

## **Supplemental Figure Legends**

**Supplemental Figure 1.** Noggin immunofluorescence controls. (A-C) Negative control staining for noggin in the SGZ, GCL, and hilus of the adult dentate gyrus. (D-F) NSE-Noggin-IRES-egfp overexpression animals stained for gfp (cells expressing the transgene) and noggin in the adult dentate. Noggin is secreted unidirectionally from the GCL towards the hilus. GCL: granule cell layer; SGZ: subgranular zone; h: hilus; NSE: neuron specific enolase; egfp: enhanced green fluorescent protein.

**Supplemental Figure 2.** Dual thymidine analog immunofluorescence controls. Animals were administered IdU for 2 weeks, regular drinking water for 1 week, CldU for 2 weeks, and drinking water again for 1 week before euthanasia (see Figure 7A). (A-H) Tissue was processed singularly with the IdU (BD, anti-BrdU) or CldU (Accurate, anti-BrdU) antibodies and both appropriate secondary antibodies. The opposite channel was devoid of staining demonstrating that we could appropriately distinguish between the two labeling periods. Also, note that the IdU<sup>+</sup> cells are located farther within the granule cell layer compared to CldU<sup>+</sup> cells. (I-L) Staining for both IdU and CldU in the olfactory bulb (OB). High numbers of CldU<sup>+</sup> or IdU<sup>+</sup> cells were present in the OB, but CldU and IdU do not co-localize.