



Figure 3- figure supplement 1. Paired-pulse stimulation at high frequency induces a negative shift in the Cav3.1 steady-state inactivation properties. **(a-b)** Steady-state inactivation of the Cav3.1 current measured using a paired-pulse stimulation (inter-stimulation 1s) applied 80 times (Stim 1 to Stim 80). The membrane potential (V_m) between the two pulses ranged from -110 to -50 mV, as illustrated in **(a)** for a V_m of -70 mV. Steady-state inactivation (measured at P2) as a function of the V_m is determined for the first stimulation (Stim 1) and for the 80th stimulation (Stim 80, **(b)**, $n=5-13$ per point). **(c)** Recovery from short-term inactivation of the Cav3.1 current measured by a paired-pulse stimulation (inter-stimulation 1s) applied 80 times (Stim 1 to Stim 80). The recovery from short-term inactivation, as a function of the interpulse duration (100, 400 or 1000 ms) is quantified for the first stimulation (Stim 1) and for the 80th stimulation ($n=8-9$ per point). **(d)** Activation curve of the Cav3.1 current measured during 1 Hz or 0.05 Hz stimulation. The Cav3.1 current was stimulated at 1 Hz or 0.05 Hz until reaching the steady-state just before I-V protocols, which were performed by a double-pulse protocol to maintain the 1 Hz stimulation effect ($n=6$).