See caption on next page.
**Supplemental Figure 4.** Gating of PP-evoked dendritic spikes by SC EPSPs (model cell 3).

(a) Color map of peak depolarization and voltage versus time plots at three dendritic locations for activation of 8% of PP synapses (one trial) in the weak dendritic excitability model. Scales in A apply to B and C as well.

(b) Response of the same model to activation of 2% of SC synapses in the upper apical dendrites.

(c) Response of the same model to coincident activation of 8% PP and 2% SC synapses. This model was obtained from Bartlett Mel’s web site at the University of Southern California ([http://www-lnc.usc.edu/CA1-pyramidal-cell-model/](http://www-lnc.usc.edu/CA1-pyramidal-cell-model/)). The model contains additional voltage-gated conductances that were not included in model cells 1 and 2.