/242 (76%)	-0.31	0 100 100	28, 56, 91, 117	0
1	CV	189/242 (78%)	-0.36	3 (1%) 72 71	21, 52, 92, 144	0
1	CW	217/242 (89%)	-0.22	6 (2%) 53 49	21, 51, 107, 194	0
1	CZ	185/242 (76%)	-0.37	0 100 100	26, 55, 91, 108	0
1	Ca	189/242 (78%)	-0.44	2 (1%) 80 80	22, 53, 93, 141	0
1	Cb	217/242 (89%)	-0.23	7 (3%) 47 43	15, 50, 106, 197	0
1	Ce	185/242 (76%)	-0.45	0 100 100	17, 49, 82, 117	0
1	Cf	189/242 (78%)	-0.40	1 (0%) 91 91	20, 46, 96, 130	0
1	Cg	217/242 (89%)	-0.09	6 (2%) 53 49	16, 50, 104, 215	0
1	Cj	185/242 (76%)	-0.43	0 100 100	20, 48, 84, 109	0
1	Ck	189/242 (78%)	-0.43	1 (0%) 91 91	20, 49, 98, 146	0
1	Cl	217/242 (89%)	-0.18	6 (2%) 53 49	20, 46, 105, 204	0
1	Co	185/242 (76%)	-0.43	0 100 100	24, 49, 77, 110	0
1	Cp	189/242 (78%)	-0.45	2 (1%) 80 80	16, 47, 90, 145	0
1	Cq	217/242 (89%)	-0.14	5 (2%) 60 58	27, 52, 109, 204	0
1	Ct	185/242 (76%)	-0.44	1 (0%) 91 91	21, 45, 78, 116	0
1	Cu	189/242 (78%)	-0.55	0 100 100	11, 39, 89, 136	0
1	Cv	217/242 (89%)	-0.24	9 (4%) 37 32	19, 42, 99, 199	0
1	Cy	185/242 (76%)	-0.52	0 100 100	13, 38, 78, 107	0
1	Cz	189/242 (78%)	-0.55	4 (2%) 63 61	12, 34, 82, 123	0
1	D1	217/242 (89%)	-0.18	6 (2%) 53 49	14, 42, 106, 203	0
1	D4	185/242 (76%)	-0.44	0 100 100	19, 41, 85, 110	0
1	D5	189/242 (78%)	-0.56	1 (0%) 91 91	12, 35, 78, 121	0
1	D6	217/242 (89%)	-0.24	7 (3%) 47 43	15, 38, 95, 205	0
1	DA	185/242 (76%)	-0.32	1 (0%) 91 91	20, 49, 83, 111	0
1	DB	189/242 (78%)	-0.34	1 (0%) 91 91	16, 47, 85, 130	0
1	DC	217/242 (89%)	-0.19	6 (2%) 53 49	17, 48, 103, 188	0
1	DF	185/242 (76%)	-0.30	1 (0%) 91 91	25, 54, 85, 123	0
1	DG	189/242 (78%)	-0.45	1 (0%) 91 91	25, 51, 89, 164	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	DH	217/242 (89%)	-0.19	6 (2%) 53 49	22, 53, 106, 186	0
1	DK	185/242 (76%)	-0.40	1 (0%) 91 91	18, 45, 78, 105	0
1	DL	189/242 (78%)	-0.45	1 (0%) 91 91	13, 40, 84, 129	0
1	DM	217/242 (89%)	-0.27	7 (3%) 47 43	15, 43, 105, 207	0
1	DP	185/242 (76%)	-0.35	0 100 100	26, 52, 91, 123	0
1	DQ	189/242 (78%)	-0.40	0 100 100	19, 47, 86, 137	0
1	DR	217/242 (89%)	-0.22	6 (2%) 53 49	17, 46, 102, 190	0
1	DU	185/242 (76%)	-0.24	3 (1%) 72 71	26, 63, 95, 128	0
1	DV	189/242 (78%)	-0.40	2 (1%) 80 80	27, 57, 94, 149	0
1	DW	217/242 (89%)	-0.08	9 (4%) 37 32	32, 60, 111, 195	0
1	DZ	185/242 (76%)	-0.40	0 100 100	22, 50, 94, 123	0
1	Da	189/242 (78%)	-0.47	0 100 100	18, 46, 89, 134	0
1	Db	217/242 (89%)	-0.01	8 (3%) 41 37	19, 49, 102, 207	0
1	De	185/242 (76%)	-0.31	0 100 100	31, 62, 93, 116	0
1	Df	189/242 (78%)	-0.43	0 100 100	22, 54, 92, 139	0
1	Dg	217/242 (89%)	-0.14	6 (2%) 53 49	24, 56, 108, 184	0
1	Dj	185/242 (76%)	-0.40	0 100 100	22, 48, 84, 115	0
1	Dk	189/242 (78%)	-0.49	3 (1%) 72 71	14, 41, 88, 147	0
1	Dl	217/242 (89%)	-0.21	6 (2%) 53 49	21, 47, 102, 192	0
1	Do	185/242 (76%)	-0.27	0 100 100	32, 59, 96, 120	0
1	Dp	189/242 (78%)	-0.33	2 (1%) 80 80	26, 57, 97, 164	0
1	Dq	217/242 (89%)	-0.12	7 (3%) 47 43	24, 56, 111, 193	0
1	Dt	185/242 (76%)	-0.31	2 (1%) 80 80	16, 48, 80, 132	0
1	Du	189/242 (78%)	-0.38	2 (1%) 80 80	23, 47, 90, 143	0
1	Dv	217/242 (89%)	-0.22	6 (2%) 53 49	18, 50, 101, 190	0
1	Dy	185/242 (76%)	-0.45	0 100 100	7, 38, 76, 98	0
1	Dz	189/242 (78%)	-0.48	2 (1%) 80 80	16, 38, 75, 130	0
1	E1	217/242 (89%)	-0.28	6 (2%) 53 49	14, 43, 102, 207	0
1	E4	185/242 (76%)	-0.46	0 100 100	18, 46, 87, 114	0
1	E5	189/242 (78%)	-0.44	1 (0%) 91 91	15, 43, 84, 124	0
1	E6	217/242 (89%)	-0.32	6 (2%) 53 49	16, 44, 106, 194	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	EA	185/242 (76%)	-0.35	1 (0%) 91 91	12, 43, 74, 108	0
1	EB	189/242 (78%)	-0.46	1 (0%) 91 91	12, 41, 81, 122	0
1	EC	217/242 (89%)	-0.21	6 (2%) 53 49	18, 43, 98, 186	0
1	EF	185/242 (76%)	-0.35	1 (0%) 91 91	22, 52, 90, 126	0
1	EG	189/242 (78%)	-0.42	1 (0%) 91 91	21, 51, 92, 151	0
1	EH	217/242 (89%)	-0.17	7 (3%) 47 43	24, 55, 114, 189	0
1	EK	185/242 (76%)	-0.34	0 100 100	25, 54, 89, 122	0
1	EL	189/242 (78%)	-0.32	1 (0%) 91 91	27, 53, 95, 126	0
1	EM	217/242 (89%)	-0.21	7 (3%) 47 43	21, 52, 108, 195	0
1	EP	185/242 (76%)	-0.41	0 100 100	17, 45, 86, 118	0
1	EQ	189/242 (78%)	-0.50	0 100 100	15, 43, 78, 131	0
1	ER	217/242 (89%)	-0.22	6 (2%) 53 49	15, 46, 105, 192	0
1	EU	185/242 (76%)	-0.40	1 (0%) 91 91	22, 52, 83, 128	0
1	EV	189/242 (78%)	-0.47	1 (0%) 91 91	16, 46, 89, 135	0
1	EW	217/242 (89%)	-0.17	6 (2%) 53 49	21, 50, 103, 200	0
1	EZ	185/242 (76%)	-0.31	2 (1%) 80 80	30, 53, 85, 118	0
1	Ea	189/242 (78%)	-0.37	0 100 100	20, 48, 90, 143	0
1	Eb	217/242 (89%)	-0.16	7 (3%) 47 43	16, 50, 105, 190	0
1	Ee	185/242 (76%)	-0.36	0 100 100	33, 59, 88, 116	0
1	Ef	189/242 (78%)	-0.39	0 100 100	21, 54, 93, 136	0
1	Eg	217/242 (89%)	0.01	8 (3%) 41 37	24, 60, 113, 203	0
1	Ej	185/242 (76%)	-0.16	2 (1%) 80 80	22, 58, 90, 113	0
1	Ek	189/242 (78%)	-0.38	4 (2%) 63 61	29, 57, 94, 139	0
1	El	217/242 (89%)	-0.06	5 (2%) 60 58	30, 56, 107, 191	0
1	Eo	185/242 (76%)	-0.36	0 100 100	25, 54, 84, 113	0
1	Ep	189/242 (78%)	-0.38	4 (2%) 63 61	20, 46, 89, 162	0
1	Eq	217/242 (89%)	-0.27	5 (2%) 60 58	23, 52, 112, 190	0
1	Et	185/242 (76%)	-0.46	0 100 100	17, 38, 77, 114	0
1	Eu	189/242 (78%)	-0.50	1 (0%) 91 91	13, 37, 80, 134	0
1	Ev	217/242 (89%)	-0.22	8 (3%) 41 37	12, 38, 97, 197	0
1	Ey	185/242 (76%)	-0.47	0 100 100	24, 48, 79, 120	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Ez	189/242 (78%)	-0.54	0 100 100	19, 43, 84, 139	0
1	F1	217/242 (89%)	0.25	10 (4%) 32 29	49, 80, 118, 186	0
1	F4	185/242 (76%)	-0.34	0 100 100	26, 57, 86, 112	0
1	F5	189/242 (78%)	-0.31	3 (1%) 72 71	28, 57, 94, 140	0
1	F6	217/242 (89%)	-0.06	9 (4%) 37 32	31, 64, 117, 195	0
1	FA	185/242 (76%)	-0.26	1 (0%) 91 91	22, 59, 95, 134	0
1	FB	189/242 (78%)	-0.46	1 (0%) 91 91	20, 47, 90, 148	0
1	FC	217/242 (89%)	0.15	10 (4%) 32 29	29, 62, 110, 205	0
1	FF	185/242 (76%)	-0.29	0 100 100	30, 55, 92, 114	0
1	FG	189/242 (78%)	-0.36	1 (0%) 91 91	20, 51, 92, 133	0
1	FH	217/242 (89%)	-0.11	6 (2%) 53 49	24, 60, 106, 197	0
1	FK	185/242 (76%)	-0.24	0 100 100	28, 59, 90, 131	0
1	FL	189/242 (78%)	-0.19	4 (2%) 63 61	24, 59, 100, 150	0
1	FM	217/242 (89%)	-0.11	6 (2%) 53 49	22, 54, 101, 200	0
1	FP	185/242 (76%)	-0.11	2 (1%) 80 80	24, 62, 101, 112	0
1	FQ	189/242 (78%)	-0.11	3 (1%) 72 71	23, 61, 94, 134	0
1	FR	217/242 (89%)	0.03	9 (4%) 37 32	26, 55, 118, 222	0
1	FU	185/242 (76%)	-0.37	0 100 100	32, 55, 86, 119	0
1	FV	189/242 (78%)	-0.41	1 (0%) 91 91	21, 48, 87, 130	0
1	FW	217/242 (89%)	-0.08	7 (3%) 47 43	19, 52, 105, 190	0
1	FZ	185/242 (76%)	-0.05	3 (1%) 72 71	42, 78, 106, 129	0
1	Fa	189/242 (78%)	-0.17	5 (2%) 56 52	34, 70, 104, 157	0
1	Fb	217/242 (89%)	0.09	7 (3%) 47 43	41, 70, 117, 212	0
1	Fe	185/242 (76%)	0.41	13 (7%) 16 12	63, 97, 124, 151	0
1	Ff	189/242 (78%)	0.25	14 (7%) 14 11	52, 93, 121, 163	0
1	Fg	217/242 (89%)	0.61	19 (8%) 10 7	58, 92, 134, 190	0
1	Fj	185/242 (76%)	0.06	3 (1%) 72 71	38, 74, 107, 128	0
1	Fk	189/242 (78%)	0.07	8 (4%) 36 32	35, 75, 111, 141	0
1	Fl	217/242 (89%)	0.30	8 (3%) 41 37	41, 79, 127, 203	0
1	Fo	185/242 (76%)	-0.23	5 (2%) 54 50	26, 54, 92, 120	0
1	Fp	189/242 (78%)	-0.28	0 100 100	14, 49, 93, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Fq	217/242 (89%)	-0.19	6 (2%) 53 49	11, 50, 103, 203	0
1	Ft	185/242 (76%)	-0.30	0 100 100	27, 55, 92, 127	0
1	Fu	189/242 (78%)	-0.40	1 (0%) 91 91	24, 51, 88, 140	0
1	Fv	217/242 (89%)	-0.18	6 (2%) 53 49	20, 53, 102, 187	0
1	Fy	185/242 (76%)	0.10	0 100 100	59, 90, 117, 135	0
1	Fz	189/242 (78%)	-0.16	5 (2%) 56 52	40, 76, 113, 150	0
1	G1	217/242 (89%)	0.08	10 (4%) 32 29	34, 66, 116, 201	0
1	G4	185/242 (76%)	0.12	6 (3%) 47 43	57, 89, 114, 148	0
1	G5	189/242 (78%)	0.16	10 (5%) 26 22	45, 83, 114, 159	0
1	G6	217/242 (89%)	0.22	12 (5%) 25 21	38, 73, 126, 187	0
1	GA	185/242 (76%)	-0.21	1 (0%) 91 91	20, 57, 92, 118	0
1	GB	189/242 (78%)	-0.29	0 100 100	28, 59, 96, 125	0
1	GC	217/242 (89%)	-0.02	10 (4%) 32 29	23, 58, 113, 202	0
1	GF	185/242 (76%)	-0.28	0 100 100	20, 56, 83, 116	0
1	GG	189/242 (78%)	-0.31	2 (1%) 80 80	22, 53, 94, 132	0
1	GH	217/242 (89%)	-0.14	6 (2%) 53 49	25, 54, 105, 188	0
1	GK	185/242 (76%)	0.27	7 (3%) 40 36	61, 90, 117, 142	0
1	GL	189/242 (78%)	0.12	10 (5%) 26 22	52, 84, 119, 165	0
1	GM	217/242 (89%)	0.22	8 (3%) 41 37	42, 77, 118, 205	0
1	GP	185/242 (76%)	-0.31	0 100 100	20, 55, 91, 125	0
1	GQ	189/242 (78%)	-0.21	2 (1%) 80 80	26, 58, 93, 117	0
1	GR	217/242 (89%)	-0.07	6 (2%) 53 49	25, 55, 106, 199	0
1	GU	185/242 (76%)	-0.34	2 (1%) 80 80	26, 55, 87, 128	0
1	GV	189/242 (78%)	-0.44	2 (1%) 80 80	15, 46, 88, 131	0
1	GW	217/242 (89%)	-0.09	6 (2%) 53 49	23, 48, 102, 194	0
1	GZ	185/242 (76%)	0.02	0 100 100	26, 67, 96, 131	0
1	Ga	189/242 (78%)	-0.27	2 (1%) 80 80	20, 55, 99, 172	0
1	Gb	217/242 (89%)	0.08	10 (4%) 32 29	32, 61, 109, 200	0
1	Ge	185/242 (76%)	0.10	6 (3%) 47 43	33, 67, 100, 126	0
1	Gf	189/242 (78%)	-0.03	3 (1%) 72 71	28, 70, 108, 147	0
1	Gg	217/242 (89%)	0.22	9 (4%) 37 32	34, 69, 117, 199	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Gj	185/242 (76%)	0.26	7 (3%) 40 36	51, 89, 118, 144	0
1	Gk	189/242 (78%)	0.08	5 (2%) 56 52	53, 82, 114, 143	0
1	Gl	217/242 (89%)	0.27	15 (6%) 16 13	38, 75, 119, 194	0
1	Go	185/242 (76%)	0.49	15 (8%) 12 9	62, 92, 120, 144	0
1	Gp	189/242 (78%)	0.32	12 (6%) 20 16	56, 95, 124, 162	0
1	Gq	217/242 (89%)	0.23	10 (4%) 32 29	57, 91, 129, 191	0
1	Gt	185/242 (76%)	-0.24	2 (1%) 80 80	25, 56, 90, 118	0
1	Gu	189/242 (78%)	-0.32	0 100 100	24, 51, 89, 145	0
1	Gv	217/242 (89%)	-0.13	6 (2%) 53 49	24, 53, 105, 199	0
1	Gy	185/242 (76%)	-0.07	2 (1%) 80 80	35, 64, 98, 129	0
1	Gz	189/242 (78%)	-0.30	2 (1%) 80 80	34, 63, 97, 153	0
1	H1	217/242 (89%)	0.09	9 (4%) 37 32	32, 69, 116, 189	0
1	H4	185/242 (76%)	0.32	12 (6%) 18 14	56, 91, 125, 144	0
1	H5	189/242 (78%)	0.32	8 (4%) 36 32	57, 93, 122, 143	0
1	H6	217/242 (89%)	0.41	15 (6%) 16 13	55, 92, 133, 193	0
1	HA	185/242 (76%)	-0.22	2 (1%) 80 80	41, 71, 100, 130	0
1	HB	189/242 (78%)	-0.23	2 (1%) 80 80	34, 67, 106, 131	0
1	HC	217/242 (89%)	0.19	10 (4%) 32 29	46, 78, 133, 205	0
1	HF	185/242 (76%)	-0.03	1 (0%) 91 91	40, 70, 98, 130	0
1	HG	189/242 (78%)	-0.25	2 (1%) 80 80	32, 58, 99, 136	0
1	HH	217/242 (89%)	-0.05	7 (3%) 47 43	26, 60, 105, 206	0
1	HK	185/242 (76%)	-0.26	1 (0%) 91 91	30, 62, 97, 119	0
1	HL	189/242 (78%)	-0.24	1 (0%) 91 91	24, 52, 93, 141	0
1	HM	217/242 (89%)	0.02	6 (2%) 53 49	25, 64, 112, 190	0
1	HP	185/242 (76%)	-0.18	0 100 100	23, 66, 103, 127	0
1	HQ	189/242 (78%)	-0.35	0 100 100	21, 54, 99, 137	0
1	HR	217/242 (89%)	0.09	10 (4%) 32 29	24, 62, 118, 186	0
1	HU	185/242 (76%)	-0.20	2 (1%) 80 80	27, 60, 89, 126	0
1	HV	189/242 (78%)	-0.30	1 (0%) 91 91	31, 60, 104, 142	0
1	HW	217/242 (89%)	0.09	11 (5%) 28 24	38, 67, 112, 183	0
1	HZ	185/242 (76%)	-0.11	2 (1%) 80 80	36, 66, 93, 130	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Ha	189/242 (78%)	-0.30	3 (1%) 72 71	26, 57, 95, 154	0
1	Hb	217/242 (89%)	0.14	7 (3%) 47 43	33, 65, 107, 199	0
1	He	185/242 (76%)	0.30	8 (4%) 35 31	55, 96, 127, 153	0
1	Hf	189/242 (78%)	0.34	12 (6%) 20 16	50, 88, 122, 171	0
1	Hg	217/242 (89%)	0.50	18 (8%) 11 8	54, 94, 131, 203	0
1	Hj	185/242 (76%)	0.12	7 (3%) 40 36	51, 88, 110, 134	0
1	Hk	189/242 (78%)	-0.18	1 (0%) 91 91	35, 73, 112, 169	0
1	Hl	217/242 (89%)	0.16	9 (4%) 37 32	39, 71, 121, 178	0
1	Ho	185/242 (76%)	-0.24	1 (0%) 91 91	37, 65, 100, 127	0
1	Hp	189/242 (78%)	-0.28	1 (0%) 91 91	32, 61, 96, 139	0
1	Hq	217/242 (89%)	-0.07	7 (3%) 47 43	31, 62, 106, 201	0
1	Ht	185/242 (76%)	-0.02	4 (2%) 62 59	27, 67, 98, 131	0
1	Hu	189/242 (78%)	-0.10	5 (2%) 56 52	23, 62, 106, 162	0
1	Hv	217/242 (89%)	-0.06	8 (3%) 41 37	25, 57, 111, 205	0
1	Hy	185/242 (76%)	-0.16	0 100 100	37, 68, 108, 132	0
1	Hz	189/242 (78%)	-0.19	4 (2%) 63 61	25, 62, 101, 141	0
1	I1	217/242 (89%)	0.10	11 (5%) 28 24	23, 63, 112, 193	0
1	I4	185/242 (76%)	-0.05	4 (2%) 62 59	29, 67, 97, 116	0
1	I5	189/242 (78%)	-0.26	4 (2%) 63 61	31, 58, 97, 146	0
1	I6	217/242 (89%)	0.10	6 (2%) 53 49	30, 69, 117, 212	0
1	IA	185/242 (76%)	0.40	14 (7%) 13 10	67, 98, 122, 151	0
1	IB	189/242 (78%)	0.23	9 (4%) 30 27	53, 89, 127, 196	0
1	IC	217/242 (89%)	0.63	22 (10%) 7 5	56, 98, 138, 201	0
1	IF	185/242 (76%)	-0.06	5 (2%) 54 50	34, 68, 102, 130	0
1	IG	189/242 (78%)	-0.02	3 (1%) 72 71	46, 73, 104, 142	0
1	IH	217/242 (89%)	0.11	9 (4%) 37 32	42, 71, 118, 184	0
1	IK	185/242 (76%)	-0.28	0 100 100	35, 60, 90, 127	0
1	IL	189/242 (78%)	-0.38	1 (0%) 91 91	22, 50, 90, 138	0
1	IM	217/242 (89%)	-0.13	6 (2%) 53 49	27, 58, 112, 188	0
1	IP	185/242 (76%)	-0.11	3 (1%) 72 71	36, 68, 101, 128	0
1	IQ	189/242 (78%)	-0.22	3 (1%) 72 71	39, 65, 102, 162	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	IR	217/242 (89%)	-0.03	7 (3%) 47 43	40, 69, 111, 186	0
1	IU	185/242 (76%)	-0.27	0 100 100	21, 55, 88, 116	0
1	IV	189/242 (78%)	-0.47	0 100 100	18, 48, 81, 134	0
1	IW	217/242 (89%)	-0.03	6 (2%) 53 49	21, 52, 107, 195	0
1	IZ	185/242 (76%)	-0.29	1 (0%) 91 91	21, 58, 87, 123	0
1	Ia	189/242 (78%)	-0.42	0 100 100	17, 46, 86, 144	0
1	Ib	217/242 (89%)	-0.15	7 (3%) 47 43	23, 50, 105, 194	0
1	Ie	185/242 (76%)	0.10	4 (2%) 62 59	53, 85, 115, 136	0
1	If	189/242 (78%)	-0.03	3 (1%) 72 71	37, 71, 116, 154	0
1	Ig	217/242 (89%)	0.09	9 (4%) 37 32	34, 70, 116, 193	0
1	Ij	185/242 (76%)	0.44	15 (8%) 12 9	56, 89, 121, 143	0
1	Ik	189/242 (78%)	0.12	4 (2%) 63 61	34, 76, 114, 152	0
1	Il	217/242 (89%)	0.44	13 (5%) 21 18	40, 85, 123, 212	0
1	Io	185/242 (76%)	-0.29	2 (1%) 80 80	26, 56, 94, 123	0
1	Ip	189/242 (78%)	-0.42	0 100 100	21, 51, 90, 140	0
1	Iq	217/242 (89%)	-0.06	7 (3%) 47 43	26, 58, 112, 189	0
1	It	185/242 (76%)	-0.22	1 (0%) 91 91	29, 59, 94, 132	0
1	Iu	189/242 (78%)	-0.32	2 (1%) 80 80	21, 53, 102, 135	0
1	Iv	217/242 (89%)	-0.14	5 (2%) 60 58	26, 54, 103, 186	0
1	Iy	185/242 (76%)	-0.11	3 (1%) 72 71	44, 73, 104, 132	0
1	Iz	189/242 (78%)	-0.26	3 (1%) 72 71	37, 67, 105, 162	0
1	J1	217/242 (89%)	0.14	6 (2%) 53 49	23, 66, 107, 195	0
1	J4	185/242 (76%)	0.32	11 (5%) 22 18	43, 83, 113, 139	0
1	J5	189/242 (78%)	0.06	6 (3%) 47 43	27, 73, 118, 145	0
1	J6	217/242 (89%)	0.32	9 (4%) 37 32	34, 74, 126, 198	0
1	JA	185/242 (76%)	0.09	4 (2%) 62 59	35, 70, 105, 127	0
1	JB	189/242 (78%)	-0.04	2 (1%) 80 80	32, 65, 110, 139	0
1	JC	217/242 (89%)	0.28	10 (4%) 32 29	31, 74, 118, 188	0
1	JF	185/242 (76%)	-0.03	3 (1%) 72 71	39, 73, 109, 134	0
1	JG	189/242 (78%)	-0.09	2 (1%) 80 80	24, 70, 109, 153	0
1	JH	217/242 (89%)	0.31	8 (3%) 41 37	42, 77, 115, 192	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	JK	185/242 (76%)	0.49	19 (10%) 6 5	63, 97, 126, 150	0
1	JL	189/242 (78%)	0.03	4 (2%) 63 61	52, 87, 125, 168	0
1	JM	217/242 (89%)	0.53	14 (6%) 18 14	62, 98, 136, 192	0
1	JP	185/242 (76%)	0.26	9 (4%) 29 26	58, 90, 114, 148	0
1	JQ	189/242 (78%)	-0.09	2 (1%) 80 80	44, 77, 116, 137	0
1	JR	217/242 (89%)	0.34	13 (5%) 21 18	47, 85, 125, 215	0
1	JU	185/242 (76%)	-0.03	6 (3%) 47 43	38, 69, 105, 133	0
1	JV	189/242 (78%)	-0.18	1 (0%) 91 91	35, 67, 102, 152	0
1	JW	217/242 (89%)	0.18	13 (5%) 21 18	42, 79, 121, 215	0
1	JZ	185/242 (76%)	-0.13	4 (2%) 62 59	38, 68, 101, 131	0
1	Ja	189/242 (78%)	-0.06	4 (2%) 63 61	41, 76, 108, 163	0
1	Jb	217/242 (89%)	0.00	7 (3%) 47 43	36, 69, 115, 195	0
1	Je	185/242 (76%)	-0.27	0 100 100	29, 57, 92, 124	0
1	Jf	189/242 (78%)	-0.31	0 100 100	28, 58, 98, 135	0
1	Jg	217/242 (89%)	-0.14	6 (2%) 53 49	19, 51, 99, 197	0
1	Jj	185/242 (76%)	-0.40	0 100 100	22, 49, 80, 117	0
1	Jk	189/242 (78%)	-0.46	1 (0%) 91 91	14, 44, 91, 123	0
1	Jl	217/242 (89%)	-0.16	6 (2%) 53 49	17, 44, 92, 208	0
1	Jo	185/242 (76%)	-0.27	0 100 100	31, 59, 91, 124	0
1	Jp	189/242 (78%)	-0.20	1 (0%) 91 91	31, 62, 101, 130	0
1	Jq	217/242 (89%)	-0.12	8 (3%) 41 37	24, 54, 108, 199	0
1	Jt	185/242 (76%)	-0.07	1 (0%) 91 91	36, 73, 106, 129	0
1	Ju	189/242 (78%)	-0.04	5 (2%) 56 52	34, 69, 102, 152	0
1	Jv	217/242 (89%)	0.11	6 (2%) 53 49	34, 68, 121, 185	0
1	Jy	185/242 (76%)	0.07	3 (1%) 72 71	36, 71, 108, 126	0
1	Jz	189/242 (78%)	0.05	5 (2%) 56 52	34, 73, 110, 141	0
2	A2	17/17 (100%)	4.80	14 (82%) 0 0	159, 199, 279, 304	0
2	A7	17/17 (100%)	4.93	17 (100%) 0 0	154, 204, 269, 286	0
2	AD	17/17 (100%)	5.47	15 (88%) 0 0	157, 204, 281, 286	0
2	AI	17/17 (100%)	4.65	16 (94%) 0 0	164, 188, 256, 267	0
2	AN	17/17 (100%)	4.27	16 (94%) 0 0	159, 190, 274, 277	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
2	AS	17/17 (100%)	3.86	12 (70%)	0	0	154, 202, 274, 275	0
2	AX	17/17 (100%)	4.06	13 (76%)	0	0	164, 193, 269, 273	0
2	Ac	17/17 (100%)	4.29	15 (88%)	0	0	141, 188, 262, 275	0
2	Ah	17/17 (100%)	5.02	16 (94%)	0	0	154, 193, 271, 272	0
2	Am	17/17 (100%)	4.49	16 (94%)	0	0	137, 213, 264, 277	0
2	Ar	17/17 (100%)	5.11	15 (88%)	0	0	149, 198, 271, 283	0
2	Aw	17/17 (100%)	4.75	17 (100%)	0	0	163, 197, 284, 286	0
2	B2	17/17 (100%)	5.12	16 (94%)	0	0	162, 190, 261, 267	0
2	B7	17/17 (100%)	4.42	15 (88%)	0	0	177, 200, 254, 265	0
2	BD	17/17 (100%)	5.58	17 (100%)	0	0	160, 209, 274, 279	0
2	BI	17/17 (100%)	4.85	16 (94%)	0	0	156, 207, 280, 280	0
2	BN	17/17 (100%)	4.37	11 (64%)	0	0	156, 200, 262, 264	0
2	BS	17/17 (100%)	4.93	15 (88%)	0	0	159, 208, 260, 270	0
2	BX	17/17 (100%)	4.80	16 (94%)	0	0	174, 199, 274, 277	0
2	Bc	17/17 (100%)	4.66	14 (82%)	0	0	165, 199, 272, 280	0
2	Bh	17/17 (100%)	4.40	16 (94%)	0	0	163, 199, 271, 273	0
2	Bm	17/17 (100%)	4.59	16 (94%)	0	0	154, 202, 276, 289	0
2	Br	17/17 (100%)	4.91	16 (94%)	0	0	144, 200, 289, 290	0
2	Bw	17/17 (100%)	4.25	16 (94%)	0	0	154, 195, 277, 282	0
2	C2	17/17 (100%)	3.53	13 (76%)	0	0	144, 205, 267, 273	0
2	C7	17/17 (100%)	4.53	14 (82%)	0	0	164, 209, 267, 273	0
2	CD	17/17 (100%)	5.34	16 (94%)	0	0	158, 202, 277, 281	0
2	CI	17/17 (100%)	5.99	16 (94%)	0	0	159, 206, 278, 289	0
2	CN	17/17 (100%)	5.04	16 (94%)	0	0	168, 187, 268, 276	0
2	CS	17/17 (100%)	4.28	13 (76%)	0	0	157, 199, 273, 276	0
2	CX	17/17 (100%)	5.14	16 (94%)	0	0	162, 189, 274, 293	0
2	Cc	17/17 (100%)	5.33	16 (94%)	0	0	161, 205, 260, 270	0
2	Ch	17/17 (100%)	4.25	11 (64%)	0	0	151, 201, 273, 279	0
2	Cm	17/17 (100%)	5.39	17 (100%)	0	0	152, 201, 267, 268	0
2	Cr	17/17 (100%)	4.73	14 (82%)	0	0	152, 206, 261, 272	0
2	Cw	17/17 (100%)	4.94	15 (88%)	0	0	160, 193, 274, 284	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
2	D2	17/17 (100%)	4.31	17 (100%) 0 0	152, 201, 267, 269	0
2	D7	17/17 (100%)	4.96	15 (88%) 0 0	152, 194, 266, 269	0
2	DD	17/17 (100%)	4.80	16 (94%) 0 0	161, 204, 270, 283	0
2	DI	17/17 (100%)	4.53	13 (76%) 0 0	164, 212, 272, 278	0
2	DN	17/17 (100%)	5.20	17 (100%) 0 0	162, 207, 268, 275	0
2	DS	17/17 (100%)	4.49	14 (82%) 0 0	168, 199, 259, 264	0
2	DX	17/17 (100%)	5.43	17 (100%) 0 0	176, 203, 267, 271	0
2	Dc	17/17 (100%)	4.16	15 (88%) 0 0	159, 209, 267, 279	0
2	Dh	17/17 (100%)	5.72	17 (100%) 0 0	164, 208, 269, 280	0
2	Dm	17/17 (100%)	4.70	14 (82%) 0 0	148, 199, 269, 272	0
2	Dr	17/17 (100%)	5.90	17 (100%) 0 0	157, 207, 277, 281	0
2	Dw	17/17 (100%)	4.90	15 (88%) 0 0	152, 191, 275, 293	0
2	E2	17/17 (100%)	5.19	16 (94%) 0 0	156, 193, 283, 293	0
2	E7	17/17 (100%)	4.76	15 (88%) 0 0	156, 195, 271, 287	0
2	ED	17/17 (100%)	4.49	15 (88%) 0 0	152, 188, 275, 277	0
2	EI	17/17 (100%)	4.57	14 (82%) 0 0	160, 206, 260, 264	0
2	EN	17/17 (100%)	4.45	15 (88%) 0 0	156, 192, 258, 286	0
2	ES	17/17 (100%)	4.91	15 (88%) 0 0	162, 204, 265, 279	0
2	EX	17/17 (100%)	4.62	15 (88%) 0 0	158, 195, 272, 273	0
2	Ec	17/17 (100%)	4.09	14 (82%) 0 0	157, 196, 258, 270	0
2	Eh	17/17 (100%)	4.04	16 (94%) 0 0	172, 198, 263, 268	0
2	Em	17/17 (100%)	4.19	13 (76%) 0 0	147, 194, 261, 261	0
2	Er	17/17 (100%)	5.03	17 (100%) 0 0	159, 202, 272, 280	0
2	Ew	17/17 (100%)	5.15	17 (100%) 0 0	150, 183, 263, 264	0
2	F2	17/17 (100%)	5.40	17 (100%) 0 0	194, 214, 267, 274	0
2	F7	17/17 (100%)	4.10	15 (88%) 0 0	159, 205, 277, 288	0
2	FD	17/17 (100%)	3.84	13 (76%) 0 0	167, 208, 268, 288	0
2	FI	17/17 (100%)	3.93	15 (88%) 0 0	170, 198, 262, 266	0
2	FN	17/17 (100%)	5.26	17 (100%) 0 0	163, 208, 292, 304	0
2	FS	17/17 (100%)	4.06	13 (76%) 0 0	174, 204, 274, 289	0
2	FX	17/17 (100%)	5.25	16 (94%) 0 0	158, 198, 284, 293	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
2	Fc	17/17 (100%)	5.04	17 (100%) 0 0	179, 218, 269, 281	0
2	Fh	17/17 (100%)	4.01	13 (76%) 0 0	180, 240, 287, 293	0
2	Fm	17/17 (100%)	5.38	17 (100%) 0 0	181, 216, 278, 291	0
2	Fr	17/17 (100%)	5.66	16 (94%) 0 0	167, 200, 274, 280	0
2	Fw	17/17 (100%)	4.23	15 (88%) 0 0	165, 214, 286, 290	0
2	G2	17/17 (100%)	4.51	16 (94%) 0 0	170, 212, 259, 261	0
2	G7	17/17 (100%)	4.27	15 (88%) 0 0	189, 209, 259, 271	0
2	GD	17/17 (100%)	5.45	17 (100%) 0 0	168, 211, 280, 286	0
2	GI	17/17 (100%)	5.37	17 (100%) 0 0	163, 209, 263, 277	0
2	GN	17/17 (100%)	5.81	17 (100%) 0 0	185, 217, 288, 291	0
2	GS	17/17 (100%)	4.82	17 (100%) 0 0	184, 209, 263, 275	0
2	GX	17/17 (100%)	4.11	12 (70%) 0 0	166, 203, 273, 303	0
2	Gc	17/17 (100%)	4.21	13 (76%) 0 0	165, 211, 270, 276	0
2	Gh	17/17 (100%)	5.73	17 (100%) 0 0	162, 216, 260, 260	0
2	Gm	17/17 (100%)	6.02	17 (100%) 0 0	191, 213, 278, 289	0
2	Gr	17/17 (100%)	3.98	14 (82%) 0 0	192, 219, 275, 295	0
2	Gw	17/17 (100%)	5.79	16 (94%) 0 0	165, 218, 280, 284	0
2	H2	17/17 (100%)	5.56	17 (100%) 0 0	173, 207, 289, 293	0
2	H7	17/17 (100%)	5.47	17 (100%) 0 0	195, 214, 276, 279	0
2	HD	17/17 (100%)	4.92	15 (88%) 0 0	177, 229, 281, 286	0
2	HI	17/17 (100%)	4.61	16 (94%) 0 0	173, 194, 258, 289	0
2	HN	17/17 (100%)	5.18	17 (100%) 0 0	167, 214, 281, 292	0
2	HS	17/17 (100%)	4.14	15 (88%) 0 0	174, 213, 281, 294	0
2	HX	17/17 (100%)	3.92	11 (64%) 0 0	158, 206, 276, 283	0
2	Hc	17/17 (100%)	4.48	11 (64%) 0 0	173, 208, 274, 293	0
2	Hh	17/17 (100%)	5.60	16 (94%) 0 0	196, 227, 270, 292	0
2	Hm	17/17 (100%)	5.12	15 (88%) 0 0	191, 215, 278, 297	0
2	Hr	17/17 (100%)	4.63	16 (94%) 0 0	170, 214, 284, 291	0
2	Hw	17/17 (100%)	5.62	16 (94%) 0 0	170, 214, 272, 286	0
2	I2	17/17 (100%)	4.55	14 (82%) 0 0	173, 227, 265, 269	0
2	I7	17/17 (100%)	5.34	15 (88%) 0 0	169, 209, 277, 284	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
2	ID	17/17 (100%)	5.49	17 (100%) 0 0	197, 230, 270, 282	0
2	II	17/17 (100%)	5.36	17 (100%) 0 0	181, 209, 283, 298	0
2	IN	17/17 (100%)	4.78	14 (82%) 0 0	170, 195, 279, 286	0
2	IS	17/17 (100%)	5.82	17 (100%) 0 0	180, 207, 271, 276	0
2	IX	17/17 (100%)	4.48	16 (94%) 0 0	168, 215, 279, 286	0
2	Ic	17/17 (100%)	4.15	14 (82%) 0 0	165, 214, 265, 278	0
2	Ih	17/17 (100%)	5.42	17 (100%) 0 0	176, 208, 264, 275	0
2	Im	17/17 (100%)	4.53	14 (82%) 0 0	193, 215, 278, 294	0
2	Ir	17/17 (100%)	5.09	16 (94%) 0 0	175, 206, 269, 274	0
2	Iw	17/17 (100%)	4.69	16 (94%) 0 0	167, 208, 273, 276	0
2	J2	17/17 (100%)	5.61	17 (100%) 0 0	187, 220, 287, 302	0
2	J7	17/17 (100%)	4.60	17 (100%) 0 0	181, 227, 279, 294	0
2	JD	17/17 (100%)	3.84	12 (70%) 0 0	169, 211, 260, 265	0
2	JI	17/17 (100%)	5.86	16 (94%) 0 0	179, 213, 269, 274	0
2	JN	17/17 (100%)	4.88	15 (88%) 0 0	193, 227, 264, 264	0
2	JS	17/17 (100%)	5.36	16 (94%) 0 0	203, 222, 276, 276	0
2	JX	17/17 (100%)	5.35	17 (100%) 0 0	175, 221, 275, 281	0
2	Jc	17/17 (100%)	4.93	17 (100%) 0 0	177, 215, 290, 291	0
2	Jh	17/17 (100%)	4.52	13 (76%) 0 0	156, 200, 280, 285	0
2	Jm	17/17 (100%)	5.02	15 (88%) 0 0	165, 207, 294, 298	0
2	Jr	17/17 (100%)	4.49	17 (100%) 0 0	165, 208, 270, 278	0
2	Jw	17/17 (100%)	4.02	13 (76%) 0 0	180, 215, 280, 291	0
All	All	72960/89160 (81%)	-0.04	3296 (4%) 33 29	7, 58, 123, 304	0

