



Fig. S7 | Rebound firing occurs only in a small region of parameter space. The post-spiking behavior of model neurons after a depolarization was examined for a grid of parameters, within known experimental values. A depolarizing current pulse triggers spikes at 100 ms. The rebound behavior is dependent on a complex interplay between a number of parameters, but most importantly, it

exists in a rather narrow range of the parameter space between T- and P/Q-type Ca^{2+} channels. For very low levels of $\text{Ca}_v3.1$ (T-type) expression, the model cell settles on an unphysiologically saturated depolarization after spiking. The cells in our model have $\text{Ca}_v2.1$ (P/Q-type) expression around 4.5 and $\text{Ca}_v3.1$ between 0.6 and 1.1.