## Self-Association of the Histidine Kinase CheA as Studied by Pulsed Dipolar ESR Spectroscopy

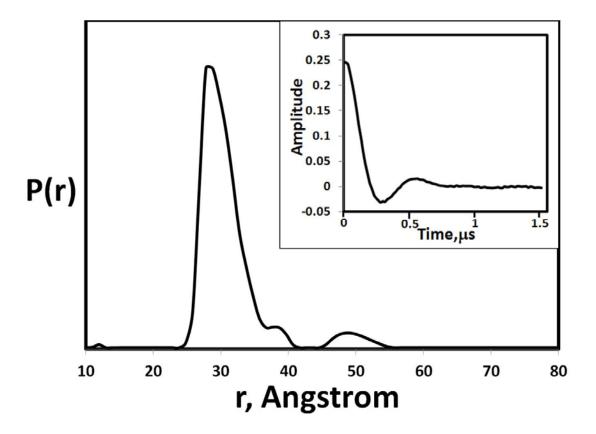
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## Supplemental Table S1. Intersubunit Spin-Spin Separations within the CheA $\!\Delta 289$ dimer.

Domains	Residue	$C_{\beta}$ separations in crystal	ESR Average	Full-width at half
	Pair	structure of CheA∆289,	Distance, (Å)	maximum from
		(Å)		P(r) ,(Å)
P4-P4	A371-B371	65	50	23
	A387-B387	49	50	18
	A401-B401	52	50	25
	A458-B458*	101	62	31
	A496-B496*	90	67	29
	A508-B508	72	60	20
	A522-B522*	67	69	9
P5-P5	A545-B545	41	44	23
	A553-B553	64	63	25
	A568-B568	74	62	22
	A634-B634	31	40	15
	A639-B639	32	45	13
	A646-B646	60	58	14

A and B represent the two CheA subunits. Dipolar signals from some sites marked "\*" were weak and contributed to only 40% of the total dipolar amplitude.



**FIGURE S1. A Characteristic Intra-molecular Dipolar Signal from the CheA P3 Domain.** Pairwise distance distribution for site E301C, which resides at the top of P3 domain with CheW. The distance distribution represents the width of the dimerization domain. **Inset:** Strong oscillating dipolar signal from site E301C after baseline correction.