All (3296) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	IW	25	ALA	25.7
1	DC	25	ALA	20.7
1	AC	25	ALA	20.2
1	Cg	25	ALA	19.6
1	Ab	25	ALA	19.3
1	Il	25	ALA	18.3
1	C1	25	ALA	18.0

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Mol	Chain	Res	Type	RSRZ
1	GW	25	ALA	17.9
1	Jv	25	ALA	17.7
1	Av	25	ALA	17.6
1	Db	27	GLY	17.5
1	FC	26	ARG	17.4
1	EC	25	ALA	17.3
1	J1	25	ALA	17.2
1	Eg	23	ARG	16.3
1	FC	25	ALA	16.2
1	FH	23	ARG	16.0
1	El	25	ALA	16.0
1	Cb	25	ALA	15.7
1	CH	25	ALA	15.7
1	F1	25	ALA	15.4
1	Ev	23	ARG	15.4
1	Cg	23	ARG	15.0
1	H1	25	ALA	14.7
1	Fb	25	ALA	14.7
1	G1	25	ALA	14.6
1	B6	25	ALA	14.6
1	JH	25	ALA	14.6
1	E1	23	ARG	14.5
1	FW	23	ARG	14.4
1	Hb	25	ALA	14.3
1	BH	25	ALA	14.1
1	JW	23	ARG	13.9
1	IM	25	ALA	13.8
1	GC	23	ARG	13.6
1	A1	23	ARG	13.6
1	C1	23	ARG	13.6
1	HH	23	ARG	13.5
1	IH	25	ALA	13.5
1	Fq	25	ALA	13.5
1	Db	24	ARG	13.4
1	Jb	25	ALA	13.4
1	H6	22	ARG	13.4
1	IW	23	ARG	13.3
1	CR	24	ARG	13.2
1	E1	23	ARG	13.1
1	BM	23	ARG	13.1
2	DS	1	U	13.0
2	Cm	17	U	12.9

