

**SUPPLEMENTARY FIG. S2.** Immunohistochemical labeling for microglia with0 anti-Iba1. Sagittal section of the mouse brain at  $\pm 0.4$  mm lateral to midline in the corpus callosum (CC) at 24 h post last injury (**A–D**), and 12 months post last injury (**E–H**). There was no evidence of neuroinflammation in the hTau sham animals at any time point (**I,J**). In the single injury animals, both resting and activated mcroglia (with a bushy morphology) were observed at 24 h post-injury in the CC (s-mTBI 6.22 $\pm 0.9\%$  vs. s-sham 3.22 $\pm 0.9\%$ ; p<0.05; D,I). For mice that underwent r-mTBI, immunostaining for Iba-1 revealed clusters of activated microglia in the CC (r-mTBI 13.7 $\pm 1.3\%$  vs. r-sham 2.21 $\pm 0.6\%$ ; p<0.0001; s-mTBI 6.22 $\pm 0.9\%$  vs. r-mTBI 13.7 $\% \pm 1.3\%$ ; p<0.05; D,I). By 12 months post-injury, the single and r-mTBI showed increased microglial activity in the body of the CC when compared with corresponding shams (r-mTBI 10.4 $\pm 1.3\%$  vs. r-sham 3.01 $\pm 0.5\%$ ; p<0.0001; s-mTBI 6.1 $\pm 0.9\%$  vs. s-sham 3.4 $\pm 0.7\%$ ; p<0.05; F,H,J).