

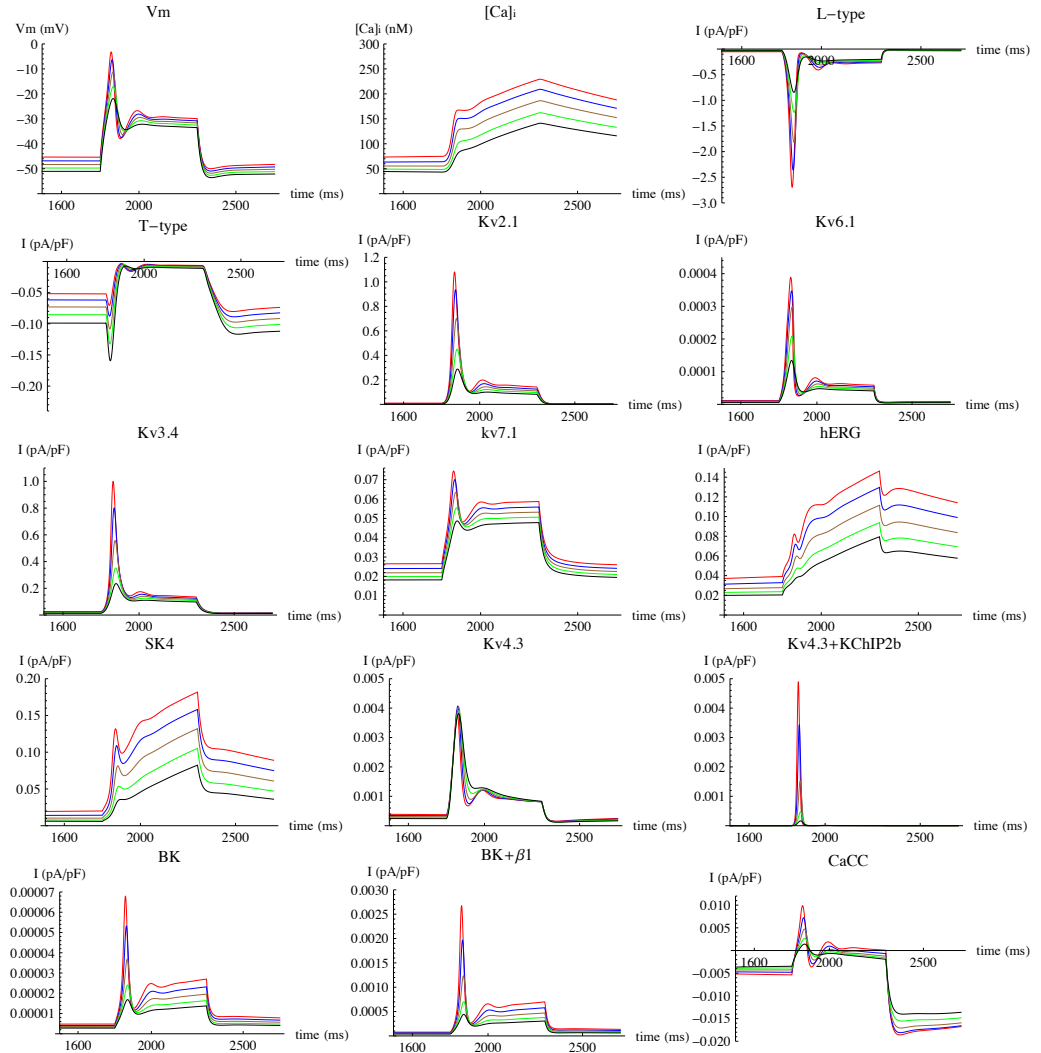


Figure S6: Effect of increasing Kir7.1 densities.

A free running simulation of the effect of increasing Kir7.1 densities on the myometrial AP waveform. Time-dependent effect of increasing Kir7.1 densities (red=0 channels/pF, blue=300 channels/pF, brown=600 channels/pF, green=900 channels/pF and black=1200 channels/pF) is depicted on V (mV), $[Ca^{2+}]_i$ (nM), and individual conductances (pA/pF) included in the simulation. Increasing density of Kir7.1 within physiologically realistic values, hyperpolarises RMP, whilst decreasing membrane excitability during depolarising excursions in V leading to decreasing calcium entry. Changing the channel density of Kir7.1 has a disproportionate effect on hERG, Kv7.1, SK4 and BK.