Expanded View Figures

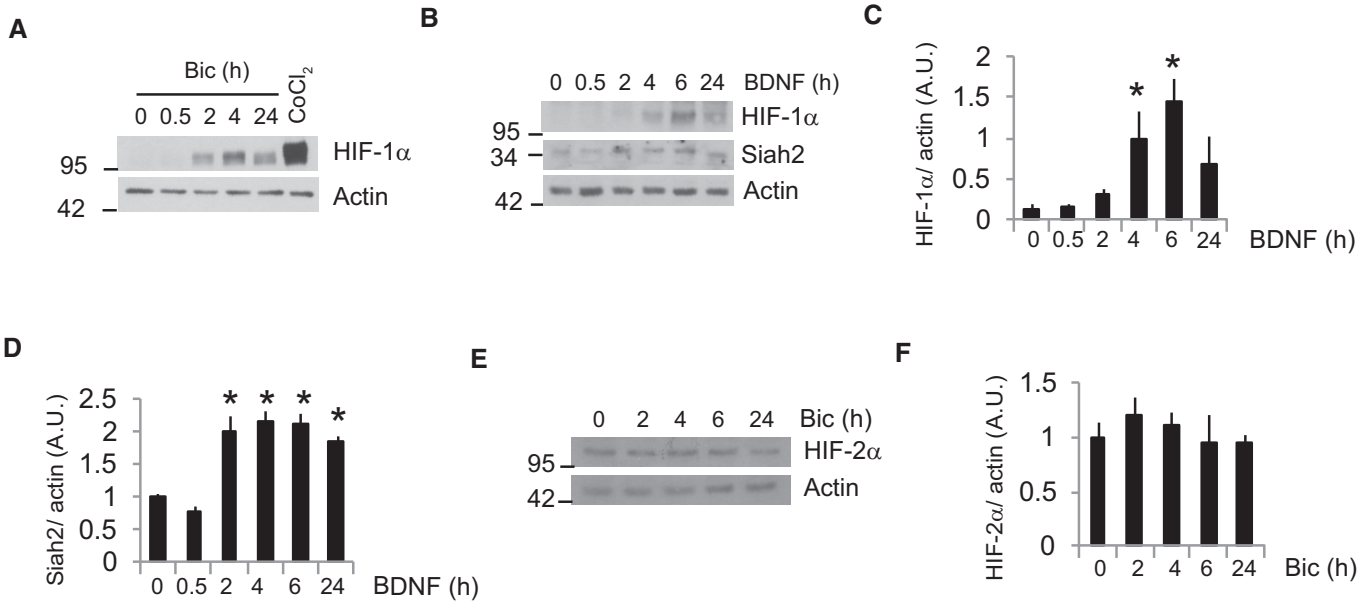

Figure EV1. Synaptic activity and BDNF stabilize HIF-1α.

A–D Representative Western blots of cortical neurons stimulated with (A) Bic+4-AP at the indicated time points or the hypoxia-mimetic $CoCl_2$ (200 μM) for 4 h and (B) BDNF (25 ng/ml) for the indicated time points (n = 4–5 independent experiments) and (C and D) densitometric analysis. Values represent mean ± s.e.m. *P < 0.05, two-tailed Student's t-test.

E Neurons were stimulated with Bic+4-AP for the indicated times and HIF-2α was analyzed by Western blot.

F Densitometric analysis (n = 4 independent experiments). Values represent mean ± s.e.m.

Source data are available online for this figure.

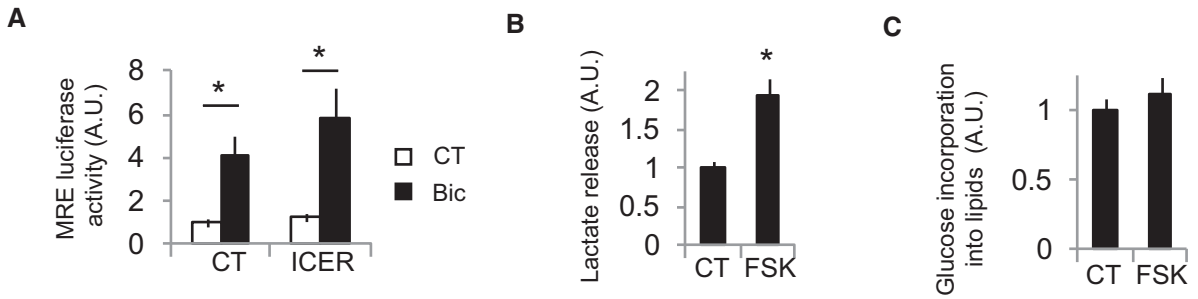

Figure EV2. Glut3 and Siah2 expression is regulated by CREB.

A Luciferase-based MEF2 activity in neurons expressing a control plasmid (globin) or the CREB inhibitor ICER and stimulated with Bic+4-AP for 8 h (n = 7 independent experiments). Values represent mean ± s.e.m. *P < 0.05, one-way ANOVA followed by Tukey's *post hoc* test.

B Lactate released into the medium by neurons stimulated with 10 μM forskolin (for 24 h; n = 4 independent experiments). Values represent mean ± s.e.m. *P < 0.05, two-tailed Student's t-test.

C ^{14}C-U-glucose incorporation into lipids in neurons treated with 10 μM forskolin for 48 h (n = 4 independent experiments). Values represent mean ± s.e.m.

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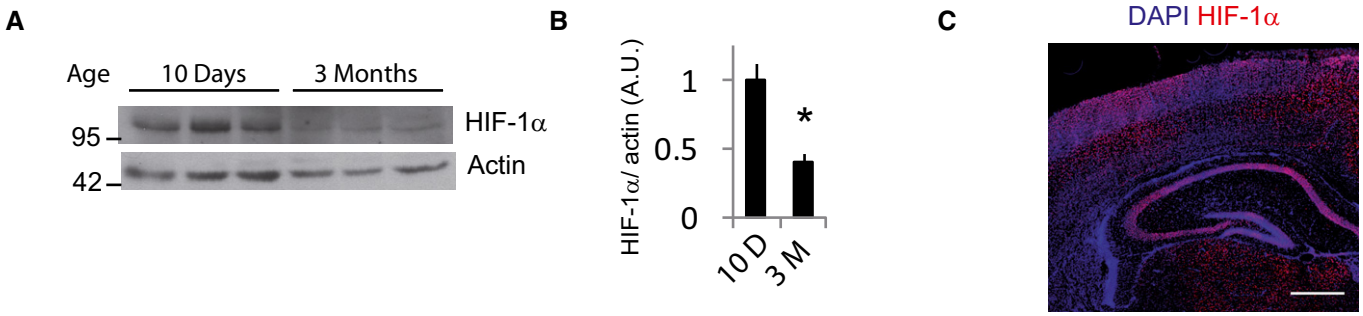

Figure EV3. HIF-1α is highly expressed in the brain of 10-day-old mice.

A, B (A) Representative Western blot of HIF-1α expression in protein extracts of the cortex of 10-day and 3-month-old mice and (B) densitometric analysis (n = 4 mice per condition). Values represent mean ± s.e.m. *$P < 0.05$, two-tailed Student's t-test.

C Immunofluorescence detection of HIF-1α in coronal sections from 10-day-old mice (n = 3 mice). Scale bar, 100 μm.

Source data are available online for this figure.