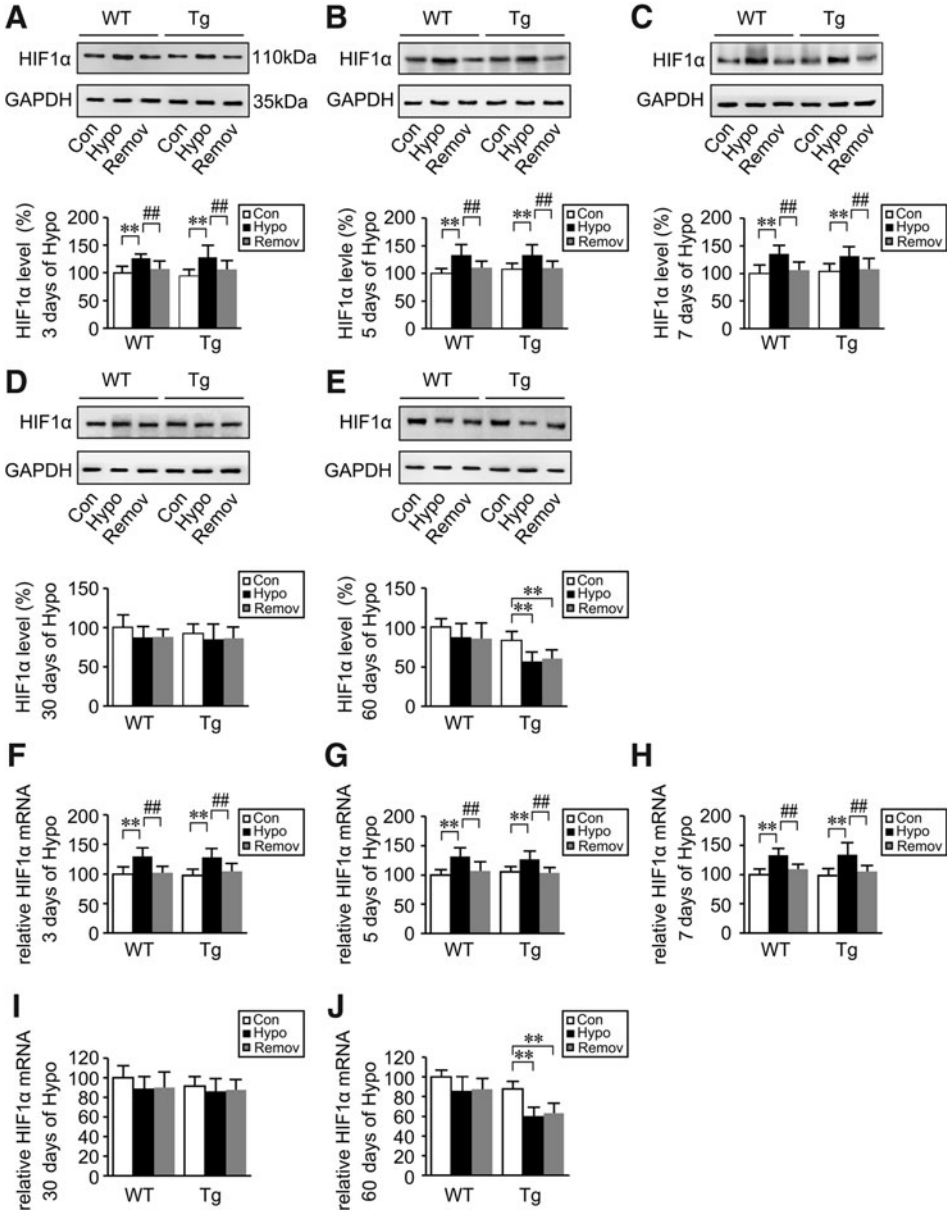
Supplementary Data



SUPPLEMENTARY FIG. S1. Alterations of HIF1α levels induced by hypoxia intervention in adult APP/PS1 and age-matched C57BL/6 mice brain. Male double transgenic (Tg) APP/PS1 mice and age-matched WT C56BL/6 mice at 4 months of age were exposed to hypoxia once daily. The effects of hypoxia exposure on HIF1α protein and mRNA expression in the mice brain were analyzed after 3, 5, 7, 30, and 60 days of hypoxia intervention (Hypo). Twelve hours after removing hypoxia treatment (Remov), the HIF1α levels were assessed by Western blot and RT-PCR. Untreated mice were used as the controls (Con). **(A–E)** Representative Western blot images of HIF1α protein expression in both WT and Tg mice brain. Quantification shows that 3, 5, and 7 days of hypoxia administration significantly increased HIF1α protein expression in both WT and Tg mice brain; while 12 h after removing the intervention, the protein levels of HIF1α returned to baseline levels **(A–C)**. **(D)** There were no statistical differences in the protein expression of HIF1α levels among groups after 30 days of hypoxia exposure. **(E)** Sixty days of hypoxia intervention resulted in decreases of HIF1α protein expression in the Tg mice brain. A similar decline is characteristic of the expression of HIF1α in the WT group, which is due to its high variability in HIF1α level. RT-PCR assessment shows that mRNA levels of HIF1α are elevated under 3, 5, and 7 days of hypoxia exposure compared with controls. Twelve hours after removing hypoxia, the alterations of hypoxia-induced HIF1α mRNA levels are abolished **(F–H)**. The changes of HIF1α mRNA levels are not statistically significant after 30 days of hypoxia treatment **(I)**. **(J)** The HIF1α mRNA levels are upregulated in the Tg mice brain with 60 days of hypoxia treatment $^{**}p < 0.01$ *versus* Con group; $^{\#\#}p < 0.01$ *versus* Hypo group by two-way ANOVA, $n = 4$ in each group. Data are represented as mean ± standard error of the mean values (SEM).