



**Supplementary Figure 2. Negative controls that did not contain the primary antibody were included to confirm the absence of non-specific staining.** Representative photomicrographs of the lateral cortex (LC) negative control sections, which had omitted the target antibodies: ionised calcium binding adaptor molecule 1 (IBA1), and Signal transducer and activator of transcription 3 (STAT3). Left panel shows immunofluorescent staining of the nuclear stain HOECHST (showing cell nuclei, blue). Middle panel shows sections without the target antibody did not display non-specific staining. Right panel shows the merged image. Scale bar = 100  $\mu$ m.