

Supplemental figure legend

Supplemental figure 1. Influence of muscimol infusion on motor function and cortical cells. **A**, Illustration of the experimental procedure for muscimol infusion after brain injury. Brain contusion injury was induced in the right sensorimotor cortex (red). A cannula was implanted into the left hemisphere. Muscimol or saline was infused for 7 days starting at day 3 after the injury. At day 10, the pump was removed. BDA was injected into the left hemisphere at 14 days and the animals were sacrificed at 28 days. **B**, Temporal impairment of motor function of the unaffected (right) forelimb by muscimol infusion during the grid walk test after the injury (saline-treated group, dotted line; muscimol-treated group, solid line). **C**, The cortical lesion volume did not differ between the groups after the injury. **D**, No apparent damage to the cortical cells by saline or muscimol infusion in the contralesional cortex. The arrows indicate the infused region. Scale bar: 200 μm . The data represented the mean \pm SD ($n = 6$); $**p < 0.01$ versus the saline-treated group (Mann-Whitney U -test). **E**, Expression of *alivin-1*, a neuronal activity-dependent gene, increased in the contralesional cortex at 7 days after the injury. The data represent the mean \pm SD ($n = 3$); $*p < 0.05$ (Mann-Whitney U -test).

Supplemental Table

Primer sequences for Alivin1

name		Primer sequence
Alivin1	Forward	GCTTCCCAGCGCTGTGA
	Reverse	ATCAGCTCAGTCTCCCACCAA

Supplemental Figure 1

