

Supplementary materials

Article

Changes of resurgent Na⁺ currents in the Na_v1.4 channel resulting from an *SCN4A* mutation contributing to sodium channel myotonia

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Figure S1

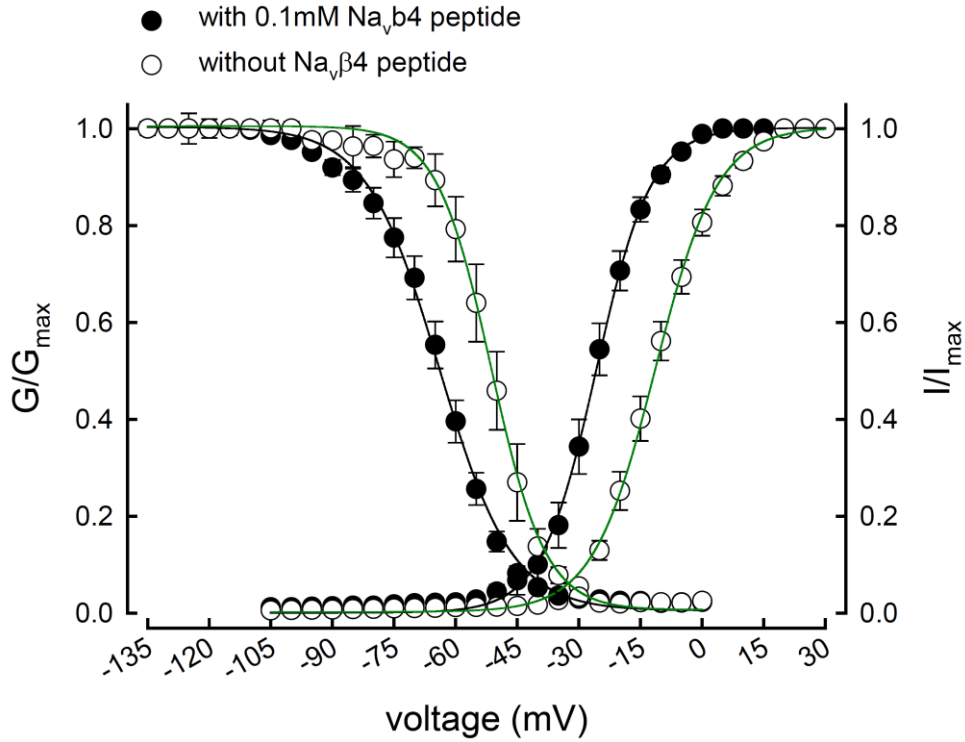


Figure S1. The activation and inactivation curves of the WT Na_v1.4 channel with and without of the 0.1mM Na_vβ4 peptide

The activation and inactivation curves for each cells are fitted with Boltzmann functions, and the cumulative results for V_h are -25.79 ± 1.5 mV and -11.43 ± 1.21 mV with and without the 0.1 mM Na_vβ4 peptides, respectively ($n=9$; $p<0.05$), and k are 6.67 ± 0.43 and 7.59 ± 0.34 with and without the 0.1 mM Na_vβ4 peptides for the inactivation curve, respectively ($n=9$; no significant difference). For the inactivation curves, the V_h are -63.99 ± 2.17 mV and -51.35 ± 1.51 mV with and without the 0.1 mM Na_vβ4 peptides, respectively ($n=9$; $p<0.05$), and k are -8.93 ± 0.33 and -6.62 ± 0.38 with and without the Na_vβ4 peptides, respectively ($n=9$; no significant difference).

