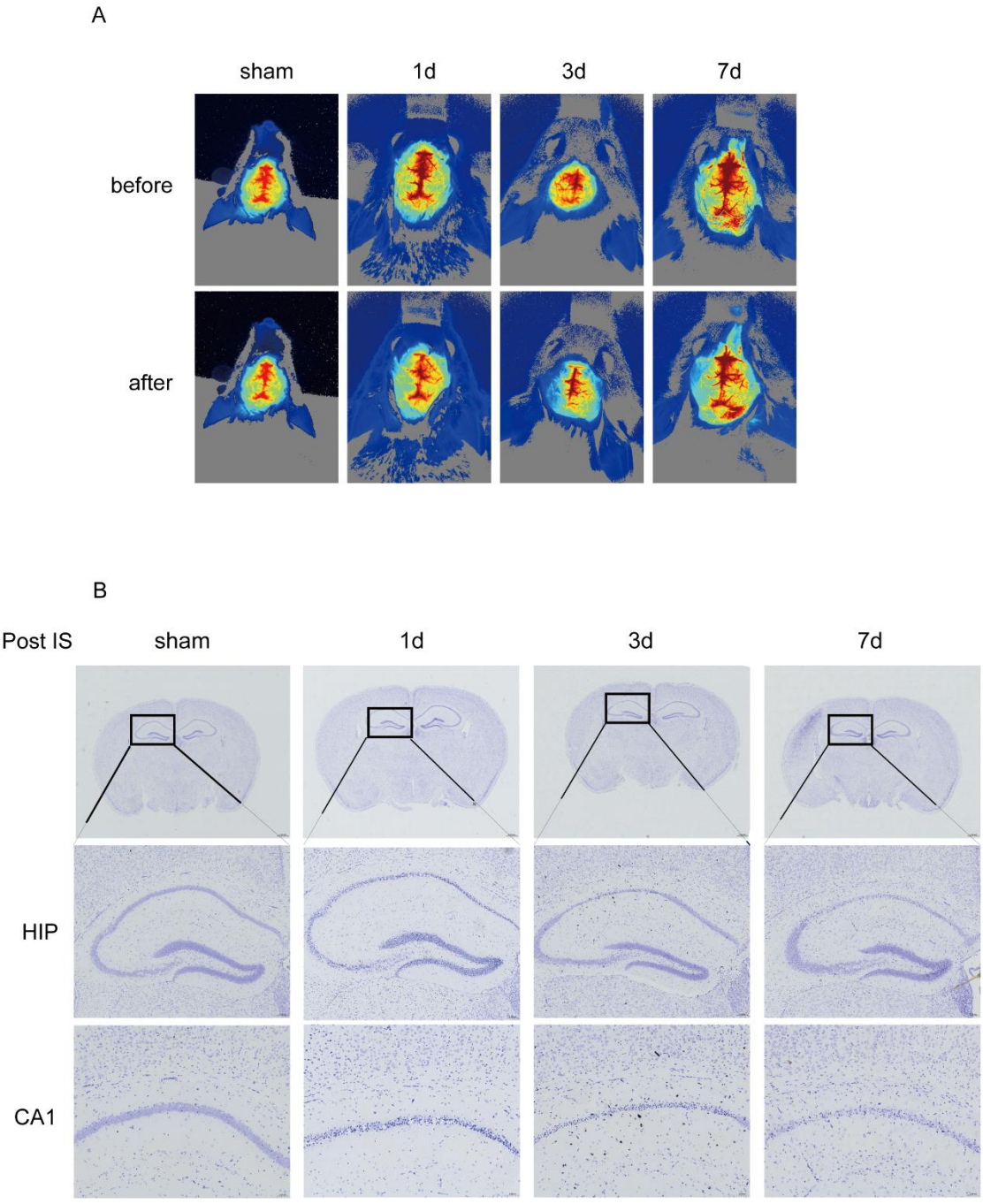
Supplementary materials

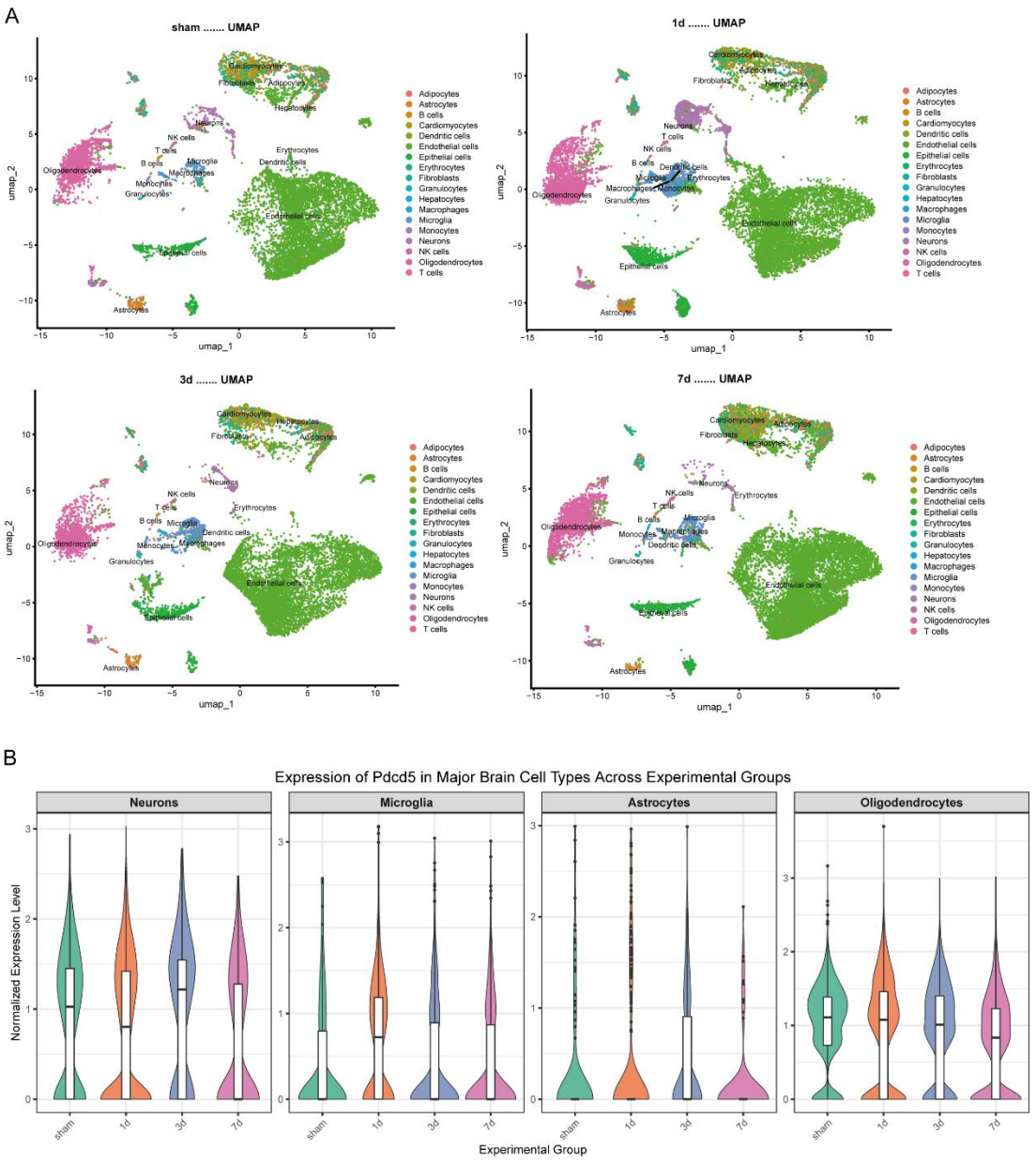


Supplementary Figure S1. Validation of the transient MCAO mouse model and post-ischemic histological alterations

(A) Representative laser speckle contrast images showing cerebral blood flow before and after surgery in sham mice and mice at 1, 3, and 7 days following MCAO.

(B) Representative Nissl-stained coronal brain sections from sham and ischemic mice at

the indicated time points post-ischemic stroke (Post IS). Upper panels display overall brain morphology; lower panels show magnified views of the hippocampus (HIP) and CA1 region from the boxed areas.

