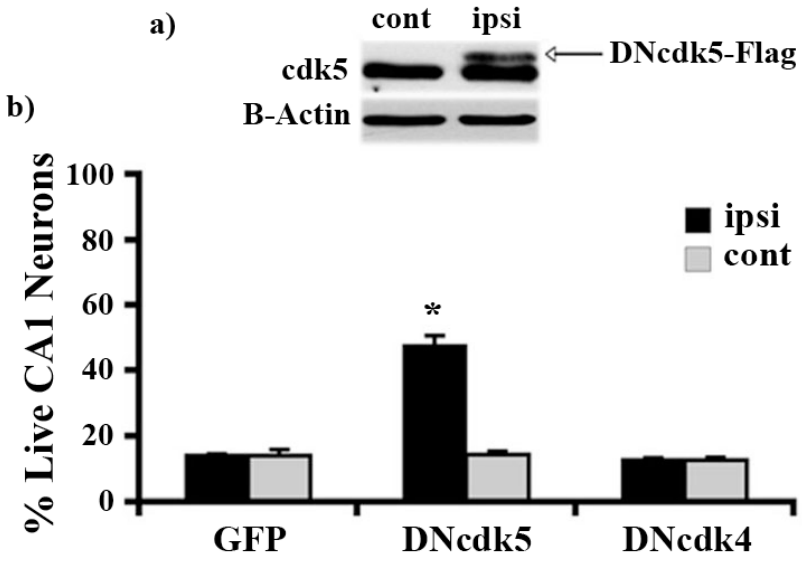
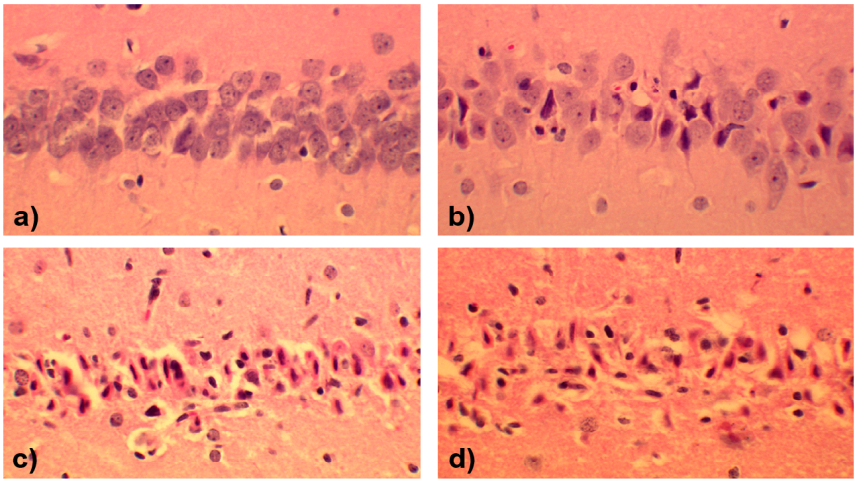
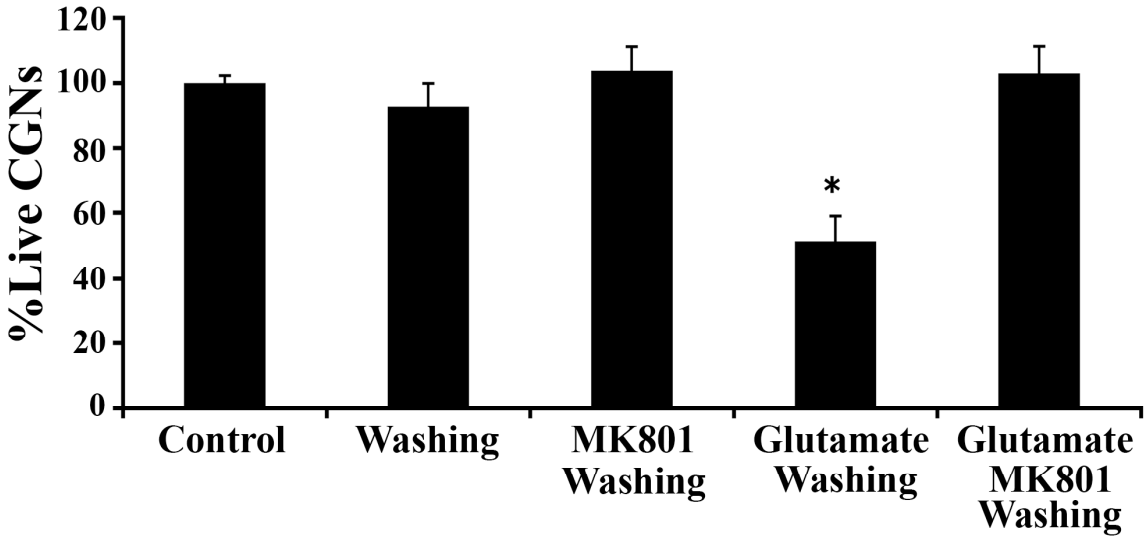


