

Figure S5. Calcium influx induces cell death in developing neurons from layer II at P5. (A, B) At P5 cells at layer II mCherry / mAG-hGem-electroporated neurons initiate nuclear expression of mAG-hGem (white arrowheads) but died shortly thereafter. Left panel: cortical slice used for time-lapse at P5 (*in utero* electroporated at E15). Right panel: Time-lapse sequence of layer II upon ionomycin treatment. Scale bar: (A)  $150 \mu m$  (left panel) and  $100 \mu m$  (right panel), (B)  $50 \mu m$  (left panel) and  $10 \mu m$  (right panel).