



Supplementary Figure 3. Ca^{2+} binding properties of CaM accumulated from each fitted set. Cumulative probability plots of the fitted results (fitted parameters) for wild type CaM (filled symbols) and mutants (open symbols). The fast and low affinity cooperative pair measured in the wildtype CaM data (dark blue filled symbols) is grouped with the CaM_{EF34} data (light blue open symbols) based on comparable values indicating that the fast, low affinity pair represents the N-lobe (**N**). Similarly, the slower, high affinity cooperative pair measured in wildtype CaM (purple filled symbols) is grouped with the CaM_{EF12} data (pink open symbols) based on comparable values indicating that the slower, high affinity pair represents the C-lobe (**C**). Arrows indicate the transition from T-state (square symbols) to R state (triangular symbols) as Ca^{2+} binds. The circular symbols in the K_d graphs indicate the apparent K_d (equivalent to a steady state binding curve). The solid lines are fits with a log-normal distribution function for which the results can be found in Table 1 of the main text.