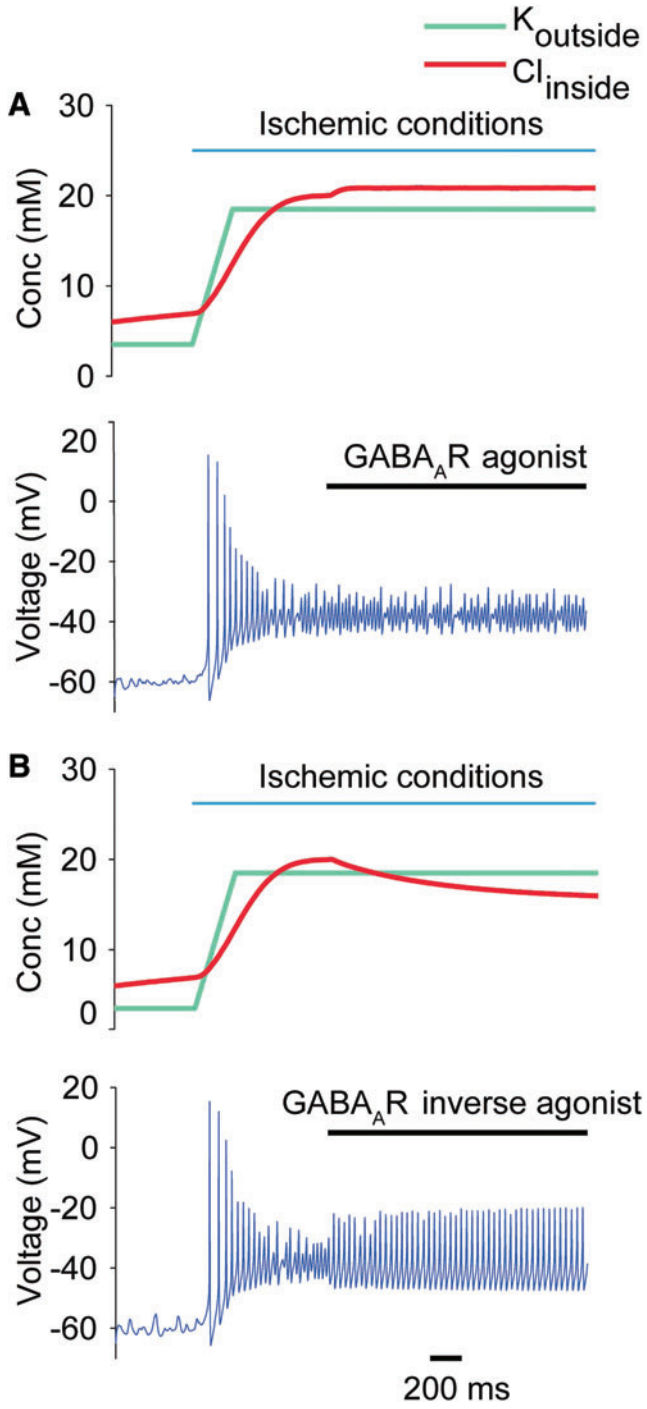

SUPPLEMENTARY FIG. S4. Effect of agonists and inverse agonists of $GABA_A$ receptors under ischemic conditions. **(A)** Response of the regular spiking (RS) neuron model to $GABA_A$ receptor agonists under ischemic conditions. The values of extracellular potassium and intracellular chloride are shown in the upper panel. Under these conditions, the model reaches depolarization block and $GABA_AR$ agonists are unable to rescue the neuron from depolarization block. Ischemic conditions were modeled as an increase in extracellular potassium concentration and continuous activation of $GABA_ARs$ by the increased extracellular GABA levels seen in ischemia, but not post-traumatic brain injury (TBI). **(B)** Response of the RS neuron model to $GABA_A$ receptor inverse agonists under ischemic conditions. $GABA_A$ receptor inverse agonists partially rescue the neuron from depolarization block under ischemic conditions.