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Mol	Chain	Res	Type	RSRZ
1	Cl	23	ARG	12.9
1	G1	23	ARG	12.8
1	HR	23	ARG	12.8
1	Db	25	ALA	12.8
2	Br	17	U	12.8
1	CR	23	ARG	12.8
1	IC	27	GLY	12.7
1	Ab	23	ARG	12.7
1	AW	25	ALA	12.7
1	Cv	25	ALA	12.6
1	Ib	25	ALA	12.5
1	Fb	22	ARG	12.5
1	Hb	22	ARG	12.5
2	E7	17	U	12.5
2	JS	1	U	12.5
1	I1	22	ARG	12.4
2	Gm	17	U	12.3
1	BH	23	ARG	12.3
1	D1	24	ARG	12.3
1	F6	25	ALA	12.3
1	H1	26	ARG	12.3
1	HR	25	ALA	12.2
1	Fg	23	ARG	12.2
1	Gg	25	ALA	12.1
1	HW	25	ALA	12.1
2	Hw	17	U	12.1
1	Eb	25	ALA	12.0
2	IS	1	U	12.0
1	Iv	25	ALA	11.9
1	Cv	23	ARG	11.9
1	Fl	25	ALA	11.8
1	D6	22	ARG	11.8
1	G6	25	ALA	11.8
1	Cq	23	ARG	11.8
1	Hv	25	ALA	11.8
1	JH	23	ARG	11.7
2	Jr	1	U	11.7
2	FI	1	U	11.7
1	HC	23	ARG	11.7
1	GM	22	ARG	11.7
2	AX	1	U	11.6
1	JW	24	ARG	11.6

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Mol	Chain	Res	Type	RSRZ
1	Ev	25	ALA	11.6
1	Av	24	ARG	11.6
1	GM	25	ALA	11.6
1	HM	22	ARG	11.6
1	HR	22	ARG	11.5
2	Gh	15	U	11.5
1	Hg	25	ALA	11.5
1	Cq	22	ARG	11.5
1	HH	25	ALA	11.4
2	IS	2	U	11.4
2	Dr	17	U	11.4
2	F2	1	U	11.4
1	Dq	25	ALA	11.4
1	FW	25	ALA	11.4
1	JM	25	ALA	11.4
1	A6	25	ALA	11.4
1	F1	22	ARG	11.4
1	GC	25	ALA	11.4
2	Br	1	U	11.3
1	C1	24	ARG	11.3
1	El	24	ARG	11.3
1	IR	25	ALA	11.3
1	JR	26	ARG	11.3
1	JR	25	ALA	11.3
1	FR	23	ARG	11.2
2	CI	1	U	11.2
1	IC	25	ALA	11.2
1	I6	27	GLY	11.2
2	DX	1	U	11.2
2	Ac	1	U	11.2
2	CI	17	U	11.2
2	H7	3	A	11.1
2	GI	1	U	11.1
1	H1	22	ARG	11.1
2	BX	1	U	11.1
2	Gm	1	U	11.1
1	Av	23	ARG	11.1
1	CW	22	ARG	11.1
1	Eg	22	ARG	11.1
2	Dr	2	U	11.1
1	Cq	25	ALA	11.1
1	Fb	24	ARG	11.0

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Mol	Chain	Res	Type	RSRZ
1	Fg	22	ARG	11.0
1	Hb	26	ARG	11.0
2	IN	17	U	11.0
2	IS	3	A	11.0
2	Dr	1	U	11.0
2	ES	1	U	11.0
1	Cl	25	ALA	11.0
1	DM	25	ALA	10.9
2	Ar	17	U	10.9
2	DX	17	U	10.9
1	Eg	27	GLY	10.9
1	FC	23	ARG	10.8
2	JS	2	U	10.8
1	Bl	24	ARG	10.7
1	CM	23	ARG	10.7
1	Jq	24	ARG	10.7
2	A2	17	U	10.7
2	Cc	17	U	10.7
2	Dw	17	U	10.7
1	Jg	22	ARG	10.7
1	CH	23	ARG	10.7
2	JN	3	A	10.7
1	Bl	25	ALA	10.7
2	Ah	1	U	10.7
1	DR	25	ALA	10.7
1	JR	24	ARG	10.6
1	Fv	25	ALA	10.6
2	JI	3	A	10.6
2	Bw	1	U	10.6
1	Db	26	ARG	10.6
1	Fl	23	ARG	10.6
2	FS	1	U	10.5
2	FX	17	U	10.5
1	Cv	22	ARG	10.5
2	CX	16	U	10.5
2	D7	17	U	10.5
2	EI	1	U	10.5
2	HX	1	U	10.5
1	G1	22	ARG	10.5
2	BI	17	U	10.5
1	JH	27	GLY	10.4
2	Ew	3	A	10.4

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Mol	Chain	Res	Type	RSRZ
1	GW	23	ARG	10.4
2	CD	17	U	10.4
2	H2	3	A	10.4
2	H7	2	U	10.4
2	Dm	2	U	10.4
1	AW	23	ARG	10.3
2	Hc	17	U	10.3
1	BH	22	ARG	10.3
2	EI	2	U	10.3
1	F6	23	ARG	10.3
1	IH	24	ARG	10.3
2	Ir	17	U	10.3
1	Aq	25	ALA	10.3
1	Il	24	ARG	10.3
2	Ah	17	U	10.3
2	FN	1	U	10.3
2	Gh	1	U	10.3
2	BS	3	A	10.3
1	Eq	25	ALA	10.3
1	Hv	22	ARG	10.3
1	FW	24	ARG	10.2
1	Dq	23	ARG	10.2
1	HM	24	ARG	10.2
1	Db	23	ARG	10.2
2	BD	1	U	10.2
2	Fm	17	U	10.2
2	JX	3	A	10.2
1	EW	23	ARG	10.2
2	CX	2	U	10.1
1	GH	23	ARG	10.1
1	G1	25	ALA	10.1
1	CC	25	ALA	10.1
1	EW	24	ARG	10.1
1	GR	25	ALA	10.1
2	Hw	1	U	10.1
1	H1	25	ALA	10.1
1	Hb	27	GLY	10.1
1	IR	24	ARG	10.1
2	AD	3	A	10.1
2	BS	1	U	10.0
1	F1	23	ARG	10.0
1	AM	25	ALA	10.0

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Mol	Chain	Res	Type	RSRZ
2	II	17	U	10.0
2	Jc	2	U	10.0
1	C6	27	GLY	10.0
1	BM	25	ALA	10.0
2	H2	1	U	10.0
1	Jl	25	ALA	10.0
1	Dg	22	ARG	10.0
2	J2	3	A	10.0
1	Aq	23	ARG	10.0
1	Eg	25	ALA	10.0
1	HR	26	ARG	10.0
2	CI	2	U	9.9
2	CN	2	U	9.9
2	E2	2	U	9.9
1	CC	23	ARG	9.9
2	G7	16	U	9.9
1	Il	26	ARG	9.9
1	JM	27	GLY	9.9
1	Ib	22	ARG	9.9
1	ER	25	ALA	9.9
1	GR	27	GLY	9.8
1	Bb	25	ALA	9.8
1	Ab	22	ARG	9.8
1	Cg	26	ARG	9.8
2	HX	3	A	9.8
2	Ih	16	U	9.8
1	BH	24	ARG	9.8
1	FR	25	ALA	9.8
1	Cl	24	ARG	9.8
1	Fq	27	GLY	9.8
1	HM	26	ARG	9.8
2	Ir	1	U	9.8
1	DR	24	ARG	9.8
2	C7	3	A	9.8
2	Gm	2	U	9.8
1	BR	25	ALA	9.7
1	CM	25	ALA	9.7
2	Bc	16	U	9.7
2	Cr	3	A	9.7
1	Ab	24	ARG	9.7
1	E1	25	ALA	9.7
1	Jq	22	ARG	9.7

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Mol	Chain	Res	Type	RSRZ
1	Hq	25	ALA	9.7
1	Gv	22	ARG	9.7
1	JC	24	ARG	9.7
1	D1	25	ALA	9.7
1	Jl	23	ARG	9.7
1	CH	24	ARG	9.7
1	FM	22	ARG	9.7
1	I6	23	ARG	9.6
1	CW	27	GLY	9.6
2	Jh	17	U	9.6
1	GM	24	ARG	9.6
2	Cc	15	U	9.6
1	Cl	27	GLY	9.6
1	Dg	25	ALA	9.6
1	EH	25	ALA	9.6
1	EC	23	ARG	9.6
2	B7	3	A	9.6
2	DX	2	U	9.6
2	GN	16	U	9.6
2	Fr	3	A	9.6
2	IS	16	U	9.6
1	Bv	22	ARG	9.6
1	Jl	22	ARG	9.6
1	CR	25	ALA	9.6
1	Al	24	ARG	9.6
2	GS	17	U	9.6
2	II	2	U	9.6
1	Gb	22	ARG	9.5
2	Bc	17	U	9.5
2	CX	1	U	9.5
2	IX	1	U	9.5
2	Ch	3	A	9.5
1	Av	22	ARG	9.5
1	HC	24	ARG	9.5
2	GD	17	U	9.5
1	F1	24	ARG	9.5
2	A2	3	A	9.5
1	FC	24	ARG	9.5
1	DC	24	ARG	9.5
2	Jl	1	U	9.5
1	Gb	25	ALA	9.5
1	Gv	27	GLY	9.5

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Mol	Chain	Res	Type	RSRZ
2	Jm	17	U	9.5
2	Cm	16	U	9.4
1	GM	23	ARG	9.4
2	Jh	1	U	9.4
1	FH	22	ARG	9.4
2	F2	2	U	9.4
1	GR	23	ARG	9.4
1	D6	25	ALA	9.3
1	Db	22	ARG	9.3
2	B2	1	U	9.3
2	Cr	17	U	9.3
1	Gl	26	ARG	9.3
1	Jl	24	ARG	9.3
1	GC	24	ARG	9.3
2	I7	17	U	9.3
1	GH	22	ARG	9.3
1	Jv	23	ARG	9.3
2	CX	17	U	9.3
2	Gm	3	A	9.3
1	JH	26	ARG	9.3
2	Ew	2	U	9.3
1	Bv	24	ARG	9.2
1	C1	22	ARG	9.2
2	DN	3	A	9.2
2	ES	2	U	9.2
2	E7	16	U	9.2
2	H7	1	U	9.2
1	H1	27	GLY	9.2
1	F1	26	ARG	9.2
2	Ac	2	U	9.2
2	DD	17	U	9.2
2	GN	1	U	9.2
2	HX	2	U	9.2
1	Hb	24	ARG	9.2
2	Cw	15	U	9.2
2	DD	1	U	9.2
1	FM	23	ARG	9.2
2	A2	2	U	9.2
1	Jl	26	ARG	9.2
2	Hr	1	U	9.2
1	Dv	24	ARG	9.2
1	C6	25	ALA	9.1

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Mol	Chain	Res	Type	RSRZ
2	Dm	17	U	9.2
1	Dq	24	ARG	9.1
2	I7	8	U	9.1
1	GH	25	ALA	9.1
2	BI	2	U	9.1
2	GS	16	U	9.1
2	Iw	1	U	9.1
1	Fg	24	ARG	9.1
1	HR	24	ARG	9.1
2	Hw	2	U	9.1
1	Bl	22	ARG	9.1
1	Cq	24	ARG	9.1
1	Dl	22	ARG	9.1
1	I1	23	ARG	9.1
2	Ah	3	A	9.1
2	BN	3	A	9.1
1	Hv	23	ARG	9.1
1	Jb	24	ARG	9.1
2	DS	2	U	9.1
2	C7	1	U	9.1
2	Ar	1	U	9.0
2	A2	16	U	9.0
2	II	3	A	9.0
1	D6	24	ARG	9.0
2	Fc	3	A	9.0
1	DW	23	ARG	9.0
1	FM	24	ARG	9.0
1	Gb	27	GLY	9.0
2	H2	2	U	9.0
2	EX	2	U	9.0
2	Fh	17	U	9.0
1	AW	24	ARG	9.0
1	BR	24	ARG	9.0
1	Eg	26	ARG	9.0
1	JC	23	ARG	9.0
2	ID	3	A	9.0
2	Aw	17	U	8.9
2	CD	15	U	8.9
2	DI	9	U	8.9
2	H2	17	U	8.9
2	Bm	3	A	8.9
1	B6	24	ARG	8.9

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Mol	Chain	Res	Type	RSRZ
1	J1	23	ARG	8.9
1	Fb	23	ARG	8.9
2	IX	17	U	8.9
1	Dl	25	ALA	8.9
2	CD	16	U	8.9
2	EN	3	A	8.9
2	FD	17	U	8.9
1	FM	26	ARG	8.9
2	Er	1	U	8.9
1	J5	91	GLY	8.9
1	AR	25	ALA	8.9
1	EH	23	ARG	8.9
1	Eq	23	ARG	8.9
2	CS	1	U	8.9
2	IN	1	U	8.9
2	GN	2	U	8.8
1	Ag	23	ARG	8.8
2	D2	1	U	8.8
2	Er	2	U	8.8
2	II	1	U	8.8
1	Cl	22	ARG	8.8
1	AR	24	ARG	8.8
1	HC	22	ARG	8.8
2	F7	3	A	8.8
1	G1	27	GLY	8.8
2	BN	2	U	8.8
2	BS	17	U	8.8
1	FM	25	ALA	8.8
1	JW	25	ALA	8.8
2	Bh	1	U	8.8
2	B2	16	U	8.8
2	Gw	15	U	8.8
1	Gb	24	ARG	8.8
2	IN	16	U	8.8
1	Gb	23	ARG	8.8
2	Gw	10	U	8.7
1	C1	26	ARG	8.7
1	IC	26	ARG	8.7
2	JI	2	U	8.7
1	EW	25	ALA	8.7
1	DH	23	ARG	8.7
2	Fr	2	U	8.7

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Mol	Chain	Res	Type	RSRZ
2	JD	17	U	8.7
1	Iq	23	ARG	8.7
2	EX	17	U	8.7
1	A6	22	ARG	8.7
2	CX	3	A	8.7
2	Cc	2	U	8.7
1	Hg	22	ARG	8.7
2	AD	15	U	8.7
2	Dm	1	U	8.7
2	Ih	3	A	8.7
1	G1	24	ARG	8.7
1	Ig	27	GLY	8.7
1	Fg	25	ALA	8.7
1	AH	23	ARG	8.7
2	EN	16	U	8.7
2	Gw	1	U	8.7
2	I2	17	U	8.7
2	Iw	3	A	8.7
2	DX	16	U	8.6
2	GI	15	U	8.6
2	Dm	3	A	8.6
2	E2	1	U	8.6
1	Bl	26	ARG	8.6
1	DW	24	ARG	8.6
2	AS	1	U	8.6
1	Jg	27	GLY	8.6
2	Dh	10	U	8.6
2	Jr	2	U	8.6
2	CI	3	A	8.6
2	EI	3	A	8.6
2	Cw	3	A	8.6
1	I6	25	ALA	8.6
1	Ev	24	ARG	8.6
2	Ah	2	U	8.6
2	HI	2	U	8.6
2	I2	1	U	8.6
1	Bl	23	ARG	8.6
1	Fv	23	ARG	8.6
1	JC	25	ALA	8.6
1	J6	23	ARG	8.6
2	GX	2	U	8.6
1	Ab	26	ARG	8.6

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Mol	Chain	Res	Type	RSRZ
1	J6	24	ARG	8.6
2	Hm	1	U	8.5
2	Ic	17	U	8.5
1	Bv	25	ALA	8.5
1	H6	23	ARG	8.5
2	BX	2	U	8.5
2	Jc	1	U	8.5
1	I6	24	ARG	8.5
2	G2	6	A	8.5
2	Gr	17	U	8.5
1	Iv	23	ARG	8.5
2	ED	2	U	8.5
2	Hc	2	U	8.5
2	Jc	17	U	8.5
2	BI	3	A	8.5
1	Ib	23	ARG	8.5
2	Ic	1	U	8.5
1	C1	27	GLY	8.5
1	BW	23	ARG	8.5
1	J6	26	ARG	8.5
1	Ag	22	ARG	8.5
2	GS	3	A	8.5
2	IS	17	U	8.5
1	Eg	24	ARG	8.5
2	Jw	1	U	8.5
1	CW	25	ALA	8.5
1	H1	26	ARG	8.5
2	Gw	3	A	8.4
2	Cw	17	U	8.4
2	Ew	17	U	8.4
2	Gh	3	A	8.4
1	Al	26	ARG	8.4
2	Dm	16	U	8.4
2	Fw	17	U	8.4
2	AD	17	U	8.4
2	B2	17	U	8.4
1	Hq	22	ARG	8.4
1	A6	23	ARG	8.4
1	GR	22	ARG	8.4
2	Ch	1	U	8.4
2	Fr	1	U	8.4
2	GD	2	U	8.4

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Mol	Chain	Res	Type	RSRZ
1	D1	23	ARG	8.4
1	IH	26	ARG	8.4
1	A1	27	GLY	8.3
2	I2	9	U	8.3
2	BD	4	A	8.3
2	Br	3	A	8.3
2	B2	3	A	8.3
1	GW	26	ARG	8.3
2	C7	2	U	8.3
2	Ih	2	U	8.3
2	Iw	17	U	8.3
1	J6	25	ALA	8.3
1	Dg	24	ARG	8.3
2	HD	9	U	8.3
2	HI	1	U	8.3
2	Hh	10	U	8.3
2	Cc	3	A	8.3
1	FR	26	ARG	8.3
2	Fw	1	U	8.3
1	Ig	24	ARG	8.3
2	Bm	17	U	8.3
1	IM	24	ARG	8.3
1	FC	27	GLY	8.3
1	IH	23	ARG	8.3
2	GX	1	U	8.3
1	Gv	25	ALA	8.3
2	Br	2	U	8.2
1	Gl	23	ARG	8.2
2	BN	17	U	8.2
2	C7	17	U	8.2
2	JI	17	U	8.2
2	Jh	3	A	8.2
1	FW	22	ARG	8.2
1	IW	24	ARG	8.2
2	EN	1	U	8.2
2	FS	17	U	8.2
1	BM	22	ARG	8.2
1	DH	22	ARG	8.2
2	Hh	6	A	8.2
2	Gw	17	U	8.2
2	Jm	10	U	8.2
1	Ig	23	ARG	8.2

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Mol	Chain	Res	Type	RSRZ
2	Fm	1	U	8.2
2	G7	17	U	8.2
2	J2	2	U	8.2
1	GC	22	ARG	8.2
1	GW	24	ARG	8.2
1	Aq	24	ARG	8.2
1	Bb	23	ARG	8.2
2	GI	3	A	8.2
2	E2	16	U	8.2
1	Bv	23	ARG	8.2
2	Dc	1	U	8.2
2	HS	3	A	8.2
1	CW	23	ARG	8.2
2	CS	17	U	8.1
2	EN	2	U	8.1
1	HW	23	ARG	8.1
2	HD	17	U	8.1
1	AM	22	ARG	8.1
2	Bh	3	A	8.1
1	Iv	22	ARG	8.1
2	AD	2	U	8.1
1	IM	22	ARG	8.1
1	IR	23	ARG	8.1
1	JH	24	ARG	8.1
1	JW	22	ARG	8.1
2	BX	17	U	8.1
2	CD	1	U	8.1
2	CI	15	U	8.1
2	DI	17	U	8.1
2	Jm	1	U	8.1
1	Al	23	ARG	8.1
2	Ec	4	A	8.1
1	FH	25	ALA	8.1
2	DN	1	U	8.1
2	ES	17	U	8.1
2	GX	17	U	8.1
2	Cc	16	U	8.1
1	BH	27	GLY	8.1
2	ED	1	U	8.1
2	ES	3	A	8.1
2	Fc	1	U	8.0
2	BI	1	U	8.0

