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Supplementary material for:

Apo-states of calmodulin and CaBP1 control Ca_V1 voltage-gated calcium channel function through direct competition for the IQ domain

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Inventory of Supplementary Material:

Supplementary Figures S1-S2

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Supplementary Fig. S1

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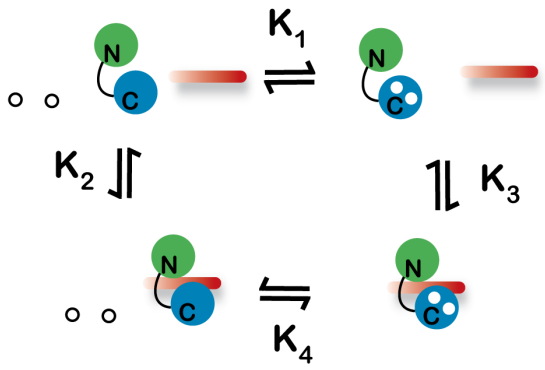

Supplementary Fig. S1 Thermodynamic analysis of CaM, Ca^{2+}, and IQ domain binding Macroscopic thermodynamic cycle for CaBP1, Ca^{2+} and $Ca_V1.2$ IQ domain. K_1 and K_4 describe Ca^{2+} binding to CaBP1 and the CaBP1/IQ complex, respectively. K_2 and K_3 describe IQ domain binding to calcium-free CaBP1 and Ca^{2+}/CaBP1, respectively.

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Supplementary Fig. S2

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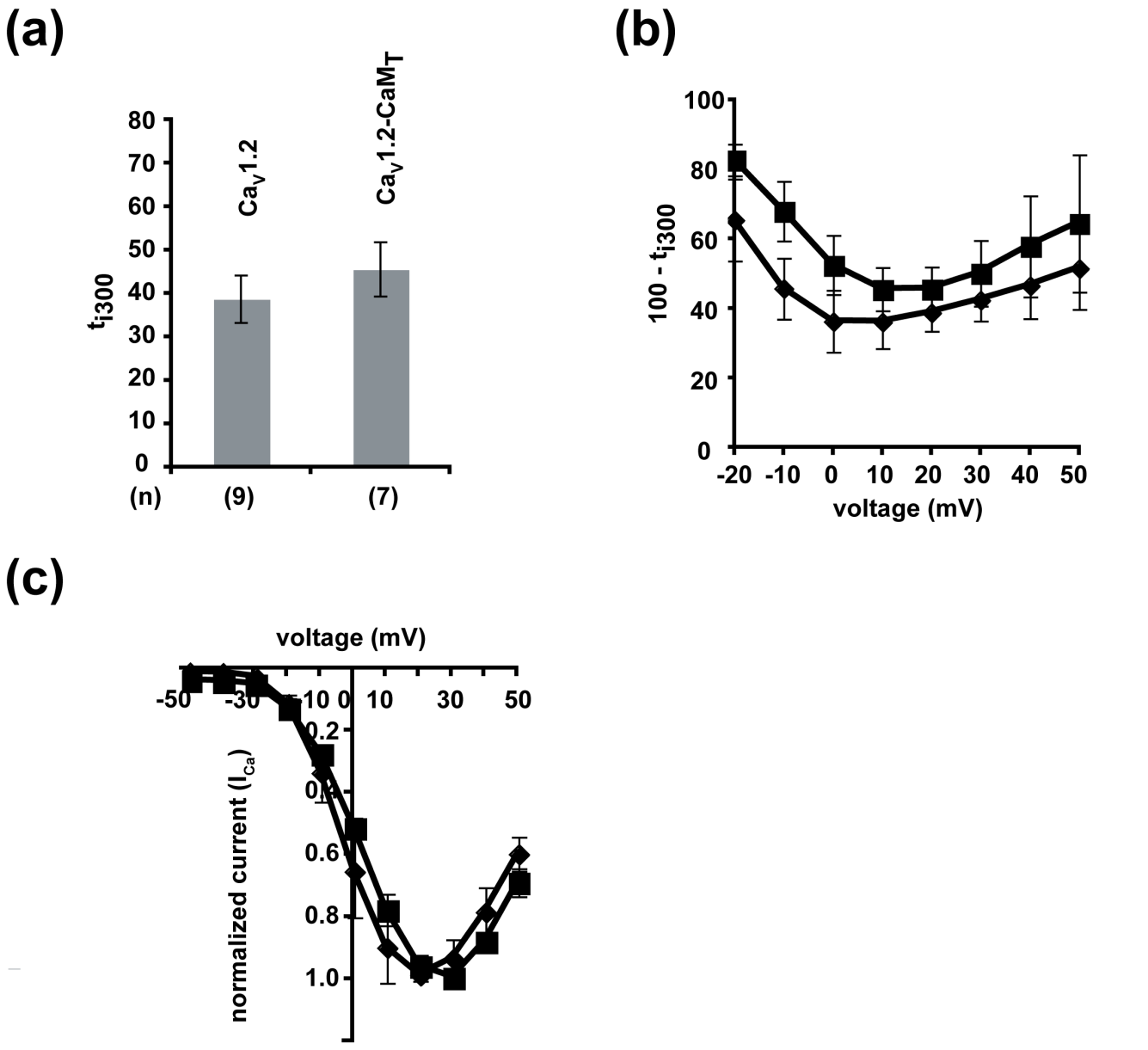

Supplementary Fig. S2 Functional properties of $Ca_V1.2\text{-}CaM_T$ are similar to the parent channel
a, Averaged t_i300 from normalized I_{Ca} traces at a test potential of +20 mV from *Xenopus* oocytes expressing $Ca_V1.2$ or $Ca_V1.2\text{-}CaM_T$. In all experiments mRNA for $Ca_V\beta_{2a}$ and $Ca_V\alpha_2\delta$-1 were injected at equimolar concentrations to $Ca_V1.2$. (n) indicates the number of experiments. **b,** Averaged remaining normalized current after 300 ms ($100 - t_{i300}$) at different test voltages from oocytes expressing $Ca_V1.2$ (◆) or $Ca_V1.2\text{-}CaM_T$ (■). **c,** Averaged normalized I_{Ca} as a function of voltage. Symbols are the same as in **'b'.**