

Supporting Information

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a.

	a	b	c	d	e	f	g
134					E	K	E
137	L	E	E	K	K	E	A
144	L	E				L	A
148	I	D	Q	A	S	R	D
155	Y					H	R
158	A	T	A	L	E	K	E
165	L	E	E	K	K	K	A
172	L	E				L	A
176	I	D	Q	A	S	Q	D
183	Y					N	R
186	A	N	V	L	E	K	E

b. M1*1R

	a	b	c	d	e	f	g
134	V	K	E	L	E	E	K
141	V	E	A	L	E	L	A
148	I	D	Q	A	S	R	D
155	Y	H	R	L	T	A	L
162	V	K	E	L	E	E	K
169	V	K	A	L	E	L	A
176	I	D	Q	A	S	Q	D
183	Y	N	R	L	N	V	L
190	V	K	E				

c. M1*2R

	a	b	c	d	e	f	g
134					E	K	E
137	V	E	E	L	K	E	A
144	V	E	L	L	I	D	Q
151	A	S	R	D	Y	H	R
158	V	T	A	L	E	K	E
165	V	E	E	L	K	K	A
172	V	E	L	L	I	D	Q
179	A	S	Q	D	Y	N	R
186	V	N	V	L	E	K	E

Fig. S1. Idealization of the B repeats. (A) Heptad positions of residues in the B repeats as predicted by Coils (12). Residues that correspond to register 1 are in red, and those that correspond to register 2 are in blue. (B) Sequence of M1*1R, with idealizing mutations in black and depicted in register 1. Residues that contact Fg in register 2 are bolded and italicized. (C) Sequence of M1*2R, with idealizing mutations in black and depicted in register 2. Residues that contact Fg in register 2 are bolded and italicized.

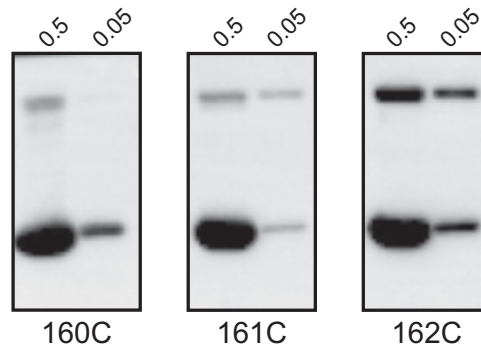


Fig. S2. Intradimer versus interdimer disulfide bond formation. Disulfide bond formation at 10-fold higher (0.5 mg/mL) or the same concentration (0.05 mg/mL) as in Fig. 4A, as assessed by nonreducing SDS/PAGE and visualized by Western blot using an anti-His antibody.

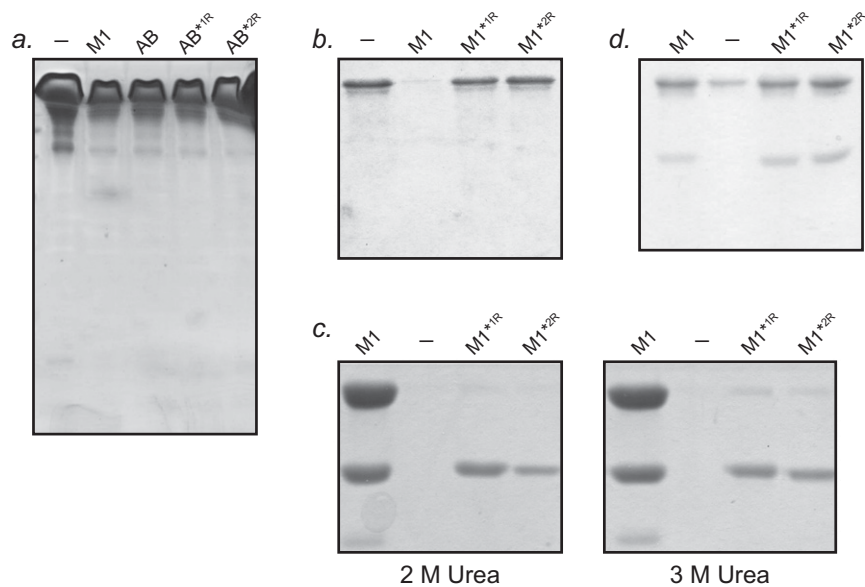


Fig. S3. Interaction with Fg. (A) Unbound proteins from Ni^{2+} -NTA coprecipitation assay for interaction of His-tagged AB proteins with FgD, as shown in Fig. 4B. (B) Unbound proteins from Ni^{2+} -NTA coprecipitation assay for interaction of His-tagged M1 proteins with FgD, as shown in Fig. 4C. (C) Ni^{2+} -NTA agarose coprecipitation assay for interaction of His-tagged M1 proteins with FgD at 37 °C carried out in the presence of 2 M (Left) or 3 M (Right) urea. Bound FgD was assessed through Coomassie-stained SDS/PAGE. (D) Unbound proteins from Ni^{2+} -NTA coprecipitation assay for interaction of His-tagged M1 proteins with FgD, as shown in Fig. 4E.

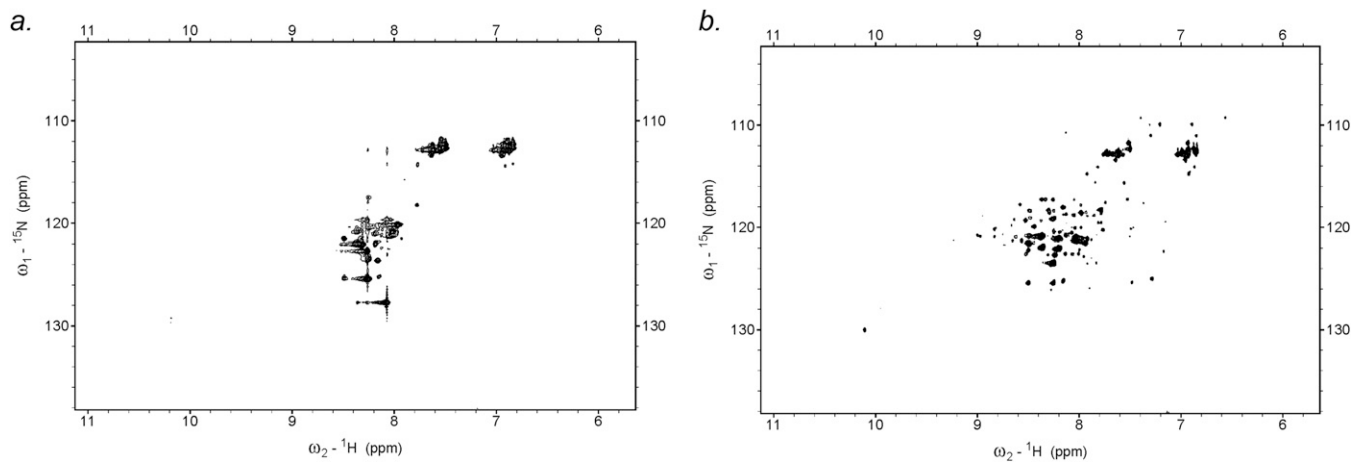


Fig. S4. AB*2R is a structured protein. ^1H - ^{15}N HSQC spectra of (A) AB (B) and AB*2R collected at 26 °C.

