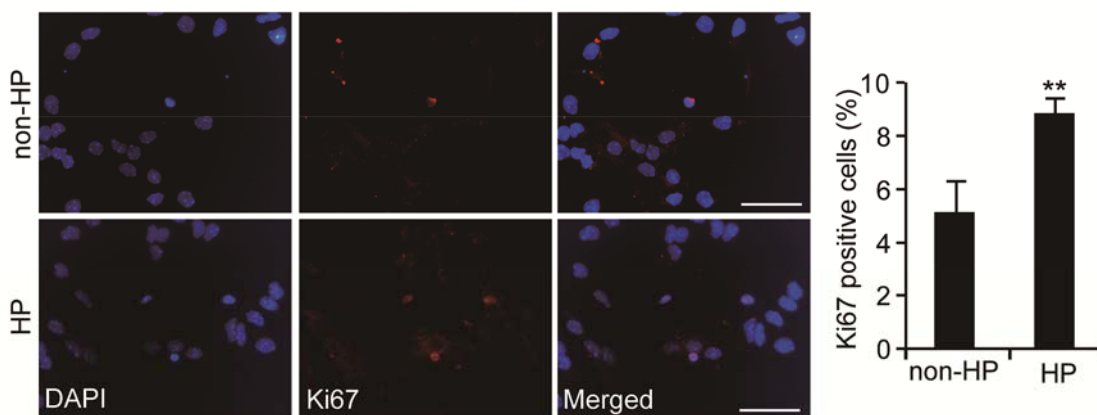
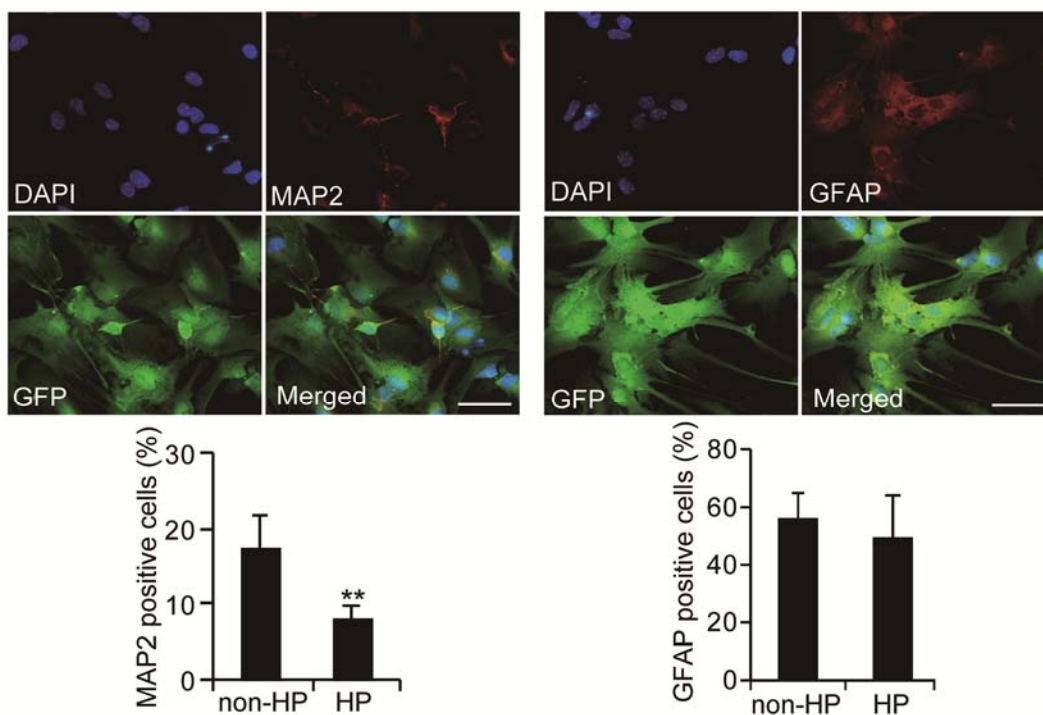
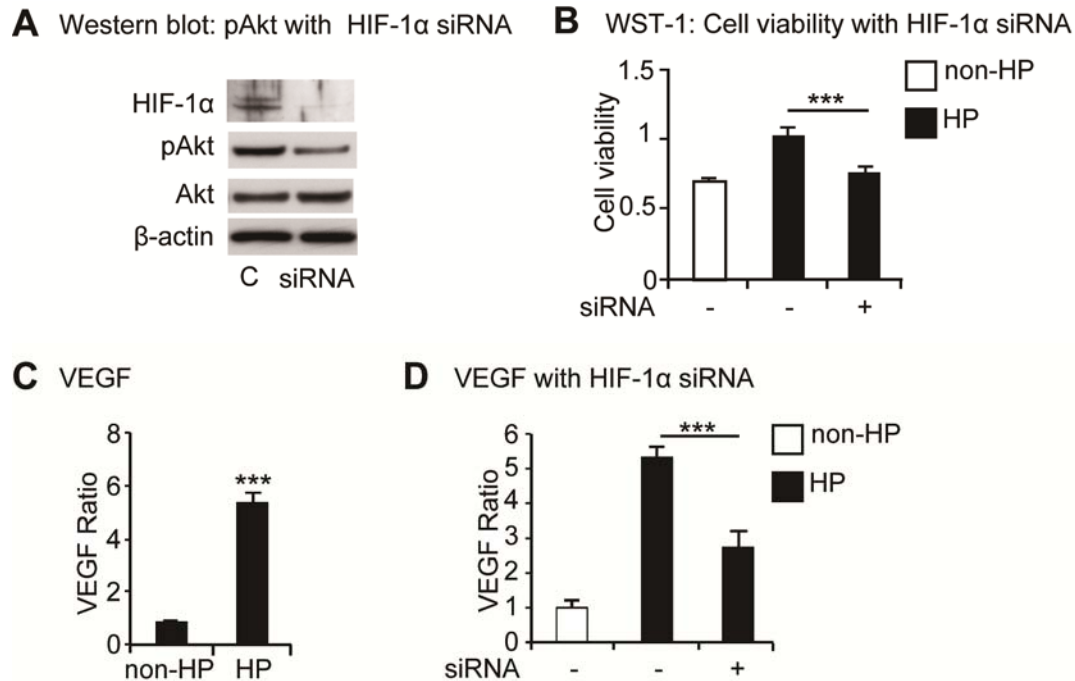