Figure S2

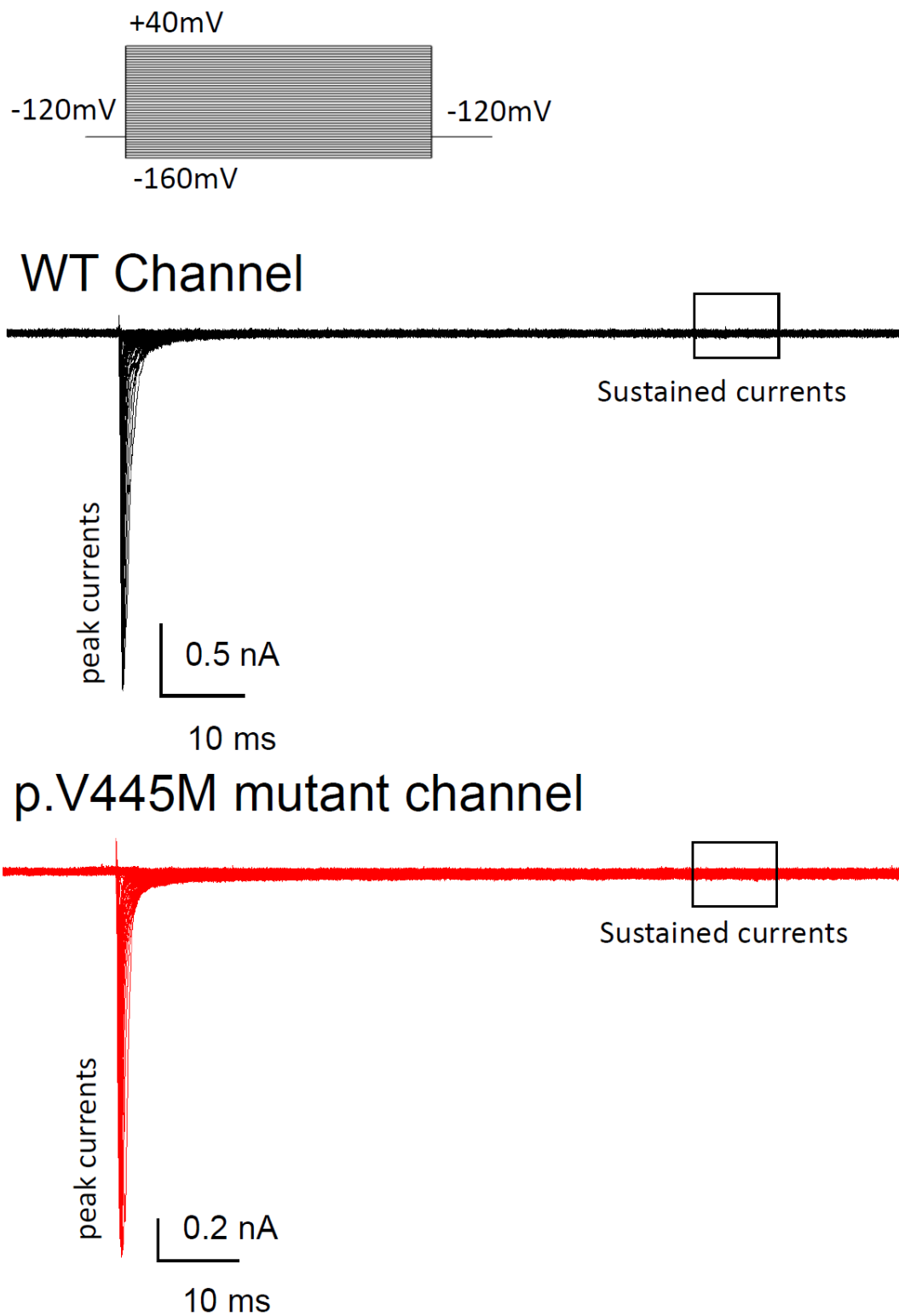


Figure S2. Sample sweeps shows the peak currents and sustained currents in WT and p.V445M mutant Na_v1.4 channels

Sample sweeps traces recorded from CHO-K1 cells expressing WT Nav1.4 and p.V445M mutant channels in response to activation stimulation protocol (~100 ms pulse). Sustained currents are seen as current remaining at the end of the 90-95 ms of stimulus duration. Note that the sustained currents are larger in the p.V445M mutant Nav1.4 channel compared to the WT channel.