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Mol	Chain	Res	Type	RSRZ
2	Dh	9	U	8.0
2	HN	10	U	8.0
1	Eb	24	ARG	8.0
2	B7	15	U	8.0
1	D6	23	ARG	8.0
1	F1	24	ARG	8.0
1	Jq	23	ARG	8.0
2	IX	3	A	8.0
2	Jm	16	U	8.0
1	CR	26	ARG	8.0
1	Dv	23	ARG	8.0
1	Jg	23	ARG	8.0
2	BS	16	U	8.0
2	Iw	2	U	8.0
2	Gc	3	A	8.0
1	Fg	26	ARG	8.0
2	Dh	17	U	8.0
2	Gh	17	U	8.0
2	Ar	3	A	8.0
1	Fb	26	ARG	8.0
2	Fm	2	U	8.0
2	GS	1	U	7.9
2	Ih	1	U	7.9
2	Dw	3	A	7.9
2	E7	3	A	7.9
2	Br	16	U	7.9
2	Cc	1	U	7.9
2	DX	3	A	7.9
2	AD	1	U	7.9
2	E2	17	U	7.9
2	JN	1	U	7.9
1	Cv	24	ARG	7.9
1	DW	25	ALA	7.9
1	C6	23	ARG	7.9
1	Dg	23	ARG	7.9
1	Ig	25	ALA	7.9
2	Dw	1	U	7.9
2	Fh	3	A	7.9
2	JI	6	A	7.9
1	BR	26	ARG	7.9
2	AN	1	U	7.9
2	Fh	16	U	7.9

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Mol	Chain	Res	Type	RSRZ
2	J2	1	U	7.9
2	Cw	16	U	7.9
2	Hc	15	U	7.9
2	Fr	4	A	7.9
1	HM	25	ALA	7.9
2	Ar	2	U	7.9
1	Dv	22	ARG	7.9
2	FD	1	U	7.8
2	BX	3	A	7.8
2	GD	16	U	7.8
2	Gc	17	U	7.8
1	DH	25	ALA	7.8
2	Fw	3	A	7.8
2	A7	10	U	7.8
1	Al	25	ALA	7.8
1	FH	24	ARG	7.8
2	DN	9	U	7.8
2	IN	2	U	7.8
2	JX	16	U	7.8
1	HI	24	ARG	7.8
1	JM	24	ARG	7.8
1	J1	22	ARG	7.8
2	Hh	16	U	7.8
1	FR	24	ARG	7.8
1	GH	26	ARG	7.8
1	Jv	22	ARG	7.8
2	D7	16	U	7.8
2	Hm	2	U	7.8
1	DM	27	GLY	7.8
1	G6	26	ARG	7.8
2	Gh	16	U	7.8
1	DC	23	ARG	7.8
1	Gl	24	ARG	7.8
2	A7	2	U	7.7
1	Dk	50	MET	7.7
1	Gq	25	ALA	7.7
2	AS	2	U	7.7
2	BX	16	U	7.7
2	D7	10	U	7.7
2	FN	15	U	7.7
2	GN	17	U	7.7
1	Gg	23	ARG	7.7

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Mol	Chain	Res	Type	RSRZ
1	B1	25	ALA	7.7
1	AC	24	ARG	7.7
2	Aw	16	U	7.7
2	Dh	2	U	7.7
2	JN	2	U	7.7
2	DD	3	A	7.7
1	HM	23	ARG	7.7
1	JL	52	GLN	7.7
2	Dh	3	A	7.7
1	A1	25	ALA	7.7
1	DH	24	ARG	7.7
1	EW	22	ARG	7.7
1	G1	26	ARG	7.7
1	Hv	24	ARG	7.7
1	Aq	27	GLY	7.7
1	Hq	26	ARG	7.7
2	Am	3	A	7.7
2	Dr	3	A	7.7
2	Bc	2	U	7.7
2	E7	2	U	7.7
2	Hh	17	U	7.7
2	CI	16	U	7.7
1	ER	23	ARG	7.7
1	El	22	ARG	7.7
2	BD	2	U	7.6
2	Ch	16	U	7.6
2	Em	2	U	7.6
2	F7	17	U	7.6
2	HS	17	U	7.6
2	BD	17	U	7.6
2	B2	9	U	7.6
2	Cr	1	U	7.6
2	Fr	17	U	7.6
2	Ih	17	U	7.6
1	Iq	22	ARG	7.6
1	Jv	24	ARG	7.6
2	HD	16	U	7.6
2	I7	1	U	7.6
1	GC	26	ARG	7.6
2	HD	1	U	7.6
1	Bq	25	ALA	7.6
1	Bq	26	ARG	7.6

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Mol	Chain	Res	Type	RSRZ
2	FN	2	U	7.6
2	FN	17	U	7.6
2	GN	3	A	7.6
2	BD	10	U	7.6
2	Jr	17	U	7.6
1	IH	27	GLY	7.6
2	AS	17	U	7.6
2	Am	1	U	7.5
2	DN	10	U	7.5
2	ES	16	U	7.5
2	Hw	8	U	7.5
2	DI	3	A	7.5
1	E1	22	ARG	7.5
2	G2	17	U	7.5
2	GN	15	U	7.5
1	Fq	26	ARG	7.5
1	HR	27	GLY	7.5
2	BD	9	U	7.5
2	DI	2	U	7.5
2	ID	2	U	7.5
2	Dh	1	U	7.5
2	FS	2	U	7.5
2	Gr	1	U	7.5
2	Hr	17	U	7.5
2	JD	2	U	7.5
2	Jh	2	U	7.5
1	FR	27	GLY	7.5
2	BD	3	A	7.5
2	ID	17	U	7.5
1	H6	25	ALA	7.5
1	IR	26	ARG	7.5
2	Ar	16	U	7.5
2	AD	8	U	7.4
2	Em	17	U	7.4
2	Er	4	A	7.4
1	CW	24	ARG	7.4
2	AX	2	U	7.4
2	FI	16	U	7.4
2	Bw	17	U	7.4
2	Cm	8	U	7.4
2	Hc	1	U	7.4
2	FN	3	A	7.4

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Mol	Chain	Res	Type	RSRZ
2	Gw	4	A	7.4
1	HC	25	ALA	7.4
1	FR	22	ARG	7.4
1	Gl	27	GLY	7.4
2	AD	16	U	7.4
2	A7	1	U	7.4
2	Cm	15	U	7.4
2	HX	17	U	7.4
1	BC	25	ALA	7.4
1	Gg	24	ARG	7.4
2	Ec	2	U	7.4
2	GI	17	U	7.4
2	Bh	2	U	7.3
2	Fw	2	U	7.3
2	Er	3	A	7.3
2	IS	4	A	7.3
2	DI	16	U	7.3
2	FX	16	U	7.3
1	EH	22	ARG	7.3
1	Gq	26	ARG	7.3
2	CS	16	U	7.3
2	Gw	9	U	7.3
1	CC	24	ARG	7.3
1	GW	22	ARG	7.3
2	GD	1	U	7.3
1	JM	26	ARG	7.3
2	AI	17	U	7.3
2	EX	16	U	7.3
1	JH	22	ARG	7.3
2	G2	1	U	7.3
2	Hh	3	A	7.3
1	Aq	22	ARG	7.3
2	Bw	2	U	7.3
2	Cw	2	U	7.3
1	Hb	23	ARG	7.3
2	Gc	2	U	7.2
2	J2	10	U	7.2
1	Bg	25	ALA	7.2
1	Ev	27	GLY	7.2
1	Eq	22	ARG	7.2
1	Hg	26	ARG	7.2
2	Hm	10	U	7.2

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Mol	Chain	Res	Type	RSRZ
2	II	16	U	7.2
1	JM	22	ARG	7.2
1	JM	23	ARG	7.2
2	Fr	16	U	7.2
1	Fq	24	ARG	7.2
1	F6	22	ARG	7.2
2	Hr	4	A	7.2
1	G6	27	GLY	7.2
1	Iv	24	ARG	7.2
2	Em	3	A	7.2
2	GX	3	A	7.2
1	HI	22	ARG	7.2
2	Ec	1	U	7.2
1	Bb	24	ARG	7.2
1	DI	23	ARG	7.2
1	Jq	25	ALA	7.2
2	HN	11	U	7.2
2	H7	17	U	7.2
2	Bh	4	A	7.2
2	EX	3	A	7.2
2	Ir	3	A	7.2
2	Ch	2	U	7.1
2	E7	1	U	7.1
2	Jc	16	U	7.1
1	Fq	23	ARG	7.1
2	ED	17	U	7.1
1	AC	27	GLY	7.1
2	BN	1	U	7.1
2	H7	16	U	7.1
1	DW	27	GLY	7.1
1	G6	24	ARG	7.1
1	IR	22	ARG	7.1
1	IW	26	ARG	7.1
2	Er	17	U	7.1
2	FN	16	U	7.1
2	Jm	9	U	7.1
2	Dr	10	U	7.1
2	Fr	8	U	7.1
2	Ih	15	U	7.1
1	F1	22	ARG	7.1
2	AX	17	U	7.1
2	Ar	10	U	7.1

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Mol	Chain	Res	Type	RSRZ
2	C2	9	U	7.1
2	Dh	11	U	7.1
2	HS	2	U	7.1
2	Cm	2	U	7.1
2	D7	2	U	7.1
2	Jm	2	U	7.1
1	Ag	24	ARG	7.1
1	E6	23	ARG	7.1
2	Hh	4	A	7.0
1	D1	27	GLY	7.0
2	Ew	1	U	7.0
2	I2	2	U	7.0
1	Bg	24	ARG	7.0
1	HH	22	ARG	7.0
1	Ag	25	ALA	7.0
2	Ac	3	A	7.0
2	Bc	3	A	7.0
2	F2	17	U	7.0
2	Gw	2	U	7.0
2	HN	17	U	7.0
2	H2	16	U	7.0
1	IW	22	ARG	7.0
1	Fv	22	ARG	7.0
2	CS	2	U	7.0
2	HI	17	U	7.0
2	JX	17	U	7.0
2	AN	16	U	7.0
1	DM	23	ARG	7.0
2	A2	1	U	7.0
2	Hh	2	U	7.0
2	Im	3	A	7.0
1	Fb	27	GLY	7.0
2	Im	2	U	7.0
2	J2	9	U	7.0
2	CN	1	U	7.0
2	Gm	9	U	7.0
2	G7	1	U	7.0
1	A1	24	ARG	7.0
1	BR	23	ARG	7.0
1	JC	22	ARG	7.0
2	Dh	4	A	7.0
2	FX	6	A	7.0

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Mol	Chain	Res	Type	RSRZ
2	FI	2	U	7.0
1	GI	22	ARG	7.0
1	HH	24	ARG	7.0
2	GX	4	A	6.9
2	Im	9	U	6.9
1	GC	27	GLY	6.9
2	Cw	1	U	6.9
2	Er	10	U	6.9
2	Gr	2	U	6.9
2	Im	17	U	6.9
2	I7	15	U	6.9
2	Fm	3	A	6.9
1	EM	23	ARG	6.9
2	AI	1	U	6.9
2	Aw	1	U	6.9
1	I1	27	GLY	6.9
1	EM	22	ARG	6.9
2	HD	2	U	6.9
2	CD	3	A	6.9
1	DI	24	ARG	6.9
2	Gc	16	U	6.9
2	Gm	16	U	6.9
2	F2	3	A	6.9
1	E1	24	ARG	6.9
1	J1	24	ARG	6.9
2	Jc	15	U	6.9
2	D7	1	U	6.9
2	CD	2	U	6.8
2	CS	3	A	6.8
2	Hm	6	A	6.8
1	GH	27	GLY	6.8
1	Hq	27	GLY	6.8
2	Em	9	U	6.8
2	Ew	16	U	6.8
1	EC	24	ARG	6.8
1	Hv	26	ARG	6.8
2	Aw	2	U	6.8
2	CN	15	U	6.8
2	Dw	2	U	6.8
2	FD	2	U	6.8
2	GN	11	U	6.8
2	HI	16	U	6.8

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Mol	Chain	Res	Type	RSRZ
2	Im	10	U	6.8
1	B6	26	ARG	6.8
1	HW	24	ARG	6.8
2	GD	3	A	6.8
2	BD	15	U	6.8
1	Al	22	ARG	6.8
2	F7	1	U	6.8
2	J7	10	U	6.8
2	Ew	4	A	6.8
1	A1	26	ARG	6.8
1	A6	26	ARG	6.8
1	ER	24	ARG	6.7
1	H6	24	ARG	6.7
2	Fc	2	U	6.7
1	Il	27	GLY	6.7
1	A1	22	ARG	6.7
2	Am	15	U	6.7
2	Fm	16	U	6.7
2	JX	1	U	6.7
1	Gg	22	ARG	6.7
1	Hq	23	ARG	6.7
2	JN	17	U	6.7
1	Dv	25	ALA	6.7
2	AN	3	A	6.7
2	Jw	3	A	6.7
2	Bc	1	U	6.7
2	EX	10	U	6.7
2	Bh	17	U	6.7
2	Hc	16	U	6.7
2	JD	16	U	6.7
2	I7	7	U	6.7
2	Am	17	U	6.6
2	Fr	9	U	6.6
2	JI	15	U	6.6
2	A7	3	A	6.6
2	Cr	4	A	6.6
1	Hl	23	ARG	6.6
1	AH	24	ARG	6.6
2	AX	3	A	6.6
2	CN	9	U	6.6
2	Gc	1	U	6.6
2	JX	2	U	6.6

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Mol	Chain	Res	Type	RSRZ
1	EM	25	ALA	6.6
2	IX	2	U	6.6
2	Ir	2	U	6.6
1	DR	23	ARG	6.6
1	Gb	26	ARG	6.6
1	HW	26	ARG	6.6
1	IC	23	ARG	6.6
2	AI	6	A	6.6
1	EM	24	ARG	6.6
2	AN	17	U	6.6
2	Ic	2	U	6.6
1	BC	22	ARG	6.6
2	GX	16	U	6.5
2	ID	1	U	6.5
1	CH	22	ARG	6.5
2	B7	2	U	6.5
2	Dw	16	U	6.5
2	JD	3	A	6.5
1	Cl	26	ARG	6.5
2	Am	2	U	6.5
2	DN	2	U	6.5
1	B6	22	ARG	6.5
2	Jh	4	A	6.5
2	A7	8	U	6.5
2	CN	16	U	6.5
2	Eh	1	U	6.5
2	HN	16	U	6.5
2	Dc	12	A	6.5
1	JW	27	GLY	6.5
2	Gh	14	U	6.5
1	BW	24	ARG	6.5
2	CI	9	U	6.5
2	EX	1	U	6.5
2	Gh	9	U	6.5
2	JI	16	U	6.5
1	E6	25	ALA	6.5
2	Hm	7	U	6.5
2	ED	3	A	6.4
2	FX	1	U	6.4
2	Hh	1	U	6.4
2	Ir	16	U	6.4
1	Eq	24	ARG	6.4

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Mol	Chain	Res	Type	RSRZ
2	DN	8	U	6.4
2	E2	3	A	6.4
2	Cr	2	U	6.4
2	Dh	16	U	6.4
2	Hw	16	U	6.4
1	CM	24	ARG	6.4
1	GR	24	ARG	6.4
1	HC	54	GLN	6.4
2	Em	1	U	6.4
1	Cg	24	ARG	6.4
2	AD	7	U	6.4
2	EX	15	U	6.4
2	HS	16	U	6.4
2	Ah	4	A	6.4
2	F2	12	A	6.4
2	Hc	3	A	6.4
2	JX	9	U	6.4
1	Ab	27	GLY	6.4
2	DS	3	A	6.4
2	G7	3	A	6.4
2	ED	16	U	6.4
2	I7	2	U	6.4
1	Bb	22	ARG	6.4
1	Ig	22	ARG	6.4
2	I7	9	U	6.3
1	H6	186	ILE	6.3
1	HM	27	GLY	6.3
2	Dr	16	U	6.3
2	FX	2	U	6.3
2	Hm	16	U	6.3
2	Ec	3	A	6.3
1	H1	24	ARG	6.3
2	BS	2	U	6.3
2	G7	2	U	6.3
2	IX	16	U	6.3
2	Jw	2	U	6.3
1	Gq	23	ARG	6.3
2	CI	4	A	6.3
2	IN	3	A	6.3
2	Dh	8	U	6.3
2	Fc	17	U	6.3
1	Gq	27	GLY	6.3

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Mol	Chain	Res	Type	RSRZ
2	H2	6	A	6.3
2	DN	17	U	6.3
1	Jv	26	ARG	6.2
2	Aw	3	A	6.2
2	J2	4	A	6.2
2	DD	2	U	6.2
2	Fc	10	U	6.2
2	ID	9	U	6.2
1	ER	22	ARG	6.2
2	EN	17	U	6.2
2	Cm	3	A	6.2
1	B1	22	ARG	6.2
1	DW	26	ARG	6.2
2	ID	14	U	6.2
2	JI	10	U	6.2
2	Jw	17	U	6.2
1	BC	24	ARG	6.2
2	AI	7	U	6.2
2	DD	16	U	6.2
2	D2	16	U	6.2
2	GD	6	A	6.2
2	DI	10	U	6.2
2	Gm	8	U	6.2
1	CR	22	ARG	6.2
1	Ev	26	ARG	6.2
1	Eb	27	GLY	6.2
1	IA	54	GLN	6.2
2	CN	3	A	6.2
1	B6	23	ARG	6.2
1	Cg	22	ARG	6.2
1	J1	26	ARG	6.2
2	Im	1	U	6.2
2	JX	10	U	6.2
2	Jh	16	U	6.2
1	J1	27	GLY	6.2
1	Cb	23	ARG	6.2
1	G6	23	ARG	6.2
2	G2	3	A	6.2
2	JN	4	A	6.2
2	J7	1	U	6.2
2	C7	16	U	6.1
2	Hh	9	U	6.1

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Mol	Chain	Res	Type	RSRZ
1	Iq	25	ALA	6.1
2	Hm	17	U	6.1
2	Hr	16	U	6.1
2	Bm	4	A	6.1
1	Bq	23	ARG	6.1
2	Ah	16	U	6.1
2	CN	6	A	6.1
1	Eb	23	ARG	6.1
1	CM	22	ARG	6.1
2	Ew	15	U	6.1
2	I2	16	U	6.1
2	J2	6	A	6.1
2	J7	15	U	6.1
2	Bm	15	U	6.1
2	GD	10	U	6.1
1	F6	26	ARG	6.1
1	H1	23	ARG	6.1
2	FI	17	U	6.0
2	H7	4	A	6.0
2	I7	3	A	6.0
1	B1	24	ARG	6.0
1	AM	24	ARG	6.0
1	BM	24	ARG	6.0
2	Dr	4	A	6.0
2	FX	3	A	6.0
2	C2	1	U	6.0
2	Dc	16	U	6.0
2	D2	2	U	6.0
1	Bg	27	GLY	6.0
2	Dr	12	A	6.0
2	Dc	2	U	6.0
2	AS	3	A	6.0
2	Im	4	A	6.0
1	Fl	26	ARG	6.0
2	Cr	5	U	6.0
2	JX	15	U	6.0
2	FI	3	A	6.0
1	BC	23	ARG	6.0
1	Gv	24	ARG	6.0
2	AX	16	U	6.0
2	BN	7	U	6.0
2	Gr	10	U	6.0

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Mol	Chain	Res	Type	RSRZ
1	I5	50	MET	6.0
2	JS	3	A	6.0
2	B7	16	U	5.9
2	Gw	8	U	5.9
2	Hw	15	U	5.9
1	E6	24	ARG	5.9
1	I6	22	ARG	5.9
2	Ch	17	U	5.9
2	ID	16	U	5.9
2	Ic	10	U	5.9
2	Bc	15	U	5.9
2	ID	8	U	5.9
2	AI	3	A	5.9
2	Hr	3	A	5.9
2	Fc	16	U	5.9
2	Gw	16	U	5.9
2	G2	5	U	5.9
1	Gg	26	ARG	5.9
2	HD	3	A	5.9
2	Hc	4	A	5.9
1	AR	22	ARG	5.9
2	D2	17	U	5.9
1	Il	23	ARG	5.9
2	AI	2	U	5.9
2	AI	16	U	5.9
2	Bm	16	U	5.9
2	JS	17	U	5.9
2	Dw	6	A	5.8
2	CI	8	U	5.8
2	DS	4	A	5.8
1	I6	26	ARG	5.8
2	Bm	2	U	5.8
2	Eh	10	U	5.8
1	Ib	24	ARG	5.8
2	BI	4	A	5.8
2	CN	17	U	5.8
2	JS	14	U	5.8
1	EM	27	GLY	5.8
2	Dc	17	U	5.8
2	GD	7	U	5.8
2	JD	1	U	5.8
2	Hm	11	U	5.8