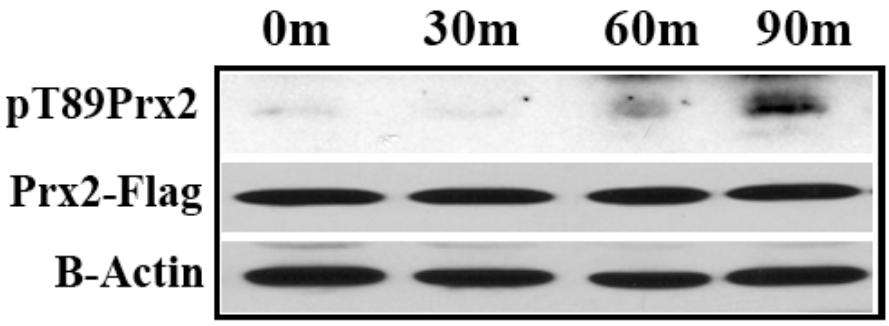
Supplemental material 1. Inhibition of cdk5 provides significant protection from 5min-4VO. a) Expression of AAV-mediated expression of Flag-tagged DNcdk5 in hippocampus shown by Western blot using anti-cdk5 antibody. ipsi: injected side, cont: non-injected side. b) Quantification of surviving CA1 neurons expressing GFP (n=3), DNcdk5 (n=5) and DNcdk4 (n=3) four days after 4VO. ipsi is injected side, cont is non-injected side. Data is presented as mean ±SEM (*Student's t-Test, $p<0.05$).



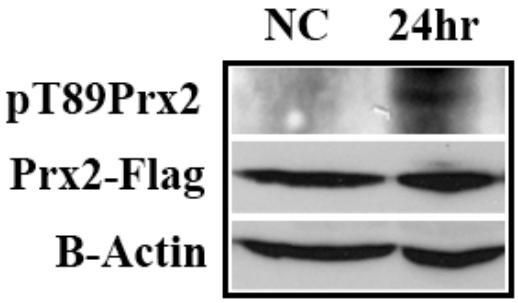
Supplemental material 2. Representative sections from the CA1 region stained with hematoxylin and eosin (H&E). (a) Non-stroked, (b) DNcdk5-NES-injected + 4VO, (c) Wt-cdk5-NLS(NES) + 4VO or DNcdk5-NLS-injected + 4VO, (d) GFP-injected + 4VO.



Supplemental material 3. The wells treated with MK801/glutamate serve as controls for non-specific death caused by washing.



Supplemental material 4. Viral expressed WtPrx2 in CGN cultures is phosphorylated following glutamate exposure. 5-day cultured CGNs were infected with AV expressing WtPrx2-Flag. On day 7, cultures were treated with 20 μM glutamate for 20 minutes, washed with conditional medium, and then incubated. Cells were collected at time points 0, 30, 60 and 90 minutes following incubation for Western blot analysis. Blot was probed for pT89Prx2, Flag and B-actin (as loading control). The Prx2-Flag bands run at a lower mobility than that of endogenous Prx2. The phosphopT89 signal shown is the same mobility as Prx2-Flag.



Supplemental material 5. Viral expressed WtPrx2 in brain is phosphorylated following focal ischemia. Brains were collected 24 hours after injection of endothelin-1 and subjected to western blot analysis. Blot was probed for pT89Prx2, Flag and B-actin (as loading control). The blot is representative of n=3. "NC" represents virus-injected, non-stroked control animal.