



**Figure S10.** Binding isotherms generated by plotting the change in  $^1\text{H}$  and  $^{15}\text{N}$  chemical shifts ( $\Delta\delta$ ) as a function of peptide concentration. Titration data were fit by a one-site binding model. As indicated by the  $K_d$  values, FasDD peptides bind much weaker to isolated domains of  $\text{Ca}^{2+}/\text{CaM}$  than that of the full-length protein (15-268 vs. 0.3 and 1.1  $\mu\text{M}$ ). Data also show that both peptides have higher affinity to  $\text{Ca}^{2+}/\text{CaM-C}$  than  $\text{Ca}^{2+}/\text{CaM-N}$ .