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Mol	Chain	Res	Type	RSRZ
2	Ir	15	U	5.8
1	Gq	24	ARG	5.8
2	HN	6	A	5.8
2	Ic	3	A	5.8
2	Fc	8	U	5.8
1	Bv	26	ARG	5.8
2	C2	17	U	5.8
2	GN	10	U	5.8
2	Am	4	A	5.7
2	Cw	4	A	5.7
2	AN	2	U	5.7
2	EI	17	U	5.7
2	Fh	1	U	5.7
2	GI	2	U	5.7
2	Ih	10	U	5.7
1	Bq	27	GLY	5.7
1	Dv	27	GLY	5.7
2	Bh	16	U	5.7
1	A6	24	ARG	5.7
2	Dm	9	U	5.7
2	JI	7	U	5.7
1	C6	22	ARG	5.7
2	CN	8	U	5.7
2	Em	10	U	5.7
2	FD	16	U	5.7
2	Hh	12	A	5.7
1	E1	27	GLY	5.7
1	IM	23	ARG	5.7
2	Eh	2	U	5.7
2	Fm	10	U	5.7
2	G2	2	U	5.7
2	FX	12	A	5.7
2	A7	17	U	5.7
1	BM	26	ARG	5.7
2	Hm	15	U	5.7
1	DR	26	ARG	5.7
2	Dr	11	U	5.6
2	F2	10	U	5.6
2	HS	1	U	5.6
2	Ih	8	U	5.6
1	CH	26	ARG	5.6
1	Jb	23	ARG	5.6

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Mol	Chain	Res	Type	RSRZ
1	G6	92	ASP	5.6
2	BN	16	U	5.6
2	Fh	2	U	5.6
1	Fa	50	MET	5.6
1	J6	22	ARG	5.6
1	FH	27	GLY	5.6
2	Jw	16	U	5.6
2	Dh	12	A	5.6
1	IB	50	MET	5.6
1	D1	22	ARG	5.6
2	J2	16	U	5.6
1	AC	26	ARG	5.6
1	Dq	22	ARG	5.6
2	AN	15	U	5.6
2	EN	15	U	5.6
2	Eh	17	U	5.6
2	JD	15	U	5.6
2	Jm	3	A	5.6
2	Gh	2	U	5.6
1	Gv	23	ARG	5.6
2	Fc	4	A	5.6
2	ID	6	A	5.6
1	AM	23	ARG	5.6
1	AR	23	ARG	5.6
2	BD	16	U	5.6
2	Cm	1	U	5.6
2	H2	15	U	5.6
1	B1	23	ARG	5.6
1	Dq	26	ARG	5.6
2	Hr	13	U	5.6
2	HN	9	U	5.5
2	Iw	9	U	5.5
1	AC	23	ARG	5.5
1	FC	22	ARG	5.5
1	F6	27	GLY	5.5
1	Hf	50	MET	5.5
1	J6	27	GLY	5.5
1	Cz	52	GLN	5.5
2	JN	10	U	5.5
2	C7	8	U	5.5
2	GI	16	U	5.5
2	HN	1	U	5.5

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Mol	Chain	Res	Type	RSRZ
2	J2	15	U	5.5
2	Bw	3	A	5.5
2	Fm	6	A	5.5
2	ED	9	U	5.5
2	Gm	10	U	5.5
1	BC	26	ARG	5.5
2	JI	4	A	5.5
1	C5	50	MET	5.5
2	FN	10	U	5.5
2	GS	2	U	5.5
2	JS	7	U	5.5
2	B7	4	A	5.5
2	II	4	A	5.5
2	Jc	3	A	5.5
1	Bg	26	ARG	5.5
2	Ic	16	U	5.5
1	Jg	25	ALA	5.5
2	E2	10	U	5.5
2	E7	15	U	5.5
2	H2	7	U	5.5
2	Ir	14	U	5.5
1	AH	22	ARG	5.5
1	Cb	22	ARG	5.5
1	El	26	ARG	5.5
1	Fq	22	ARG	5.5
2	F7	4	A	5.5
2	F2	13	U	5.5
1	GR	26	ARG	5.4
2	Am	16	U	5.4
2	Im	15	U	5.4
2	JS	16	U	5.4
2	Cm	4	A	5.4
1	Bg	22	ARG	5.4
1	Ij	212	SER	5.4
2	Bw	10	U	5.4
2	B2	2	U	5.4
2	Fw	16	U	5.4
2	JX	8	U	5.4
2	AI	4	A	5.4
2	Aw	4	A	5.4
2	FD	3	A	5.4
2	GI	4	A	5.4

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Mol	Chain	Res	Type	RSRZ
2	EX	9	U	5.4
2	B2	4	A	5.4
1	AW	22	ARG	5.4
2	Jh	15	U	5.4
1	AC	22	ARG	5.4
1	DM	24	ARG	5.4
1	Eb	22	ARG	5.4
1	Il	22	ARG	5.4
2	F2	9	U	5.4
1	EC	22	ARG	5.4
1	Jb	26	ARG	5.4
2	F2	6	A	5.4
2	B7	1	U	5.4
2	I7	16	U	5.4
2	I7	10	U	5.4
2	J2	17	U	5.4
1	Bl	27	GLY	5.3
1	Cv	26	ARG	5.3
2	Fm	9	U	5.3
2	AD	4	A	5.3
1	CR	27	GLY	5.3
1	FW	27	GLY	5.3
2	D7	15	U	5.3
2	Gm	15	U	5.3
2	Er	6	A	5.3
2	JX	4	A	5.3
2	CI	14	U	5.3
2	FS	16	U	5.3
2	Gr	9	U	5.3
1	Cv	27	GLY	5.3
2	Hr	2	U	5.3
2	A7	4	A	5.3
2	Bw	4	A	5.3
2	Hw	3	A	5.3
2	J7	16	U	5.3
1	D1	26	ARG	5.3
1	J4	94	PRO	5.3
2	Hm	9	U	5.3
2	Hw	7	U	5.3
1	A6	27	GLY	5.3
1	Aq	26	ARG	5.3
1	HR	54	GLN	5.3

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Mol	Chain	Res	Type	RSRZ
2	J7	17	U	5.3
1	BW	22	ARG	5.3
1	JW	26	ARG	5.3
1	Hf	210	GLY	5.3
2	DN	16	U	5.3
2	EI	16	U	5.3
2	ES	9	U	5.3
2	GI	11	U	5.3
2	Dw	4	A	5.2
2	GS	4	A	5.2
1	EW	26	ARG	5.2
2	AI	15	U	5.2
2	GN	14	U	5.2
2	D7	6	A	5.2
2	Gh	6	A	5.2
2	H7	11	U	5.2
2	JS	15	U	5.2
1	JR	23	ARG	5.2
1	Dq	27	GLY	5.2
1	DC	26	ARG	5.2
1	Gv	26	ARG	5.2
2	IN	8	U	5.2
1	Bb	26	ARG	5.2
1	C6	26	ARG	5.2
1	IC	24	ARG	5.2
2	Hw	6	A	5.2
2	GD	5	U	5.2
1	EW	27	GLY	5.2
1	HW	22	ARG	5.2
1	I1	26	ARG	5.2
2	CX	4	A	5.2
2	AS	16	U	5.2
2	DX	14	U	5.2
1	Ha	52	GLN	5.2
1	Iq	27	GLY	5.2
2	DS	17	U	5.2
1	G5	52	GLN	5.2
2	Fh	14	U	5.2
2	BN	4	A	5.2
2	Dw	12	A	5.2
2	FN	8	U	5.2
2	Gr	16	U	5.2

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Mol	Chain	Res	Type	RSRZ
2	Ic	7	U	5.2
2	Gm	4	A	5.1
2	B7	17	U	5.1
1	AW	27	GLY	5.1
1	Cb	24	ARG	5.1
2	H7	15	U	5.1
2	JN	9	U	5.1
2	GN	6	A	5.1
2	Bc	10	U	5.1
2	FX	9	U	5.1
2	Fc	9	U	5.1
1	IC	52	GLN	5.1
2	DI	4	A	5.1
2	CD	8	U	5.1
2	Cr	16	U	5.1
2	JX	7	U	5.1
2	J7	2	U	5.1
1	BH	26	ARG	5.1
1	Bq	22	ARG	5.1
2	Iw	16	U	5.1
1	JR	22	ARG	5.1
2	Ac	15	U	5.1
2	DX	15	U	5.1
2	Gh	7	U	5.1
2	Hh	5	U	5.1
2	D2	3	A	5.1
2	D2	6	A	5.1
2	H2	4	A	5.1
1	AH	25	ALA	5.1
2	BN	5	U	5.1
2	FX	10	U	5.1
1	Hg	23	ARG	5.0
1	Ha	51	GLY	5.0
2	DS	15	U	5.0
2	FX	13	U	5.0
2	HN	14	U	5.0
2	Hw	10	U	5.0
2	J2	14	U	5.0
2	Dc	3	A	5.0
2	ID	4	A	5.0
1	Gp	52	GLN	5.0
1	JL	50	MET	5.0

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Mol	Chain	Res	Type	RSRZ
1	FW	26	ARG	5.0
2	Cc	4	A	5.0
2	HD	6	A	5.0
1	Ev	22	ARG	5.0
2	GN	8	U	5.0
1	AH	54	GLN	5.0
2	Aw	9	U	5.0
2	Er	16	U	5.0
2	E2	8	U	5.0
2	BS	12	A	5.0
2	Cw	8	U	5.0
2	Dr	7	U	5.0
1	Av	27	GLY	5.0
2	A7	9	U	5.0
2	F7	9	U	5.0
2	Jm	4	A	5.0
2	C2	10	U	5.0
2	HN	7	U	5.0
2	J7	9	U	5.0
2	J7	11	U	5.0
1	H6	27	GLY	5.0
1	GL	52	GLN	5.0
2	F2	4	A	5.0
2	BI	16	U	5.0
2	BS	15	U	5.0
2	DD	15	U	5.0
2	F2	5	U	5.0
2	Hw	9	U	5.0
2	II	15	U	5.0
2	Fr	6	A	4.9
2	Hr	6	A	4.9
1	GM	26	ARG	4.9
2	II	13	U	4.9
1	Hg	27	GLY	4.9
1	DW	22	ARG	4.9
2	Fr	12	A	4.9
2	HI	3	A	4.9
1	IQ	50	MET	4.9
2	BI	9	U	4.9
2	Cc	9	U	4.9
2	Fc	11	U	4.9
2	Ac	17	U	4.9

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Mol	Chain	Res	Type	RSRZ
2	B2	11	U	4.9
2	HN	4	A	4.9
2	DI	1	U	4.9
2	GI	10	U	4.9
2	Jc	8	U	4.9
1	DM	22	ARG	4.9
1	If	52	GLN	4.9
2	D2	5	U	4.9
2	Jr	8	U	4.9
1	Cb	26	ARG	4.9
2	BS	4	A	4.9
2	D7	9	U	4.9
2	FN	9	U	4.9
2	FX	14	U	4.9
2	HN	8	U	4.9
2	Jm	8	U	4.9
2	Ac	6	A	4.9
2	Iw	4	A	4.9
1	DM	26	ARG	4.9
1	E1	26	ARG	4.9
1	Fv	24	ARG	4.9
1	Jg	24	ARG	4.9
2	AS	15	U	4.9
2	Fm	7	U	4.9
2	Fm	8	U	4.9
2	HX	16	U	4.9
2	Ih	11	U	4.9
2	Ah	9	U	4.9
2	Fc	13	U	4.9
2	IN	14	U	4.9
1	F1	54	GLN	4.8
1	IB	52	GLN	4.8
1	Cg	27	GLY	4.8
2	A2	12	A	4.8
2	C7	4	A	4.8
2	Bm	8	U	4.8
2	Jr	9	U	4.8
1	IH	22	ARG	4.8
2	FN	14	U	4.8
2	Im	16	U	4.8
2	Jr	16	U	4.8
2	Cm	6	A	4.8

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Mol	Chain	Res	Type	RSRZ
1	EH	24	ARG	4.8
1	BC	27	GLY	4.8
2	Ew	5	U	4.8
2	IS	7	U	4.8
1	Gq	22	ARG	4.8
2	Ch	4	A	4.8
2	Hm	3	A	4.8
2	H2	12	A	4.8
1	Ep	51	GLY	4.8
2	AN	10	U	4.8
2	B2	10	U	4.8
2	CS	15	U	4.8
2	ID	15	U	4.8
2	J7	12	A	4.8
2	BX	10	U	4.8
2	GD	8	U	4.8
1	DR	27	GLY	4.8
2	E2	15	U	4.8
2	I7	11	U	4.8
2	J7	3	A	4.8
2	Cm	9	U	4.8
2	Dm	15	U	4.8
2	ES	6	A	4.8
2	HS	6	A	4.8
2	Bc	9	U	4.8
1	BR	27	GLY	4.7
1	I1	24	ARG	4.7
2	Ir	9	U	4.7
2	CD	4	A	4.7
2	ID	12	A	4.7
1	F5	51	GLY	4.7
2	CI	5	U	4.7
2	Ic	11	U	4.7
2	Gc	6	A	4.7
1	JC	54	GLN	4.7
2	Gh	8	U	4.7
2	JS	12	A	4.7
1	DR	22	ARG	4.7
2	BX	9	U	4.7
2	E2	7	U	4.7
1	Af	52	GLN	4.7
2	GD	4	A	4.7

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Mol	Chain	Res	Type	RSRZ
2	HI	4	A	4.7
1	Gq	238	SER	4.7
2	DD	9	U	4.7
2	JI	9	U	4.7
2	JN	11	U	4.7
1	GL	50	MET	4.7
1	Hq	24	ARG	4.7
2	DD	4	A	4.7
2	J2	12	A	4.7
2	HD	14	U	4.7
1	Bg	23	ARG	4.7
2	IX	4	A	4.7
2	AD	9	U	4.7
2	GN	5	U	4.7
2	HI	10	U	4.7
1	CC	22	ARG	4.7
1	CM	26	ARG	4.7
2	II	14	U	4.7
2	DX	10	U	4.6
1	JK	90	ALA	4.6
2	Fr	15	U	4.6
2	F7	16	U	4.6
1	IC	22	ARG	4.6
2	CD	7	U	4.6
1	BR	22	ARG	4.6
1	HH	26	ARG	4.6
2	Hw	12	A	4.6
2	CN	10	U	4.6
2	Cc	14	U	4.6
2	Er	5	U	4.6
2	Fm	14	U	4.6
2	Fm	15	U	4.6
2	F7	2	U	4.6
1	Cb	27	GLY	4.6
1	E6	22	ARG	4.6
1	GH	24	ARG	4.6
2	EI	4	A	4.6
2	I2	3	A	4.6
2	Dc	15	U	4.6
2	JS	10	U	4.6
2	A7	16	U	4.6
2	D2	15	U	4.6

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Mol	Chain	Res	Type	RSRZ
2	Eh	6	A	4.6
2	FX	4	A	4.6
2	Jc	12	A	4.6
2	Ec	15	U	4.6
2	Br	4	A	4.5
2	DX	4	A	4.5
2	HI	9	U	4.5
2	HN	2	U	4.5
2	HN	15	U	4.5
2	IN	15	U	4.5
2	Jw	9	U	4.5
1	F6	24	ARG	4.5
1	H5	147	PRO	4.5
2	B7	6	A	4.5
2	DS	6	A	4.5
2	E2	4	A	4.5
2	Dc	10	U	4.5
2	ID	13	U	4.5
2	Ic	9	U	4.5
2	JS	9	U	4.5
2	Ar	6	A	4.5
2	HX	4	A	4.5
2	Jw	14	U	4.5
1	G6	22	ARG	4.5
2	B2	12	A	4.5
2	Ar	9	U	4.5
2	Cr	15	U	4.5
2	Em	16	U	4.5
2	G2	16	U	4.5
1	Iv	26	ARG	4.5
2	HI	6	A	4.5
2	Ir	4	A	4.5
2	EI	11	U	4.5
2	Fh	15	U	4.5
2	IS	8	U	4.5
1	FH	26	ARG	4.5
1	Bv	27	GLY	4.5
1	D6	27	GLY	4.5
2	EN	8	U	4.5
2	Hm	8	U	4.5
2	Jh	10	U	4.5
1	HC	26	ARG	4.5

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Mol	Chain	Res	Type	RSRZ
2	IN	10	U	4.5
2	CI	6	A	4.5
2	C2	3	A	4.5
2	D7	3	A	4.5
2	C2	16	U	4.5
2	BD	12	A	4.4
2	CX	7	U	4.4
2	Cm	10	U	4.4
1	Jl	27	GLY	4.4
2	BI	5	U	4.4
2	CD	14	U	4.4
1	JP	177	ARG	4.4
1	IC	165	LEU	4.4
2	Jr	3	A	4.4
2	I2	10	U	4.4
2	J7	14	U	4.4
2	ED	4	A	4.4
2	FN	4	A	4.4
2	GS	10	U	4.4
2	Gh	10	U	4.4
2	HD	15	U	4.4
2	HI	7	U	4.4
1	JK	86	LEU	4.4
1	H6	26	ARG	4.4
2	Aw	5	U	4.4
2	GS	15	U	4.4
2	Jc	9	U	4.4
1	JK	65	ILE	4.4
1	Ht	70	SER	4.4
2	Dw	10	U	4.4
2	D7	8	U	4.4
2	I2	15	U	4.4
2	GN	12	A	4.4
2	Ah	10	U	4.4
2	Bm	1	U	4.4
2	ID	5	U	4.4
2	Ac	4	A	4.4
2	A7	6	A	4.4
2	GD	9	U	4.4
2	Hh	15	U	4.4
2	JS	13	U	4.4
2	AD	6	A	4.3

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Mol	Chain	Res	Type	RSRZ
2	Gc	4	A	4.3
2	FX	15	U	4.3
2	F2	16	U	4.3
1	EH	26	ARG	4.3
1	I1	25	ALA	4.3
1	Gz	50	MET	4.3
2	Hc	12	A	4.3
2	H7	6	A	4.3
2	Ir	6	A	4.3
2	Bh	5	U	4.3
2	HI	14	U	4.3
2	Gr	3	A	4.3
2	Hr	12	A	4.3
2	I2	12	A	4.3
2	Eh	9	U	4.3
2	GI	9	U	4.3
2	Gc	5	U	4.3
2	CX	10	U	4.3
2	Fr	10	U	4.3
2	Ah	12	A	4.3
2	Jm	6	A	4.3
1	Gj	192	SER	4.3
2	Ac	16	U	4.3
2	DX	9	U	4.3
2	EI	8	U	4.3
2	ES	10	U	4.3
2	Eh	8	U	4.3
1	B1	26	ARG	4.3
1	Bb	27	GLY	4.3
1	E6	27	GLY	4.3
1	Hu	51	GLY	4.3
1	H5	52	GLN	4.3
2	AI	14	U	4.3
2	Cr	9	U	4.3
2	ED	10	U	4.3
2	Im	14	U	4.3
2	BS	6	A	4.3
2	BX	4	A	4.3
2	Bc	4	A	4.3
2	Bm	6	A	4.3
2	Br	12	A	4.3
2	JS	6	A	4.3

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Mol	Chain	Res	Type	RSRZ
2	Jr	4	A	4.3
2	D2	14	U	4.3
2	D2	4	A	4.3
2	ES	8	U	4.3
2	IX	10	U	4.3
1	D6	54	GLN	4.2
2	Aw	6	A	4.2
2	Ch	15	U	4.2
2	H7	10	U	4.2
2	Jw	8	U	4.2
1	EC	27	GLY	4.2
1	GW	27	GLY	4.2
1	CW	26	ARG	4.2
2	G7	4	A	4.2
2	JN	6	A	4.2
2	F7	15	U	4.2
2	HD	7	U	4.2
1	GK	153	LEU	4.2
2	Aw	11	U	4.2
2	JI	14	U	4.2
2	A2	6	A	4.2
2	Ih	12	A	4.2
1	Dl	27	GLY	4.2
2	H7	7	U	4.2
2	JI	5	U	4.2
1	AL	50	MET	4.2
2	Fw	15	U	4.2
2	AX	4	A	4.2
2	Cw	6	A	4.2
2	Em	4	A	4.2
1	Go	210	GLY	4.2
1	Ju	51	GLY	4.2
1	Hj	74	ALA	4.2
2	Ec	16	U	4.2
2	Er	11	U	4.2
2	GI	5	U	4.2
2	Hr	14	U	4.2
2	I2	8	U	4.2
1	CC	26	ARG	4.2
2	Cc	10	U	4.2
1	AW	26	ARG	4.2
2	Am	6	A	4.2

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Mol	Chain	Res	Type	RSRZ
2	Eh	12	A	4.2
2	Gm	13	U	4.2
1	Fo	92	ASP	4.1
2	Ch	6	A	4.1
2	DN	4	A	4.1
2	G2	4	A	4.1
1	Go	153	LEU	4.1
2	IS	13	U	4.1
2	Ih	9	U	4.1
2	I7	14	U	4.1
2	JX	14	U	4.1
1	AV	51	GLY	4.1
2	IX	9	U	4.1
2	J7	6	A	4.1
1	Iz	51	GLY	4.1
1	E6	26	ARG	4.1
2	Bm	7	U	4.1
2	CD	10	U	4.1
2	DI	8	U	4.1
2	GI	7	U	4.1
2	Gm	7	U	4.1
2	AN	6	A	4.1
2	G2	12	A	4.1
2	II	6	A	4.1
2	BI	8	U	4.1
2	DS	16	U	4.1
2	G7	15	U	4.1
1	GM	54	GLN	4.1
1	BW	27	GLY	4.1
1	Dl	26	ARG	4.1
2	BI	15	U	4.1
2	F2	15	U	4.1
2	Iw	10	U	4.1
2	Ar	12	A	4.1
2	H7	12	A	4.1
1	HG	50	MET	4.1
2	CN	7	U	4.1
2	DN	7	U	4.1
2	Dm	10	U	4.1
2	Ec	5	U	4.1
2	Ec	14	U	4.1
2	Hr	5	U	4.1

