

Supplementary Table 1. Orientation parameters for the BR probes on the C and E helices of TnC.

	C helix; TnC-BR₅₅₋₆₂			E helix; TnC-BR₉₅₋₁₀₂		
	5 mM MgATP (n=5)	5 mM MgATP + 25 μM Blebbistatin (n=4)	0 mM MgATP, Rigor (n=5)	5 mM MgATP (n=5)	5 mM MgATP + 25 μM Blebbistatin (n=4)	0 mM MgATP, Rigor (n=4)
<P_{2d}>						
pCa 9	0.867 ± 0.009	0.864 ± 0.010	0.847 ± 0.014	0.913 ± 0.009	0.905 ± 0.012	0.879 ± 0.017
pCa 4.2–3.8	0.858 ± 0.011	0.867 ± 0.011	0.851 ± 0.014	0.892 ± 0.011	0.901 ± 0.010	0.879 ± 0.015
<P₂>						
pCa 9	0.086 ± 0.003	0.086 ± 0.003	0.043 ± 0.010	0.207 ± 0.003	0.222 ± 0.002	0.038 ± 0.006
pCa 4.2–3.8	-0.011 ± 0.003	-0.004 ± 0.004	-0.019 ± 0.004	0.135 ± 0.006	0.167 ± 0.004	-0.010 ± 0.005
<P₄>						
pCa 9	-0.042 ± 0.006	-0.036 ± 0.002	-0.015 ± 0.010	-0.041 ± 0.006	-0.029 ± 0.007	0.003 ± 0.011
pCa 4.2–3.8	-0.036 ± 0.006	-0.033 ± 0.003	-0.026 ± 0.009	-0.061 ± 0.008	-0.058 ± 0.007	0.000 ± 0.010