



Figure S1. (A) A single *iCell* neuron held in current clamp at -70 mV, transiently exposed to glutamate ($30 \mu\text{M}$) depolarizes the cell and evokes 4–5 spikes. (B) A single *iCell* neuron with bicuculline ($3 \mu\text{M}$) included in the bath solution transiently exposed to glutamate ($30 \mu\text{M}$) evokes depolarization and a train of action potential throughout the membrane depolarization. (C) A histogram of the number of action potentials recorded over 100 s when cells are depolarized in the absence (control) or presence of bicuculline. As can be seen, bicuculline significantly ($* p \leq 0.05$) increased the number of action potentials. The bars and lines represent the mean \pm sem of $n = 4$. The bath solution was Mg^{2+} -free; the internal solution was potassium gluconate-based. The time and voltage calibration bars = 25 s and 50 mV respectively. *iCells* were 9–10 weeks in vitro.