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Mol	Chain	Res	Type	RSRZ
2	FS	6	A	4.1
1	Hg	52	GLN	4.1
2	ES	15	U	4.1
2	Iw	14	U	4.1
1	FB	50	MET	4.1
2	FI	6	A	4.1
1	AH	26	ARG	4.0
1	Ig	26	ARG	4.0
2	EI	14	U	4.1
2	ES	7	U	4.1
2	HD	8	U	4.1
2	Jw	7	U	4.1
1	AH	27	GLY	4.0
1	Gj	214	GLN	4.0
2	D7	11	U	4.0
2	FD	10	U	4.0
2	G7	10	U	4.0
2	Aw	10	U	4.0
2	C2	2	U	4.0
2	GI	8	U	4.0
1	HW	27	GLY	4.0
2	II	12	A	4.0
2	Ah	15	U	4.0
2	A7	15	U	4.0
2	Gm	11	U	4.0
2	JI	8	U	4.0
1	AM	26	ARG	4.0
2	E7	6	A	4.0
2	I2	4	A	4.0
2	Jc	6	A	4.0
1	HB	50	MET	4.0
2	Eh	13	U	4.0
2	Gc	10	U	4.0
2	Gw	5	U	4.0
2	Ir	7	U	4.0
2	Jr	14	U	4.0
2	Gm	12	A	4.0
2	HN	12	A	4.0
2	Ew	10	U	4.0
2	IS	14	U	4.0
2	Iw	15	U	4.0
1	JK	208	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
1	Ag	26	ARG	4.0
1	Fg	53	GLY	4.0
1	IM	26	ARG	4.0
2	Fr	5	U	4.0
1	BW	26	ARG	4.0
1	Ja	51	GLY	4.0
2	FS	3	A	4.0
2	A7	5	U	4.0
2	BS	10	U	4.0
2	G7	13	U	3.9
2	JN	12	A	3.9
1	Ek	50	MET	3.9
1	Hk	50	MET	3.9
2	Am	10	U	3.9
2	BD	5	U	3.9
2	Fr	7	U	3.9
2	Hh	11	U	3.9
2	Jw	15	U	3.9
2	A2	4	A	3.9
2	DD	6	A	3.9
2	F7	6	A	3.9
2	DN	15	U	3.9
2	Fw	9	U	3.9
1	DC	22	ARG	3.9
1	EC	26	ARG	3.9
2	FS	12	A	3.9
1	Ff	238	SER	3.9
1	J5	51	GLY	3.9
2	Dw	15	U	3.9
2	D7	7	U	3.9
2	EI	15	U	3.9
2	Fm	11	U	3.9
2	H2	11	U	3.9
2	JN	16	U	3.9
1	I1	54	GLN	3.9
1	Ib	27	GLY	3.9
2	Fc	12	A	3.9
1	Jz	212	SER	3.9
2	Ar	11	U	3.9
1	Gp	51	GLY	3.9
2	Dr	6	A	3.9
2	HI	15	U	3.9

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Mol	Chain	Res	Type	RSRZ
2	HS	15	U	3.9
2	AS	9	U	3.9
2	Gw	7	U	3.9
2	Gw	14	U	3.9
2	II	10	U	3.9
1	Ju	186	ILE	3.9
2	B2	15	U	3.9
2	Dh	5	U	3.9
2	Dw	9	U	3.9
2	Ec	13	U	3.9
2	GX	9	U	3.9
2	E2	6	A	3.9
1	Ij	211	SER	3.9
2	CS	9	U	3.8
2	Cr	14	U	3.8
2	ID	7	U	3.8
1	JK	139	TYR	3.8
2	Ch	10	U	3.8
2	DX	13	U	3.8
2	E7	8	U	3.8
2	GS	9	U	3.8
2	G2	9	U	3.8
2	DD	12	A	3.8
2	D7	4	A	3.8
1	BW	25	ALA	3.8
1	AV	50	MET	3.8
2	DD	14	U	3.8
2	Eh	16	U	3.8
2	Em	15	U	3.8
1	Gl	238	SER	3.8
2	Bw	12	A	3.8
2	Eh	3	A	3.8
2	E2	9	U	3.8
2	GX	5	U	3.8
2	JN	7	U	3.8
1	JK	223	LEU	3.8
2	HD	4	A	3.8
2	BX	14	U	3.8
2	CS	14	U	3.8
1	Fg	54	GLN	3.8
1	D6	26	ARG	3.8
1	Ij	92	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
2	Aw	15	U	3.8
2	CS	8	U	3.8
2	Ew	9	U	3.8
2	Ar	4	A	3.8
2	I7	4	A	3.8
2	BD	11	U	3.8
2	ED	15	U	3.8
2	FX	5	U	3.8
2	AI	12	A	3.8
2	DN	6	A	3.8
2	Hm	12	A	3.8
1	Gk	51	GLY	3.8
1	J5	52	GLN	3.8
2	Jr	10	U	3.7
2	AN	4	A	3.7
2	IN	4	A	3.7
1	DH	27	GLY	3.7
1	HC	53	GLY	3.7
1	Gb	52	GLN	3.7
1	Ij	215	ALA	3.7
2	A2	13	U	3.7
2	Ec	11	U	3.7
2	Fm	13	U	3.7
2	Hw	11	U	3.7
2	J7	8	U	3.7
1	Dg	26	ARG	3.7
1	Eq	26	ARG	3.7
1	Ga	50	MET	3.7
2	Ec	17	U	3.7
2	HS	10	U	3.7
2	Cw	12	A	3.7
2	Dc	13	U	3.7
2	FS	7	U	3.7
2	HS	7	U	3.7
1	Cq	26	ARG	3.7
1	Il	223	LEU	3.7
2	A7	7	U	3.7
2	B7	10	U	3.7
2	H2	13	U	3.7
1	JC	27	GLY	3.7
1	Gf	50	MET	3.7
2	AN	9	U	3.7

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Mol	Chain	Res	Type	RSRZ
2	Bw	8	U	3.7
2	CN	5	U	3.7
2	ED	7	U	3.7
2	EN	14	U	3.7
2	HD	12	A	3.7
1	JG	50	MET	3.7
2	Cc	5	U	3.7
2	DS	9	U	3.7
2	Ih	14	U	3.7
1	J6	233	GLY	3.7
2	Er	12	A	3.7
1	Fe	96	TYR	3.7
1	Eu	50	MET	3.7
2	Ac	5	U	3.7
2	Hh	7	U	3.7
2	Im	5	U	3.7
1	G5	51	GLY	3.7
1	Iz	50	MET	3.7
2	I7	12	A	3.7
1	He	150	LEU	3.7
2	Ac	8	U	3.6
2	GI	14	U	3.6
1	DW	226	ARG	3.6
1	Jb	22	ARG	3.6
2	EN	4	A	3.6
2	Bw	16	U	3.6
2	DN	11	U	3.6
2	GD	14	U	3.6
2	Ew	6	A	3.6
2	Ih	4	A	3.6
2	Ir	12	A	3.6
1	Iq	26	ARG	3.6
2	CX	9	U	3.6
2	DN	14	U	3.6
2	GD	11	U	3.6
1	Hp	50	MET	3.6
1	Hg	24	ARG	3.6
1	H5	177	ARG	3.6
1	J5	106	ILE	3.6
1	JK	55	GLY	3.6
1	Hl	92	ASP	3.6
2	AS	10	U	3.6

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Mol	Chain	Res	Type	RSRZ
2	Bh	15	U	3.6
2	B7	9	U	3.6
2	CX	11	U	3.6
2	DI	15	U	3.6
2	FS	13	U	3.6
2	II	9	U	3.6
2	Ir	10	U	3.6
1	Bq	24	ARG	3.6
2	Gc	15	U	3.6
2	J2	11	U	3.6
1	EM	26	ARG	3.6
1	F1	27	GLY	3.6
1	H4	210	GLY	3.6
2	Br	8	U	3.6
2	Hc	5	U	3.6
1	FM	27	GLY	3.6
1	Go	214	GLN	3.6
2	Fh	7	U	3.6
2	J2	5	U	3.6
2	E2	12	A	3.6
2	GN	4	A	3.6
1	Iq	24	ARG	3.6
1	JP	54	GLN	3.6
2	AX	8	U	3.6
2	Ar	15	U	3.6
2	Cr	10	U	3.6
2	Ew	7	U	3.6
2	FD	11	U	3.6
1	H1	27	GLY	3.6
2	Fw	4	A	3.6
2	HS	4	A	3.6
2	JX	12	A	3.6
2	AD	10	U	3.5
2	Er	9	U	3.5
2	F7	7	U	3.5
2	IS	6	A	3.5
2	DD	13	U	3.5
2	DI	11	U	3.5
2	FN	5	U	3.5
2	GX	15	U	3.5
2	IN	9	U	3.5
2	BN	15	U	3.5

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Mol	Chain	Res	Type	RSRZ
2	DS	14	U	3.5
2	DX	7	U	3.5
1	Gp	50	MET	3.5
2	Bm	10	U	3.5
2	Dc	11	U	3.5
2	Jh	5	U	3.5
2	ED	6	A	3.5
1	AR	26	ARG	3.5
1	CG	92	ASP	3.5
1	FQ	92	ASP	3.5
2	Ar	8	U	3.5
2	CI	10	U	3.5
2	JS	11	U	3.5
2	HN	3	A	3.5
1	Hf	86	LEU	3.5
1	GL	238	SER	3.5
2	C2	8	U	3.5
2	Fw	10	U	3.5
2	HN	5	U	3.5
1	Jz	50	MET	3.5
2	CS	12	A	3.5
1	CM	27	GLY	3.5
1	G4	94	PRO	3.5
2	J2	13	U	3.5
1	Jq	26	ARG	3.5
2	E7	4	A	3.5
2	Fh	4	A	3.5
2	Gh	4	A	3.5
1	Go	70	SER	3.4
2	CN	14	U	3.4
2	E2	14	U	3.4
2	Cm	12	A	3.4
2	Dm	4	A	3.4
2	A2	15	U	3.4
2	Iw	11	U	3.4
1	ER	26	ARG	3.4
2	DD	8	U	3.4
2	Dr	8	U	3.4
2	Dw	5	U	3.4
2	G2	14	U	3.4
2	Hr	15	U	3.4
2	H7	8	U	3.4

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Mol	Chain	Res	Type	RSRZ
2	CD	6	A	3.4
1	JV	52	GLN	3.4
2	Dr	5	U	3.4
2	GS	11	U	3.4
2	H7	13	U	3.4
2	FD	15	U	3.4
2	H2	10	U	3.4
2	Ir	8	U	3.4
1	Ep	50	MET	3.4
2	EN	6	A	3.4
2	FD	6	A	3.4
1	IC	92	ASP	3.4
2	Br	10	U	3.4
1	Gb	95	ILE	3.4
1	JK	98	GLY	3.4
2	Gw	6	A	3.4
2	AS	8	U	3.4
2	Am	8	U	3.4
2	A7	11	U	3.4
2	Dr	15	U	3.4
2	HD	10	U	3.4
2	IX	13	U	3.4
1	H5	93	LYS	3.4
2	G7	12	A	3.4
2	Ih	6	A	3.4
2	Bw	15	U	3.4
2	H7	14	U	3.4
1	Fg	120	PHE	3.4
1	Fv	27	GLY	3.4
2	BN	6	A	3.3
2	J7	4	A	3.3
1	GL	220	LEU	3.3
1	Ja	52	GLN	3.3
2	CD	11	U	3.3
2	C7	15	U	3.3
2	AI	5	U	3.3
2	Dw	14	U	3.3
2	EX	8	U	3.3
2	EX	11	U	3.3
2	Eh	11	U	3.3
2	IS	9	U	3.3
1	Ie	91	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
1	Iy	191	PHE	3.3
1	Av	26	ARG	3.3
1	JC	26	ARG	3.3
2	AX	13	U	3.3
2	BI	10	U	3.3
2	Bm	11	U	3.3
2	GX	14	U	3.3
2	IX	15	U	3.3
2	Jh	9	U	3.3
2	Jm	15	U	3.3
2	Bw	6	A	3.3
2	GD	12	A	3.3
1	Gk	50	MET	3.3
1	Ik	50	MET	3.3
1	G6	54	GLN	3.3
2	Bm	5	U	3.3
2	Dc	9	U	3.3
2	E2	11	U	3.3
2	E7	10	U	3.3
2	JD	9	U	3.3
2	JD	10	U	3.3
2	Jw	10	U	3.3
2	J7	7	U	3.3
1	GM	27	GLY	3.3
1	FQ	50	MET	3.3
1	JA	92	ASP	3.3
1	Gj	210	GLY	3.3
1	IA	91	GLY	3.3
2	AI	10	U	3.3
2	BN	10	U	3.3
2	Cc	11	U	3.3
2	EI	10	U	3.3
2	D2	12	A	3.3
2	Fm	12	A	3.3
1	Gp	212	SER	3.3
1	Hg	150	LEU	3.3
2	Am	7	U	3.3
2	BD	13	U	3.3
1	Ja	50	MET	3.3
1	AV	52	GLN	3.3
1	Ig	93	LYS	3.3
2	BD	6	A	3.3

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Mol	Chain	Res	Type	RSRZ
1	JR	27	GLY	3.3
2	Am	5	U	3.3
2	Bh	14	U	3.3
2	C7	10	U	3.3
1	Jy	95	ILE	3.3
1	Ju	50	MET	3.3
1	Gk	52	GLN	3.3
1	JW	52	GLN	3.3
1	B6	27	GLY	3.3
2	FN	6	A	3.3
2	Fw	6	A	3.3
2	EI	9	U	3.3
2	II	5	U	3.3
2	IN	7	U	3.3
1	Fg	216	VAL	3.3
1	Gp	94	PRO	3.3
1	C6	24	ARG	3.3
2	C2	15	U	3.2
2	IS	11	U	3.2
2	BX	12	A	3.2
1	Fe	208	VAL	3.2
1	Ff	52	GLN	3.2
1	BU	92	ASP	3.2
2	A2	7	U	3.2
2	G7	14	U	3.2
2	Im	11	U	3.2
2	Bh	12	A	3.2
2	GI	12	A	3.2
2	JS	4	A	3.2
1	DW	92	ASP	3.2
1	Ge	95	ILE	3.2
2	Jc	5	U	3.2
1	Ff	93	LYS	3.2
2	BI	6	A	3.2
2	Em	6	A	3.2
1	CC	27	GLY	3.2
1	Ga	51	GLY	3.2
1	Ik	165	LEU	3.2
2	BX	11	U	3.2
2	B2	13	U	3.2
2	Cr	8	U	3.2
2	Dc	8	U	3.2

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Mol	Chain	Res	Type	RSRZ
2	Dr	13	U	3.2
2	FI	8	U	3.2
2	Fc	5	U	3.2
1	J6	133	ASN	3.2
1	Fz	50	MET	3.2
1	Fv	26	ARG	3.2
2	Ch	5	U	3.2
2	DX	8	U	3.2
2	Er	15	U	3.2
2	HI	8	U	3.2
2	ID	10	U	3.2
1	HZ	93	LYS	3.2
1	Iq	52	GLN	3.2
1	H6	194	LEU	3.2
2	GS	12	A	3.2
2	FN	7	U	3.2
1	Go	211	SER	3.2
1	Du	51	GLY	3.2
1	EH	54	GLN	3.2
1	JH	98	GLY	3.2
2	DN	12	A	3.2
2	Eh	7	U	3.2
2	FX	8	U	3.2
2	H2	5	U	3.2
1	I4	177	ARG	3.2
1	Fe	122	TRP	3.2
2	II	7	U	3.2
2	J2	7	U	3.2
2	GS	6	A	3.2
2	Gr	12	A	3.2
1	HA	54	GLN	3.2
1	Fk	50	MET	3.2
1	Hu	50	MET	3.2
1	JK	66	LEU	3.2
2	F7	10	U	3.1
2	IS	10	U	3.1
2	JN	15	U	3.1
1	CH	27	GLY	3.1
1	G6	178	GLY	3.1
1	He	54	GLN	3.1
1	G5	58	LYS	3.1
2	Br	15	U	3.1

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Mol	Chain	Res	Type	RSRZ
2	CD	9	U	3.1
1	JP	220	LEU	3.1
2	A7	12	A	3.1
2	Bc	5	U	3.1
2	B7	8	U	3.1
2	Dh	15	U	3.1
2	FS	10	U	3.1
2	HS	8	U	3.1
2	Jc	13	U	3.1
1	Hu	52	GLN	3.1
1	Go	134	LEU	3.1
2	Cr	6	A	3.1
2	C7	6	A	3.1
2	I7	6	A	3.1
1	Hx	51	GLY	3.1
2	BS	13	U	3.1
2	B2	8	U	3.1
2	C7	7	U	3.1
2	E2	13	U	3.1
1	JK	220	LEU	3.1
1	CK	70	SER	3.1
2	JX	6	A	3.1
1	ER	27	GLY	3.1
1	IA	67	GLN	3.1
1	IR	27	GLY	3.1
1	Ig	115	TRP	3.1
2	GN	7	U	3.1
2	Jc	7	U	3.1
1	Fe	136	LEU	3.1
1	H4	86	LEU	3.1
1	IW	27	GLY	3.1
2	Jh	6	A	3.1
2	AX	15	U	3.1
2	GS	7	U	3.1
2	JS	8	U	3.1
2	Hw	13	U	3.1
2	Ic	4	A	3.1
1	Fe	223	LEU	3.1
2	B7	5	U	3.1
2	C7	9	U	3.1
2	Em	5	U	3.1
2	FS	11	U	3.1

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Mol	Chain	Res	Type	RSRZ
2	GI	13	U	3.1
2	J7	5	U	3.1
2	EX	12	A	3.1
1	Hv	92	ASP	3.1
1	Ik	70	SER	3.0
1	JP	70	SER	3.0
2	BS	11	U	3.0
2	CI	7	U	3.0
2	DX	11	U	3.0
2	Jm	5	U	3.0
2	Bh	6	A	3.0
2	JD	6	A	3.0
1	HC	57	GLN	3.0
2	Aw	14	U	3.0
2	A2	14	U	3.0
2	Bc	13	U	3.0
2	DD	10	U	3.0
2	He	11	U	3.0
1	Jb	43	LEU	3.0
1	Gf	51	GLY	3.0
1	H5	54	GLN	3.0
1	Jy	96	TYR	3.0
2	CX	14	U	3.0
2	Dh	13	U	3.0
2	Dr	9	U	3.0
1	Cv	93	LYS	3.0
1	Dg	27	GLY	3.0
1	IH	92	ASP	3.0
1	DK	54	GLN	3.0
1	JK	54	GLN	3.0
2	Dh	6	A	3.0
2	Fw	8	U	3.0
1	G5	50	MET	3.0
1	HU	216	VAL	3.0
2	Cc	8	U	3.0
2	DD	7	U	3.0
2	E7	9	U	3.0
2	IX	14	U	3.0
2	Ih	7	U	3.0
1	JU	81	PRO	3.0
1	JM	222	LEU	3.0
2	AD	5	U	3.0

