## **Supplemental figures**

**Figure 1** Midline crossing of the intact CST in cervical cord. (a) Representative transverse sections of the cervical cord obtained from intact wild-type and  $+/me^{\nu}$  mice. BDA was injected into the right motor cortex of 6 weeks old mice. The sprouting axons from the BDA-positive CST (green) crossed the midline into the right side of the cervical cord. Dotted lines indicate midline of cervical cord. Scale bars, 500 µm (upper panel); 200 µm (lower panel). (b) The number of CST axons crossing the midline of the cervical cord (C4–C7) in intact wild-type and  $+/me^{\nu}$  mice, normalized by the total number of labeled main CST fibers. Data are presented as mean ± SEM (wild-type, n = 7;  $+/me^{\nu}$ , n = 5).

**Figure 2** Cortical injury in wild-type and  $+/me^{\nu}$  mice. (**a**) Nissl staining showing cortical ablation in the injured left hemisphere (28 days after injury). Scale bar, 1 mm. (**b** and **c**) Quantitative data of the cortical lesion volume in wild-type and  $+/me^{\nu}$  mice (**b**) or saline- and NSC-87877-treated mice (**c**). Data are presented as mean  $\pm$  SEM (wild-type, n = 9;  $+/me^{\nu}$ , n = 9; saline group, n = 4; NSC-87877 group, n = 5). (**d**) PKC  $\gamma$  immunoreactivity of the dorsal CST in the cervical cord (28 days after injury). Scale bar, 100  $\mu$ m. (**e** and **f**) Quantitative data of PKC  $\gamma$ -positive CST damage in wild-type and  $+/me^{\nu}$  mice (**e**) or saline- and NSC-87877-treated mice (**f**). Data are presented as mean  $\pm$  SEM (wild-type, n = 11;  $+/me^{\nu}$ , n = 9; saline, n = 7; NSC-87877, n = 7).

Supplemental Figure 1



## Supplemental Figure 2