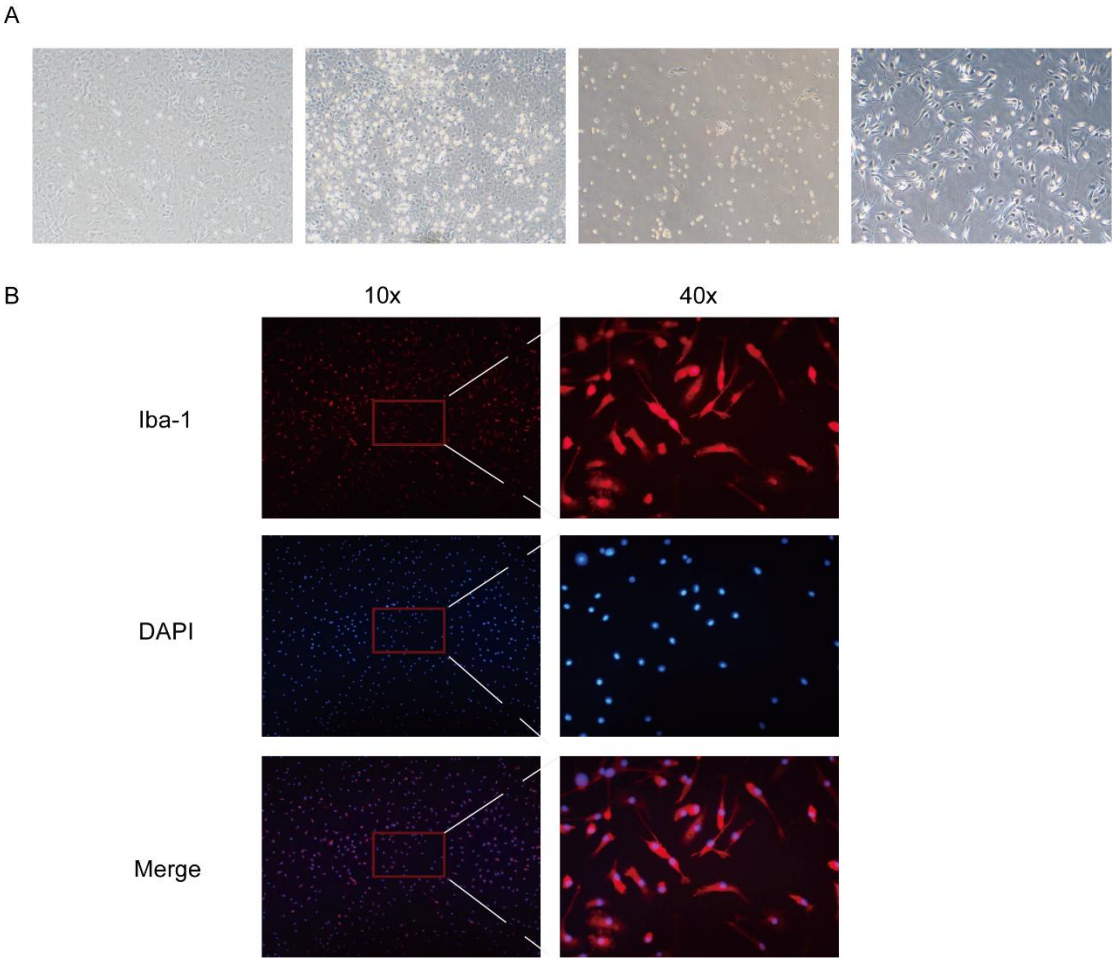


Supplementary Figure S2. Cell type annotation of single-cell transcriptomic data and cell-type-specific expression dynamics of Pdcd5

(A) UMAP visualization of unsupervised cell clustering and cell type annotation in brain tissues from sham mice and mice at 1, 3, and 7 days after MCAO. Each dot represents an

individual cell, and distinct cell types are color-coded.

(B) Violin plots showing normalized expression levels of Pdcd5 in four major brain cell types (neurons, microglia, astrocytes, and oligodendrocytes) across the indicated experimental time points.



Supplementary Figure S3. Isolation, purification and identification of primary mouse microglia

(A) Representative bright-field micrographs showing cell morphology at different stages of primary microglia isolation and purification.

(B) Immunofluorescence staining for the microglial marker Iba-1 (red) to verify the purity of isolated microglia. Nuclei were counterstained with DAPI (blue). Images are presented at 10× and 40× magnifications; the boxed areas in the 10× fields are shown at higher

magnification in the 40× panels.