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Mol	Chain	Res	Type	RSRZ
2	CD	5	U	3.0
2	Fr	11	U	3.0
2	ES	12	A	3.0
1	Ff	50	MET	3.0
1	HW	175	GLU	3.0
1	Ag	27	GLY	3.0
1	DC	27	GLY	3.0
2	F7	12	A	3.0
2	Gr	4	A	3.0
2	G2	7	U	3.0
2	AS	4	A	3.0
2	AN	14	U	2.9
2	Ew	14	U	2.9
2	Hm	14	U	2.9
2	JN	5	U	2.9
1	GL	51	GLY	2.9
1	IH	70	SER	2.9
2	Dm	12	A	2.9
2	ED	12	A	2.9
2	Cm	7	U	2.9
2	Gr	8	U	2.9
2	IX	11	U	2.9
2	Iw	8	U	2.9
1	CC	54	GLN	2.9
1	Ev	54	GLN	2.9
1	FR	92	ASP	2.9
1	GC	238	SER	2.9
2	Jc	4	A	2.9
1	IC	91	GLY	2.9
1	Hj	93	LYS	2.9
1	CQ	51	GLY	2.9
2	AX	14	U	2.9
2	Ah	5	U	2.9
2	Am	11	U	2.9
2	CX	8	U	2.9
2	D2	13	U	2.9
2	Hw	14	U	2.9
2	JN	8	U	2.9
2	Jr	13	U	2.9
1	BB	52	GLN	2.9
1	Ib	54	GLN	2.9
1	Fe	222	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
2	Ah	13	U	2.9
2	B2	7	U	2.9
2	I2	7	U	2.9
1	GQ	238	SER	2.9
2	Br	9	U	2.9
2	CN	13	U	2.9
2	Cw	7	U	2.9
2	Gh	13	U	2.9
2	Gw	11	U	2.9
2	CD	12	A	2.9
1	FQ	93	LYS	2.9
1	Ik	150	LEU	2.9
1	Iu	50	MET	2.9
2	DD	11	U	2.9
2	F2	14	U	2.9
2	HD	11	U	2.9
1	CB	92	ASP	2.9
1	CF	92	ASP	2.9
1	AM	27	GLY	2.9
1	G4	194	LEU	2.9
2	AX	10	U	2.9
2	BD	8	U	2.9
2	Cw	5	U	2.9
2	ED	5	U	2.9
2	Ew	13	U	2.9
2	Gm	5	U	2.9
1	Jz	51	GLY	2.9
1	Fz	70	SER	2.8
1	H4	212	SER	2.8
1	Eg	54	GLN	2.8
1	Fg	57	GLN	2.8
1	IF	54	GLN	2.8
2	Am	14	U	2.8
2	F2	7	U	2.8
2	Ic	8	U	2.8
1	Fe	95	ILE	2.8
1	IA	218	ILE	2.8
1	GC	177	ARG	2.8
1	Gj	191	PHE	2.8
1	IA	191	PHE	2.8
1	Fo	93	LYS	2.8
2	A2	5	U	2.8

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Mol	Chain	Res	Type	RSRZ
2	BS	5	U	2.8
2	C2	14	U	2.8
2	G2	13	U	2.8
1	GM	89	PRO	2.8
1	Jg	26	ARG	2.8
1	Gj	133	ASN	2.8
1	DU	215	ALA	2.8
1	Go	220	LEU	2.8
1	Jy	143	SER	2.8
2	Dc	6	A	2.8
2	Em	7	U	2.8
2	F7	8	U	2.8
2	H2	8	U	2.8
1	HW	92	ASP	2.8
1	I5	51	GLY	2.8
1	Ht	216	VAL	2.8
1	B5	50	MET	2.8
1	Ff	230	GLU	2.8
1	He	177	ARG	2.8
2	Bm	14	U	2.8
2	B7	14	U	2.8
2	CS	5	U	2.8
2	DS	10	U	2.8
2	GS	8	U	2.8
2	GS	14	U	2.8
2	Hm	13	U	2.8
2	H2	14	U	2.8
2	CI	12	A	2.8
2	Eh	4	A	2.8
1	GK	96	TYR	2.8
1	Ij	214	GLN	2.8
2	Eh	14	U	2.8
2	Em	8	U	2.8
2	JX	11	U	2.8
2	Jm	11	U	2.8
2	IS	12	A	2.8
2	Iw	6	A	2.8
1	JM	92	ASP	2.8
1	Hu	202	TYR	2.8
1	FZ	215	ALA	2.8
1	IA	90	ALA	2.8
1	J5	50	MET	2.8

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Mol	Chain	Res	Type	RSRZ
1	Ja	93	LYS	2.8
2	IS	15	U	2.8
2	J2	8	U	2.8
2	FD	4	A	2.8
2	HS	12	A	2.8
1	E5	93	LYS	2.8
1	Hf	133	ASN	2.8
1	H1	52	GLN	2.8
1	IA	115	TRP	2.8
2	Aw	7	U	2.8
2	Fc	7	U	2.8
1	H4	70	SER	2.8
1	Gl	92	ASP	2.8
1	HL	52	GLN	2.8
1	IC	39	TYR	2.8
2	DS	12	A	2.8
2	Hc	6	A	2.8
2	Jw	4	A	2.8
1	Bz	50	MET	2.8
1	Ha	50	MET	2.8
2	C2	7	U	2.8
2	Dr	14	U	2.8
2	ED	13	U	2.8
2	GD	13	U	2.8
2	Gh	5	U	2.8
2	Jr	15	U	2.8
1	JP	218	ILE	2.8
1	Eb	26	ARG	2.8
1	G5	93	LYS	2.8
1	Hf	197	GLU	2.8
1	J4	211	SER	2.8
1	Ff	90	ALA	2.8
1	Gk	215	ALA	2.8
1	Dp	50	MET	2.7
2	IX	12	A	2.7
2	Ic	6	A	2.7
2	Im	12	A	2.7
1	FL	51	GLY	2.7
2	EX	7	U	2.7
2	E7	14	U	2.7
2	G2	11	U	2.7
2	JI	13	U	2.7

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Mol	Chain	Res	Type	RSRZ
1	H6	93	LYS	2.7
1	IC	114	ARG	2.7
1	IC	186	ILE	2.7
1	Jz	58	LYS	2.7
1	H4	96	TYR	2.7
1	Fg	93	LYS	2.7
1	I1	58	LYS	2.7
2	B2	6	A	2.7
2	A2	10	U	2.7
2	C7	5	U	2.7
2	Fw	14	U	2.7
1	Fo	94	PRO	2.7
1	GU	92	ASP	2.7
1	I1	70	SER	2.7
2	C2	13	U	2.7
2	D2	7	U	2.7
2	GS	13	U	2.7
2	Hh	14	U	2.7
2	Ec	6	A	2.7
1	Ge	216	VAL	2.7
1	EG	238	SER	2.7
1	Gy	96	TYR	2.7
1	Go	218	ILE	2.7
2	Am	13	U	2.7
2	Ec	10	U	2.7
2	IS	5	U	2.7
1	CV	93	LYS	2.7
1	Gl	93	LYS	2.7
1	Go	150	LEU	2.7
1	IC	120	PHE	2.7
2	Cm	5	U	2.7
2	Cr	11	U	2.7
2	Ew	11	U	2.7
2	Fh	9	U	2.7
1	Ff	160	VAL	2.7
1	JH	209	VAL	2.7
2	CX	12	A	2.7
2	Dm	6	A	2.7
1	BA	90	ALA	2.7
1	I1	53	GLY	2.7
1	JR	70	SER	2.7
1	JK	93	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
2	Cw	10	U	2.7
2	EI	5	U	2.7
2	Fc	15	U	2.7
2	HN	13	U	2.7
1	Fe	86	LEU	2.7
1	Gl	94	PRO	2.7
1	JZ	92	ASP	2.7
1	Fe	234	ALA	2.7
1	Jk	51	GLY	2.7
2	FS	4	A	2.7
1	FP	70	SER	2.7
1	FV	238	SER	2.7
1	Du	50	MET	2.7
1	GK	95	ILE	2.7
2	Gc	7	U	2.7
1	Fo	216	VAL	2.7
1	Go	86	LEU	2.7
1	Gy	66	LEU	2.7
1	IC	93	LYS	2.7
1	IH	238	SER	2.7
1	BW	32	ARG	2.7
2	AN	7	U	2.7
2	A7	14	U	2.7
2	BI	14	U	2.7
2	BS	8	U	2.7
2	D2	10	U	2.7
2	F2	8	U	2.7
2	Gr	15	U	2.7
2	HX	13	U	2.7
1	Gp	58	LYS	2.7
1	AG	50	MET	2.6
1	Fj	139	TYR	2.6
2	Bc	6	A	2.6
2	Bc	12	A	2.6
2	EX	4	A	2.6
2	BI	7	U	2.6
2	BX	7	U	2.6
2	Bh	13	U	2.6
1	JA	150	LEU	2.6
1	JM	150	LEU	2.6
1	IB	68	VAL	2.6
1	AB	51	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	Jq	27	GLY	2.6
2	Aw	13	U	2.6
2	F7	11	U	2.6
2	Jr	11	U	2.6
1	Ij	222	LEU	2.6
1	Jq	216	VAL	2.6
1	H6	82	ILE	2.6
1	JC	70	SER	2.6
2	Ac	11	U	2.6
2	Ar	7	U	2.6
2	CS	7	U	2.6
2	G7	5	U	2.6
1	G5	223	LEU	2.6
1	JK	153	LEU	2.6
1	AK	92	ASP	2.6
1	F1	27	GLY	2.6
1	GA	177	ARG	2.6
1	Jb	27	GLY	2.6
2	FI	12	A	2.6
2	JD	4	A	2.6
1	JR	90	ALA	2.6
1	DB	50	MET	2.6
1	Ge	54	GLN	2.6
1	JM	238	SER	2.6
1	JW	70	SER	2.6
2	GN	13	U	2.6
1	Fz	51	GLY	2.6
1	Fe	94	PRO	2.6
2	Dc	4	A	2.6
2	GI	6	A	2.6
2	Gc	12	A	2.6
2	Ah	14	U	2.6
2	Ar	5	U	2.6
2	Cw	14	U	2.6
2	Ic	5	U	2.6
2	Ir	13	U	2.6
1	Fg	115	TRP	2.6
1	Ht	153	LEU	2.6
1	JP	91	GLY	2.6
2	AD	11	U	2.6
2	BS	14	U	2.6
2	CX	15	U	2.6

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Mol	Chain	Res	Type	RSRZ
1	IB	96	TYR	2.6
1	Dv	26	ARG	2.6
1	H4	226	ARG	2.6
1	Ig	177	ARG	2.6
1	Fb	93	LYS	2.6
2	GX	6	A	2.6
1	G5	106	ILE	2.6
1	IB	214	GLN	2.6
1	A5	51	GLY	2.6
1	If	50	MET	2.6
2	CI	11	U	2.6
2	E7	7	U	2.6
2	Jm	14	U	2.6
1	Fe	139	TYR	2.6
1	H4	209	VAL	2.6
1	EZ	93	LYS	2.6
1	HB	51	GLY	2.6
1	Il	59	LEU	2.6
2	DN	5	U	2.6
2	Dw	11	U	2.6
2	Fm	5	U	2.6
2	G2	10	U	2.6
2	I2	14	U	2.6
2	Jc	14	U	2.6
2	Jr	7	U	2.6
1	Cv	92	ASP	2.6
1	Gp	133	ASN	2.6
1	Ij	133	ASN	2.6
1	GC	53	GLY	2.5
2	AI	8	U	2.5
2	BX	15	U	2.5
2	FI	15	U	2.5
1	Dt	215	ALA	2.5
1	Il	188	ALA	2.5
1	Fg	179	ASN	2.5
1	JW	89	PRO	2.5
1	Gt	91	GLY	2.5
1	H4	66	LEU	2.5
1	GV	50	MET	2.5
1	Ge	93	LYS	2.5
1	G4	199	LYS	2.5
2	Bh	10	U	2.5

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Mol	Chain	Res	Type	RSRZ
2	Cm	11	U	2.5
2	ES	11	U	2.5
2	Er	14	U	2.5
2	BX	6	A	2.5
1	Ek	93	LYS	2.5
1	G1	186	ILE	2.5
1	A5	223	LEU	2.5
1	G6	177	ARG	2.5
2	G2	15	U	2.5
2	ID	11	U	2.5
2	CX	6	A	2.5
2	Gm	6	A	2.5
1	Fk	219	GLN	2.5
1	H6	94	PRO	2.5
1	IF	93	LYS	2.5
1	JM	68	VAL	2.5
2	ED	14	U	2.5
1	FP	93	LYS	2.5
1	JP	90	ALA	2.5
1	JU	90	ALA	2.5
1	Ej	70	SER	2.5
1	Hf	87	SER	2.5
1	IF	216	VAL	2.5
2	AN	11	U	2.5
2	B7	11	U	2.5
2	D7	14	U	2.5
2	FI	10	U	2.5
2	HI	13	U	2.5
1	Dz	92	ASP	2.5
1	IG	93	LYS	2.5
1	JP	138	PHE	2.5
1	Hf	51	GLY	2.5
1	Iz	52	GLN	2.5
1	Hf	81	PRO	2.5
1	Hf	103	LEU	2.5
2	Jh	12	A	2.5
2	DX	5	U	2.5
2	Hr	9	U	2.5
2	Iw	5	U	2.5
1	Ct	54	GLN	2.5
1	EV	178	GLY	2.5
1	HH	238	SER	2.5

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Mol	Chain	Res	Type	RSRZ
1	Il	94	PRO	2.5
2	Fh	10	U	2.5
1	IC	226	ARG	2.5
1	AR	57	GLN	2.5
1	Fe	97	SER	2.5
1	H4	164	SER	2.5
2	DN	13	U	2.5
2	ES	14	U	2.5
2	GX	13	U	2.5
2	HX	5	U	2.5
1	HH	92	ASP	2.5
2	Br	6	A	2.5
2	Fm	4	A	2.5
2	IN	6	A	2.5
1	B6	93	LYS	2.5
1	F1	53	GLY	2.5
1	HW	90	ALA	2.5
1	IB	93	LYS	2.5
1	Fg	139	TYR	2.5
1	B5	216	VAL	2.4
1	Cf	50	MET	2.4
2	BD	14	U	2.4
2	Bh	9	U	2.4
2	CX	13	U	2.4
2	DS	7	U	2.4
2	F7	5	U	2.4
2	Gr	14	U	2.4
1	Iy	93	LYS	2.4
1	Ej	221	GLY	2.4
2	Ac	12	A	2.4
2	FD	12	A	2.4
1	FC	37	LEU	2.4
1	IF	70	SER	2.4
1	G6	58	LYS	2.4
2	BX	13	U	2.4
2	FI	5	U	2.4
2	Fw	13	U	2.4
2	HX	15	U	2.4
2	IX	8	U	2.4
2	JX	5	U	2.4
1	Bv	54	GLN	2.4
1	I5	52	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
2	CN	4	A	2.4
2	FN	12	A	2.4
1	IC	43	LEU	2.4
1	Fo	70	SER	2.4
2	EN	7	U	2.4
2	I2	13	U	2.4
1	HR	92	ASP	2.4
1	IQ	92	ASP	2.4
1	BM	54	GLN	2.4
1	CA	54	GLN	2.4
1	Fk	214	GLN	2.4
1	H1	54	GLN	2.4
1	Ij	132	GLY	2.4
1	DH	26	ARG	2.4
1	Gp	74	ALA	2.4
1	F6	93	LYS	2.4
1	GK	106	ILE	2.4
1	IB	191	PHE	2.4
1	Fg	97	SER	2.4
2	AS	14	U	2.4
2	EN	9	U	2.4
2	Ic	15	U	2.4
1	Bv	53	GLY	2.4
1	Fa	53	GLY	2.4
1	IF	92	ASP	2.4
1	FL	93	LYS	2.4
1	GK	186	ILE	2.4
1	Il	89	PRO	2.4
2	Bm	12	A	2.4
2	JI	12	A	2.4
1	Ca	238	SER	2.4
1	GL	210	GLY	2.4
2	DI	5	U	2.4
2	Fc	14	U	2.4
2	HS	9	U	2.4
1	GC	93	LYS	2.4
1	GK	136	LEU	2.4
1	He	147	PRO	2.4
1	Hu	184	ARG	2.4
1	Ib	26	ARG	2.4
1	JF	216	VAL	2.4
1	EU	92	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
1	FL	58	LYS	2.4
1	JU	91	GLY	2.4
2	Bh	7	U	2.4
1	HW	50	MET	2.4
1	G6	179	ASN	2.4
1	Ge	90	ALA	2.4
1	JK	103	LEU	2.4
1	J4	150	LEU	2.4
1	DW	93	LYS	2.4
1	Ff	120	PHE	2.4
1	Fj	216	VAL	2.4
1	IQ	93	LYS	2.4
1	Ek	52	GLN	2.4
1	HZ	54	GLN	2.4
2	AD	14	U	2.4
2	Aw	8	U	2.4
2	DS	5	U	2.4
2	EN	5	U	2.4
2	Ew	8	U	2.4
2	GD	15	U	2.4
2	II	8	U	2.4
1	AB	50	MET	2.4
2	FI	4	A	2.4
2	Jw	6	A	2.4
1	Fa	238	SER	2.4
1	Hz	74	ALA	2.4
1	Gb	153	LEU	2.4
1	Gp	150	LEU	2.4
1	JR	186	ILE	2.4
1	BM	27	GLY	2.4
1	Hj	139	TYR	2.4
1	I4	216	VAL	2.4
1	AQ	92	ASP	2.4
1	H6	54	GLN	2.4
1	IG	214	GLN	2.4
2	AI	13	U	2.4
2	Br	11	U	2.4
2	Bw	9	U	2.4
2	Cw	13	U	2.4
2	HX	9	U	2.4
2	Hw	5	U	2.4
2	Iw	13	U	2.4

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Mol	Chain	Res	Type	RSRZ
2	Jm	7	U	2.4
1	Ca	50	MET	2.4
1	DM	238	SER	2.4
2	Gh	12	A	2.4
2	Jr	6	A	2.4
1	CP	93	LYS	2.4
1	Hg	186	ILE	2.4
1	Ju	94	PRO	2.3
1	Gt	92	ASP	2.3
2	Ah	11	U	2.3
2	Bw	5	U	2.3
2	B2	14	U	2.3
2	Dw	7	U	2.3
2	D2	8	U	2.3
2	FI	9	U	2.3
1	Bt	90	ALA	2.3
1	Ij	199	LYS	2.3
1	Fg	136	LEU	2.3
1	F1	37	LEU	2.3
1	Ge	70	SER	2.3
1	JM	220	LEU	2.3
2	EI	6	A	2.3
2	E7	12	A	2.3
1	JW	53	GLY	2.3
1	Hf	58	LYS	2.3
2	BI	13	U	2.3
2	Bw	7	U	2.3
2	Er	7	U	2.3
2	IN	11	U	2.3
1	GK	116	ARG	2.3
1	Ff	234	ALA	2.3
1	Dq	53	GLY	2.3
1	GV	51	GLY	2.3
1	A6	226	ARG	2.3
1	FC	92	ASP	2.3
2	Bm	13	U	2.3
2	Cc	13	U	2.3
2	HS	5	U	2.3
1	Jp	90	ALA	2.3
1	G1	77	ILE	2.3
1	IC	58	LYS	2.3
1	Ev	52	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
1	Go	78	GLN	2.3
1	HF	214	GLN	2.3
1	IA	177	ARG	2.3
2	Ec	12	A	2.3
2	Im	6	A	2.3
2	AN	8	U	2.3
2	Cm	13	U	2.3
2	Hr	10	U	2.3
2	Hr	11	U	2.3
2	Jc	10	U	2.3
1	BG	50	MET	2.3
1	He	225	MET	2.3
1	Cv	95	ILE	2.3
1	Io	223	LEU	2.3
1	DV	238	SER	2.3
1	Gp	70	SER	2.3
1	IB	210	GLY	2.3
1	Gz	52	GLN	2.3
2	CN	12	A	2.3
1	Gq	181	PRO	2.3
1	JW	92	ASP	2.3
2	AI	9	U	2.3
2	BX	5	U	2.3
2	C7	14	U	2.3
2	Er	8	U	2.3
2	FN	11	U	2.3
2	FN	13	U	2.3
2	GS	5	U	2.3
1	JQ	90	ALA	2.3
1	Go	216	VAL	2.3
1	JF	54	GLN	2.3
1	EL	92	ASP	2.3
1	Ek	92	ASP	2.3
1	Hv	93	LYS	2.3
2	IX	7	U	2.3
2	AS	6	A	2.3
2	EN	12	A	2.3
2	HI	12	A	2.3
1	Cp	50	MET	2.3
1	Fj	90	ALA	2.3
1	EH	27	GLY	2.3
1	Hv	27	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	G4	70	SER	2.3
1	HK	69	ASN	2.3
1	CK	216	VAL	2.3
1	IG	212	SER	2.3
1	Hj	58	LYS	2.3
1	G5	89	PRO	2.3
1	JU	92	ASP	2.3
2	Dh	7	U	2.3
2	Gr	13	U	2.3
2	Gw	13	U	2.3
1	Gj	193	ALA	2.3
1	JW	90	ALA	2.3
1	BC	178	GLY	2.3
2	Gr	6	A	2.3
1	Cb	52	GLN	2.3
1	GL	212	SER	2.3
1	Ij	147	PRO	2.3
2	D7	5	U	2.3
2	FS	15	U	2.3
2	H7	9	U	2.3
2	Ih	13	U	2.3
1	Fg	51	GLY	2.3
1	HR	53	GLY	2.3
2	Aw	12	A	2.3
2	Cc	12	A	2.3
2	Fh	6	A	2.3
1	DV	52	GLN	2.3
1	F6	176	THR	2.2
1	JF	143	SER	2.2
2	Ch	9	U	2.2
2	Er	13	U	2.2
1	Fl	115	TRP	2.2
1	Fu	50	MET	2.2
1	He	136	LEU	2.2
1	Il	66	LEU	2.2
1	Hg	202	TYR	2.2
1	J4	95	ILE	2.2
1	Fg	182	GLU	2.2
1	Fz	52	GLN	2.2
1	G1	54	GLN	2.2
2	AN	12	A	2.2
2	Fc	6	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	Ao	70	SER	2.2
1	Gb	70	SER	2.2
1	EA	93	LYS	2.2
2	Cm	14	U	2.2
2	Hh	8	U	2.2
2	H2	9	U	2.2
2	H7	5	U	2.2
1	EM	86	LEU	2.2
1	Hg	91	GLY	2.2
1	Hj	193	ALA	2.2
1	IA	153	LEU	2.2
1	Hb	95	ILE	2.2
1	Hg	115	TRP	2.2
1	JR	191	PHE	2.2
1	J5	202	TYR	2.2
1	Hg	32	ARG	2.2
1	DU	192	SER	2.2
1	Cz	51	GLY	2.2
1	H5	178	GLY	2.2
1	IA	92	ASP	2.2
2	FI	11	U	2.2
2	F2	11	U	2.2
1	IA	147	PRO	2.2
1	FZ	54	GLN	2.2
1	Hf	52	GLN	2.2
1	I1	52	GLN	2.2
1	CV	216	VAL	2.2
1	DL	93	LYS	2.2
1	Fk	69	ASN	2.2
1	AL	238	SER	2.2
1	GQ	178	GLY	2.2
1	Hg	149	THR	2.2
1	J4	70	SER	2.2
2	IX	6	A	2.2
2	JD	12	A	2.2
2	Bc	11	U	2.2
2	EN	11	U	2.2
2	Ir	11	U	2.2
1	A4	215	ALA	2.2
1	Jt	90	ALA	2.2
1	Ck	50	MET	2.2
1	Ep	52	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
1	FG	52	GLN	2.2
1	Ff	116	ARG	2.2
1	Gg	52	GLN	2.2
1	Ao	93	LYS	2.2
1	It	93	LYS	2.2
1	F6	115	TRP	2.2
1	He	115	TRP	2.2
1	GL	235	THR	2.2
2	Bw	11	U	2.2
2	FI	7	U	2.2
2	HX	10	U	2.2
2	Ew	12	A	2.2
1	IC	48	PRO	2.2
1	IC	224	ARG	2.2
1	Ij	90	ALA	2.2
1	Il	95	ILE	2.2
1	AW	52	GLN	2.2
1	Cz	50	MET	2.2
1	F5	50	MET	2.2
1	HA	96	TYR	2.2
1	Hj	118	LEU	2.2
1	Ie	92	ASP	2.2
1	FC	93	LYS	2.2
1	FZ	93	LYS	2.2
2	Fh	13	U	2.2
2	G7	11	U	2.2
1	HR	238	SER	2.2
1	Hj	95	ILE	2.2
1	J4	191	PHE	2.2
2	Ah	8	U	2.2
1	Cz	54	GLN	2.2
1	Fe	147	PRO	2.2
1	JC	52	GLN	2.2
1	IA	209	VAL	2.2
1	Af	51	GLY	2.2
1	FR	93	LYS	2.2
1	Gg	27	GLY	2.2
1	Gl	177	ARG	2.2
1	JW	93	LYS	2.2
1	He	223	LEU	2.2
2	Br	13	U	2.2
2	D2	9	U	2.2

