Figure EV1. Decreased number of SVZ-derived NSPCs differentiating into astrocytes in the lesion area 10 days after SWI in Id3−/− mice.

A. Scheme illustrating area of analysis after SWI.

B. High magnification images of double-IHC for BrdU (green) and S100b (red) of the quantification area in the lesion center in Id3−/− mice compared to WT mice 10 days after SWI. Enlargements of regions indicated by rectangles show BrdU+S100b+ cells (indicated by an asterisk).

C. Quantification of BrdU+ cells and BrdU+S100b+ cells.

Data information: CC, corpus callosum; CTX, cortex; LV, lateral ventricle; OB, olfactory bulb; RMS, rostral migratory stream; SVZ, subventricular zone. Scale bar: 50 μm. Values are mean ± SEM (P-values calculated by Student’s t-test; n = 5 mice per group).
Figure EV2. Increased number of SVZ-derived NSPCs that differentiated into neurons in OBS of Id3−− mice.

A Scheme illustrating the area of analysis after SWI.

B Representative image of the OB of uninjured WT mice with immunolabeling for BrdU (green) and NeuN (red). White box indicates the area of quantification.

C High magnification images of the glomerular layer of the OB of uninjured and injured Id3−− and WT mice with immunolabeling for BrdU (green) and NeuN (red).

D Quantification of BrdU+ cells and of BrdU+NeuN+ cells per total BrdU+ cells.

Data information: CC, corpus callosum; EPL, external plexiform layer; GL, glomerular layer; GCL, granule cell layer; LV, lateral ventricle; OB, olfactory bulb; RMS, rostral migratory stream; SVZ, subventricular zone. Scale bars: 80 μm (B), and 45 μm (C). Values are mean ± SEM (P-values calculated by one-way ANOVA; n = 6 mice per group).
Figure EV3. Differentially regulated Id3 expression in NSPC subpopulations of the adult SVZ niche after cortical lesion.

A, B Quantification of DAPI+ cells (A) or GFAP+ cells (B, left), Olig2+ cells (B, middle), and Thbs4+ cells (B, right) per total DAPI+ cells in the ipsilateral and contralateral SVZ niche 1, 3, 8, and 10 days after cortical SWI compared to uninjured control in coronal brain sections of WT mice.

C Immunolabeling for Id3 (green) in combination with GFAP (left), Olig2 (middle), and Thbs4 (right) (all red) in the contralateral SVZ niche 1, 3, 8, and 10 days after cortical SWI compared to uninjured control in coronal brain sections of WT mice. Enlargements of regions indicated by rectangles depict representative Id3 immunoreactivity of Id3+GFAP+ cells, Id3+Olig2+ cells, and Id3+Thbs4+ cells, respectively, at different timepoints after SWI and uninjured control.

D Immunolabeling for BMP-2 (red) in combination with GFAP (green) in the contralateral SVZ niche 1, 3, 8, and 10 days after cortical SWI compared to uninjured control in coronal brain sections of WT mice. Representative brain sections are shown.

E Immunolabeling for BMP-4 (green) in the ipsilateral adult SVZ niche 1, 3, and 8 days after SWI compared to uninjured control in coronal brain sections of WT mice. Representative brain sections are shown.

Data information: LV, lateral ventricle. Scale bars: 27 μm (C, top; D, E), and 9 μm (C, bottom). Values are mean ± SEM [P-values calculated by one-way ANOVA; ns, not significant; n = 4 mice per group (A–C); n = 5 mice per group (D); n = 3 mice per group (E)].