A Cell proliferation**B** Cell differentiation

Supplementary Figure 1. Experimental procedure *in vivo* and cell proliferation and differentiation *in vitro*. **(A)** Fluorescent staining with Ki-67 (red) and DAPI (blue) after culturing in differentiation medium for 5 days. The percentage of Ki-67-positive cells significantly increased with hypoxic preconditioning compared with non-preconditioning ($n = 4$). Bars = 50 μm . **(B)** Fluorescent staining with cell differentiation markers. The NSCs were stained with the neuronal marker MAP2 (red) with DAPI (blue), and with the astrocytic marker GFAP (red) with DAPI (blue). The percentage of MAP2-positive cells decreased with hypoxic preconditioning compared with non-preconditioning. There were no differences in the percentage of GFAP-positive cells with hypoxic preconditioning and non-preconditioning ($n = 4$). Bars = 50 μm . HP, hypoxic preconditioned. ** $P < 0.01$.



Supplementary Figure 2. HIF-1 α siRNA diminished the increase of cell viability and of VEGF expression induced by hypoxic preconditioning. **(A)** HIF-1 α , pAkt, and Akt expression on Western blot. Incubation with HIF-1 α siRNA decreased HIF-1 α and pAkt, but did not decrease Akt. **(B)** WST-1 assay showed HIF-1 α siRNA significantly decreased cell viability of hypoxic preconditioning ($n = 4$). **(C)** ELISA revealed that hypoxic preconditioning caused a 5-fold increase in VEGF expression in NSCs compared with no hypoxic preconditioning. **(D)** HIF-1 α siRNA decreased VEGF expression in hypoxic preconditioned NSCs ($n = 4$). HP, hypoxic preconditioned. *** $P < 0.001$.