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Mol	Chain	Res	Type	RSRZ
2	Eh	15	U	2.2
1	FR	186	ILE	2.2
1	Ff	54	GLN	2.2
1	H5	94	PRO	2.2
1	IM	52	GLN	2.2
1	JA	89	PRO	2.2
1	JQ	238	SER	2.2
1	Gg	231	MET	2.2
2	DI	12	A	2.2
1	J4	88	VAL	2.2
1	CV	51	GLY	2.2
1	Gq	178	GLY	2.2
1	Ff	92	ASP	2.2
1	Fk	215	ALA	2.2
1	I4	191	PHE	2.2
2	Bh	11	U	2.2
2	ES	13	U	2.2
2	Gm	14	U	2.2
2	JX	13	U	2.2
1	JZ	95	ILE	2.2
1	Db	238	SER	2.2
1	IA	70	SER	2.2
1	JK	147	PRO	2.2
1	JL	231	MET	2.2
1	EF	177	ARG	2.2
1	JZ	216	VAL	2.2
2	CS	4	A	2.2
2	Jr	12	A	2.2
1	Gp	220	LEU	2.1
1	JK	207	LEU	2.1
2	Dh	14	U	2.1
2	EX	14	U	2.1
2	JD	8	U	2.1
2	Jh	14	U	2.1
1	DU	54	GLN	2.1
1	AQ	93	LYS	2.1
1	Dz	50	MET	2.1
1	Go	94	PRO	2.1
1	FC	177	ARG	2.1
1	Fa	51	GLY	2.1
1	JK	204	VAL	2.1
1	Gk	139	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	Jz	233	GLY	2.1
1	J4	96	TYR	2.1
2	EX	6	A	2.1
2	Fw	12	A	2.1
1	Eg	52	GLN	2.1
1	GU	193	ALA	2.1
1	HG	52	GLN	2.1
2	B7	7	U	2.1
2	FD	14	U	2.1
2	Fw	5	U	2.1
2	Gc	11	U	2.1
2	HS	14	U	2.1
2	Ih	5	U	2.1
2	Iw	7	U	2.1
1	GG	238	SER	2.1
1	JR	68	VAL	2.1
1	G5	96	TYR	2.1
1	Bl	93	LYS	2.1
1	H6	92	ASP	2.1
1	Cp	52	GLN	2.1
1	EZ	54	GLN	2.1
2	Cc	6	A	2.1
2	C2	4	A	2.1
2	DX	6	A	2.1
2	DX	12	A	2.1
1	FL	215	ALA	2.1
1	G1	226	ARG	2.1
1	HV	52	GLN	2.1
1	Hg	193	ALA	2.1
1	IP	95	ILE	2.1
1	JK	95	ILE	2.1
1	JP	219	GLN	2.1
1	Jq	54	GLN	2.1
2	AN	13	U	2.1
2	J7	13	U	2.1
1	Hg	89	PRO	2.1
1	Bt	68	VAL	2.1
1	Dk	51	GLY	2.1
1	Hg	53	GLY	2.1
1	J6	212	SER	2.1
1	DA	93	LYS	2.1
1	GL	93	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	DF	150	LEU	2.1
1	Gf	223	LEU	2.1
1	G4	153	LEU	2.1
1	H5	150	LEU	2.1
1	Ep	92	ASP	2.1
1	G4	197	GLU	2.1
1	HC	226	ARG	2.1
1	JC	177	ARG	2.1
1	JU	54	GLN	2.1
2	BD	7	U	2.1
2	Br	5	U	2.1
2	Bw	14	U	2.1
2	HI	5	U	2.1
2	Ah	6	A	2.1
1	IC	133	ASN	2.1
1	FA	93	LYS	2.1
1	Ff	216	VAL	2.1
1	Gg	210	GLY	2.1
1	H6	56	TRP	2.1
1	IL	51	GLY	2.1
1	IP	94	PRO	2.1
1	JA	91	GLY	2.1
1	Jv	27	GLY	2.1
1	JM	219	GLN	2.1
2	Ac	7	U	2.1
2	D2	11	U	2.1
1	BU	178	GLY	2.1
1	G1	91	GLY	2.1
1	Dt	216	VAL	2.1
1	I4	212	SER	2.1
1	H4	220	LEU	2.1
1	H4	223	LEU	2.1
1	JL	165	LEU	2.1
1	G1	54	GLN	2.1
1	IR	54	GLN	2.1
1	JK	186	ILE	2.1
1	J4	218	ILE	2.1
1	A6	93	LYS	2.1
1	Eb	93	LYS	2.1
1	HW	93	LYS	2.1
1	Ho	93	LYS	2.1
2	FD	13	U	2.1

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Mol	Chain	Res	Type	RSRZ
2	Gh	11	U	2.1
1	Fg	27	GLY	2.1
1	Fk	70	SER	2.1
1	Hg	220	LEU	2.1
1	J4	125	SER	2.1
1	GL	92	ASP	2.1
1	If	96	TYR	2.1
1	Iu	90	ALA	2.1
1	JM	229	ALA	2.1
2	Ac	9	U	2.1
2	Ac	13	U	2.1
2	E7	11	U	2.1
2	II	11	U	2.1
1	Db	91	GLY	2.1
1	G5	107	GLY	2.1
1	Fz	216	VAL	2.1
1	Ij	216	VAL	2.1
2	BI	12	A	2.1
1	D5	238	SER	2.1
1	Gq	58	LYS	2.1
1	IC	166	SER	2.1
1	Ij	115	TRP	2.1
1	Iy	212	SER	2.1
1	JG	58	LYS	2.1
2	AX	12	A	2.1
1	F5	52	GLN	2.1
1	AW	142	TYR	2.1
1	B1	92	ASP	2.1
1	JR	215	ALA	2.1
2	FX	11	U	2.1
2	Jc	11	U	2.1
2	Jr	5	U	2.1
1	Bg	53	GLY	2.1
1	EB	51	GLY	2.1
1	Ie	177	ARG	2.1
1	IA	216	VAL	2.1
1	FW	59	LEU	2.0
1	Fk	150	LEU	2.0
1	AC	238	SER	2.0
1	Hz	52	GLN	2.0
1	G1	92	ASP	2.0
1	H4	74	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	JB	106	ILE	2.0
1	Go	91	GLY	2.0
1	Hl	91	GLY	2.0
2	A7	13	U	2.0
2	Dm	5	U	2.0
2	Dm	13	U	2.0
2	Fr	14	U	2.0
1	IP	93	LYS	2.0
1	Fa	216	VAL	2.0
1	Hz	50	MET	2.0
1	Fk	191	PHE	2.0
1	Dk	52	GLN	2.0
1	Hq	220	LEU	2.0
1	JZ	54	GLN	2.0
1	HC	238	SER	2.0
1	Ie	238	SER	2.0
1	Gj	58	LYS	2.0
1	JR	202	TYR	2.0
1	JU	176	THR	2.0
1	CL	50	MET	2.0
1	Go	68	VAL	2.0
1	Dp	52	GLN	2.0
1	J4	177	ARG	2.0
1	Ff	58	LYS	2.0
1	I5	238	SER	2.0
1	Ju	92	ASP	2.0
1	Gl	56	TRP	2.0
2	Am	9	U	2.0
2	Br	14	U	2.0
2	GN	9	U	2.0
2	Hr	8	U	2.0
1	IZ	216	VAL	2.0
1	Ij	209	VAL	2.0
1	F1	94	PRO	2.0
1	Ht	223	LEU	2.0
1	IB	54	GLN	2.0
1	Ao	92	ASP	2.0
1	F1	92	ASP	2.0
1	H1	51	GLY	2.0
1	HU	70	SER	2.0
1	H6	202	TYR	2.0
2	AX	11	U	2.0

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Mol	Chain	Res	Type	RSRZ
2	Dc	14	U	2.0
2	Dm	7	U	2.0
2	G7	8	U	2.0
1	Gp	216	VAL	2.0
1	Hl	149	THR	2.0
2	G7	6	A	2.0
1	BG	93	LYS	2.0
1	GG	50	MET	2.0
1	Hf	191	PHE	2.0
1	Ij	191	PHE	2.0
1	Io	177	ARG	2.0
1	DG	52	GLN	2.0
1	JB	153	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	CA	Ij	301	1/1	0.63	0.17	130,130,130,130	0
3	CA	Hy	301	1/1	0.65	0.21	138,138,138,138	0
3	CA	I4	301	1/1	0.69	0.22	147,147,147,147	0
3	CA	JL	301	1/1	0.73	0.11	141,141,141,141	0
3	CA	JF	301	1/1	0.74	0.09	103,103,103,103	0
3	CA	C4	301	1/1	0.77	0.12	127,127,127,127	0
3	CA	Ht	301	1/1	0.78	0.11	88,88,88,88	0
3	CA	Ce	301	1/1	0.78	0.16	113,113,113,113	0
3	CA	FA	301	1/1	0.78	0.14	94,94,94,94	0
3	CA	IR	301	1/1	0.80	0.10	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	CA	Io	301	1/1	0.81	0.09	85,85,85,85	0
3	CA	Jt	301	1/1	0.81	0.11	154,154,154,154	0
3	CA	IA	301	1/1	0.82	0.09	115,115,115,115	0
3	CA	Eo	301	1/1	0.82	0.13	105,105,105,105	0
3	CA	If	301	1/1	0.82	0.11	124,124,124,124	0
3	CA	F1	301	1/1	0.83	0.10	102,102,102,102	0
3	CA	Bt	301	1/1	0.83	0.08	90,90,90,90	0
3	CA	Ge	301	1/1	0.86	0.18	121,121,121,121	0
3	CA	Ee	301	1/1	0.86	0.11	102,102,102,102	0
3	CA	At	301	1/1	0.87	0.09	99,99,99,99	0
3	CA	JP	301	1/1	0.87	0.31	143,143,143,143	0
3	CA	CU	301	1/1	0.87	0.07	96,96,96,96	0
3	CA	Jo	301	1/1	0.88	0.11	105,105,105,105	0
3	CA	AF	301	1/1	0.88	0.11	92,92,92,92	0
3	CA	J4	301	1/1	0.88	0.07	110,110,110,110	0
3	CA	H4	301	1/1	0.89	0.11	115,115,115,115	0
3	CA	G1	301	1/1	0.89	0.12	103,103,103,103	0
3	CA	Jy	301	1/1	0.89	0.08	123,123,123,123	0
3	CA	JU	301	1/1	0.89	0.10	100,100,100,100	0
3	CA	Fe	301	1/1	0.90	0.09	123,123,123,123	0
3	CA	Do	301	1/1	0.90	0.10	87,87,87,87	0
3	CA	A1	301	1/1	0.90	0.09	106,106,106,106	0
3	CA	A4	301	1/1	0.90	0.13	81,81,81,81	0
3	CA	G4	301	1/1	0.90	0.07	109,109,109,109	0
3	CA	AP	301	1/1	0.90	0.09	81,81,81,81	0
3	CA	FZ	301	1/1	0.90	0.07	106,106,106,106	0
3	CA	JA	301	1/1	0.90	0.14	109,109,109,109	0
3	CA	IU	301	1/1	0.91	0.09	88,88,88,88	0
3	CA	DU	301	1/1	0.91	0.20	113,113,113,113	0
3	CA	Gt	301	1/1	0.91	0.09	92,92,92,92	0
3	CA	Je	301	1/1	0.91	0.12	112,112,112,112	0
3	CA	Fk	301	1/1	0.91	0.09	96,96,96,96	0
3	CA	E4	301	1/1	0.91	0.19	98,98,98,98	0
3	CA	IF	301	1/1	0.91	0.12	111,111,111,111	0
3	CA	HZ	301	1/1	0.91	0.11	88,88,88,88	0
3	CA	HF	301	1/1	0.92	0.11	101,101,101,101	0
3	CA	DZ	301	1/1	0.92	0.12	68,68,68,68	0
3	CA	GF	301	1/1	0.92	0.20	105,105,105,105	0
3	CA	Af	301	1/1	0.92	0.13	105,105,105,105	0
3	CA	EZ	301	1/1	0.92	0.08	88,88,88,88	0
3	CA	By	301	1/1	0.92	0.11	90,90,90,90	0
3	CA	BU	301	1/1	0.92	0.07	110,110,110,110	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	CA	IK	301	1/1	0.92	0.11	105,105,105,105	0
3	CA	I1	301	1/1	0.93	0.07	117,117,117,117	0
3	CA	Ft	301	1/1	0.93	0.05	88,88,88,88	0
3	CA	BQ	301	1/1	0.93	0.10	93,93,93,93	0
3	CA	It	301	1/1	0.93	0.07	102,102,102,102	0
3	CA	GP	301	1/1	0.94	0.04	91,91,91,91	0
3	CA	GU	301	1/1	0.94	0.09	84,84,84,84	0
3	CA	GZ	301	1/1	0.94	0.12	104,104,104,104	0
3	CA	BZ	301	1/1	0.94	0.14	97,97,97,97	0
3	CA	Gj	301	1/1	0.94	0.09	126,126,126,126	0
3	CA	Go	301	1/1	0.94	0.07	102,102,102,102	0
3	CA	DP	301	1/1	0.94	0.08	67,67,67,67	0
3	CA	CP	301	1/1	0.94	0.12	71,71,71,71	0
3	CA	Be	301	1/1	0.94	0.09	53,53,53,53	0
3	CA	HA	301	1/1	0.94	0.07	93,93,93,93	0
3	CA	Dj	301	1/1	0.94	0.11	86,86,86,86	0
3	CA	HK	301	1/1	0.94	0.08	88,88,88,88	0
3	CA	BK	301	1/1	0.94	0.15	96,96,96,96	0
3	CA	Hg	301	1/1	0.94	0.07	102,102,102,102	0
3	CA	D4	301	1/1	0.94	0.15	77,77,77,77	0
3	CA	EK	301	1/1	0.94	0.10	89,89,89,89	0
3	CA	EP	301	1/1	0.94	0.17	84,84,84,84	0
3	CA	F4	301	1/1	0.94	0.06	95,95,95,95	0
3	CA	Cy	301	1/1	0.94	0.08	78,78,78,78	0
3	CA	Dt	301	1/1	0.95	0.08	76,76,76,76	0
3	CA	Hj	301	1/1	0.95	0.12	104,104,104,104	0
3	CA	Ho	301	1/1	0.95	0.16	95,95,95,95	0
3	CA	FF	301	1/1	0.95	0.09	100,100,100,100	0
3	CA	CG	301	1/1	0.95	0.07	79,79,79,79	0
3	CA	EC	301	1/1	0.95	0.16	90,90,90,90	0
3	CA	DK	301	1/1	0.95	0.10	101,101,101,101	0
3	CA	CK	301	1/1	0.95	0.09	105,105,105,105	0
3	CA	BB	301	1/1	0.95	0.15	114,114,114,114	0
3	CA	JZ	301	1/1	0.95	0.10	109,109,109,109	0
3	CA	Ao	301	1/1	0.95	0.05	93,93,93,93	0
3	CA	B5	301	1/1	0.95	0.10	95,95,95,95	0
3	CA	IZ	301	1/1	0.95	0.14	94,94,94,94	0
3	CA	Ey	301	1/1	0.95	0.24	95,95,95,95	0
3	CA	CA	301	1/1	0.95	0.04	93,93,93,93	0
3	CA	GA	301	1/1	0.96	0.07	90,90,90,90	0
3	CA	Et	301	1/1	0.96	0.07	71,71,71,71	0
3	CA	DF	301	1/1	0.96	0.05	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	CA	Dy	301	1/1	0.96	0.18	65,65,65,65	0
3	CA	CZ	301	1/1	0.96	0.07	84,84,84,84	0
3	CA	AU	301	1/1	0.96	0.11	102,102,102,102	0
3	CA	FU	301	1/1	0.96	0.11	91,91,91,91	0
3	CA	Cj	301	1/1	0.96	0.07	87,87,87,87	0
3	CA	Co	301	1/1	0.96	0.09	86,86,86,86	0
3	CA	EU	301	1/1	0.96	0.11	109,109,109,109	0
3	CA	Fo	301	1/1	0.96	0.07	96,96,96,96	0
3	CA	Df	301	1/1	0.96	0.05	74,74,74,74	0
3	CA	AA	301	1/1	0.96	0.13	75,75,75,75	0
3	CA	Aj	301	1/1	0.96	0.09	70,70,70,70	0
3	CA	HU	301	1/1	0.96	0.09	78,78,78,78	0
3	CA	EF	301	1/1	0.97	0.10	112,112,112,112	0
3	CA	GK	301	1/1	0.97	0.04	97,97,97,97	0
3	CA	Ct	301	1/1	0.97	0.11	79,79,79,79	0
3	CA	AL	301	1/1	0.97	0.13	85,85,85,85	0
3	CA	AZ	301	1/1	0.97	0.12	82,82,82,82	0
3	CA	Jj	301	1/1	0.97	0.13	74,74,74,74	0
3	CA	Bk	301	1/1	0.97	0.06	90,90,90,90	0
3	CA	Bo	301	1/1	0.97	0.11	74,74,74,74	0
3	CA	FK	301	1/1	0.97	0.11	91,91,91,91	0
3	CA	Ek	301	1/1	0.97	0.10	74,74,74,74	0
3	CA	FP	301	1/1	0.98	0.13	80,80,80,80	0
3	CA	BF	301	1/1	0.98	0.04	88,88,88,88	0
3	CA	DA	301	1/1	0.98	0.09	67,67,67,67	0
3	CA	HP	301	1/1	0.98	0.12	81,81,81,81	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.