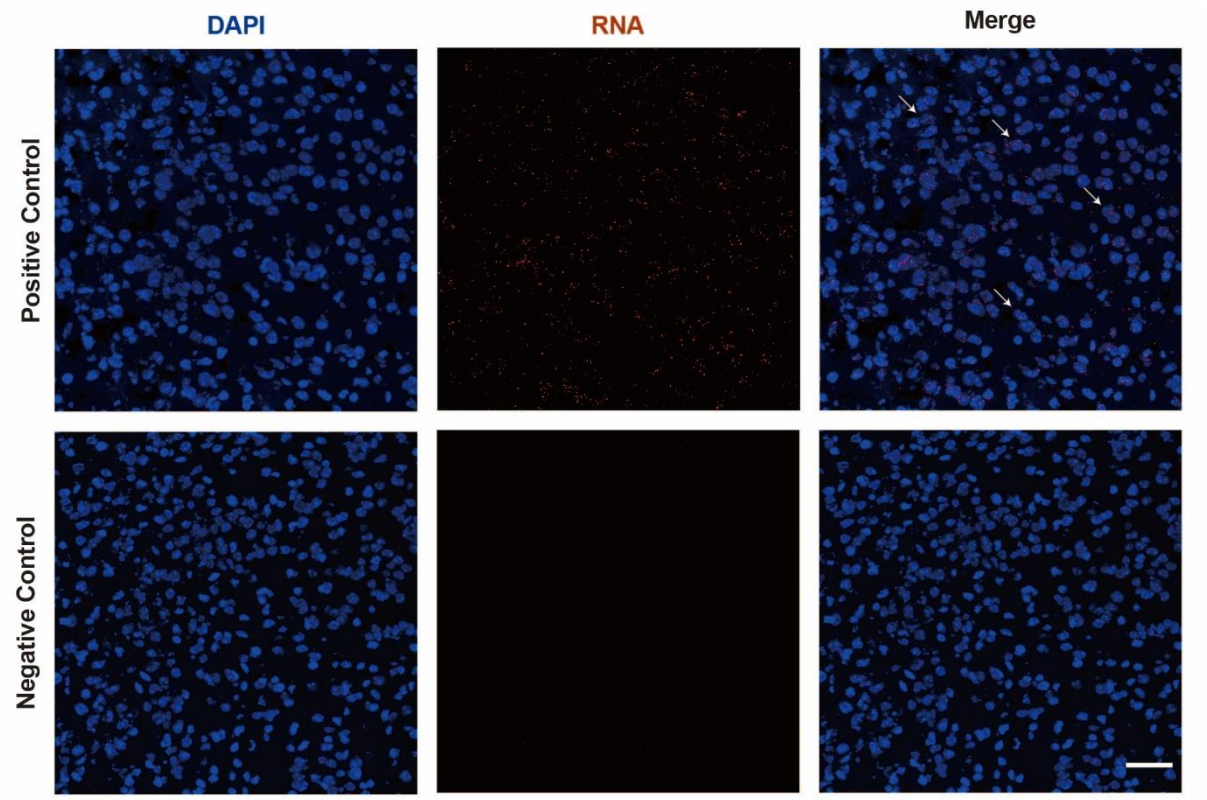
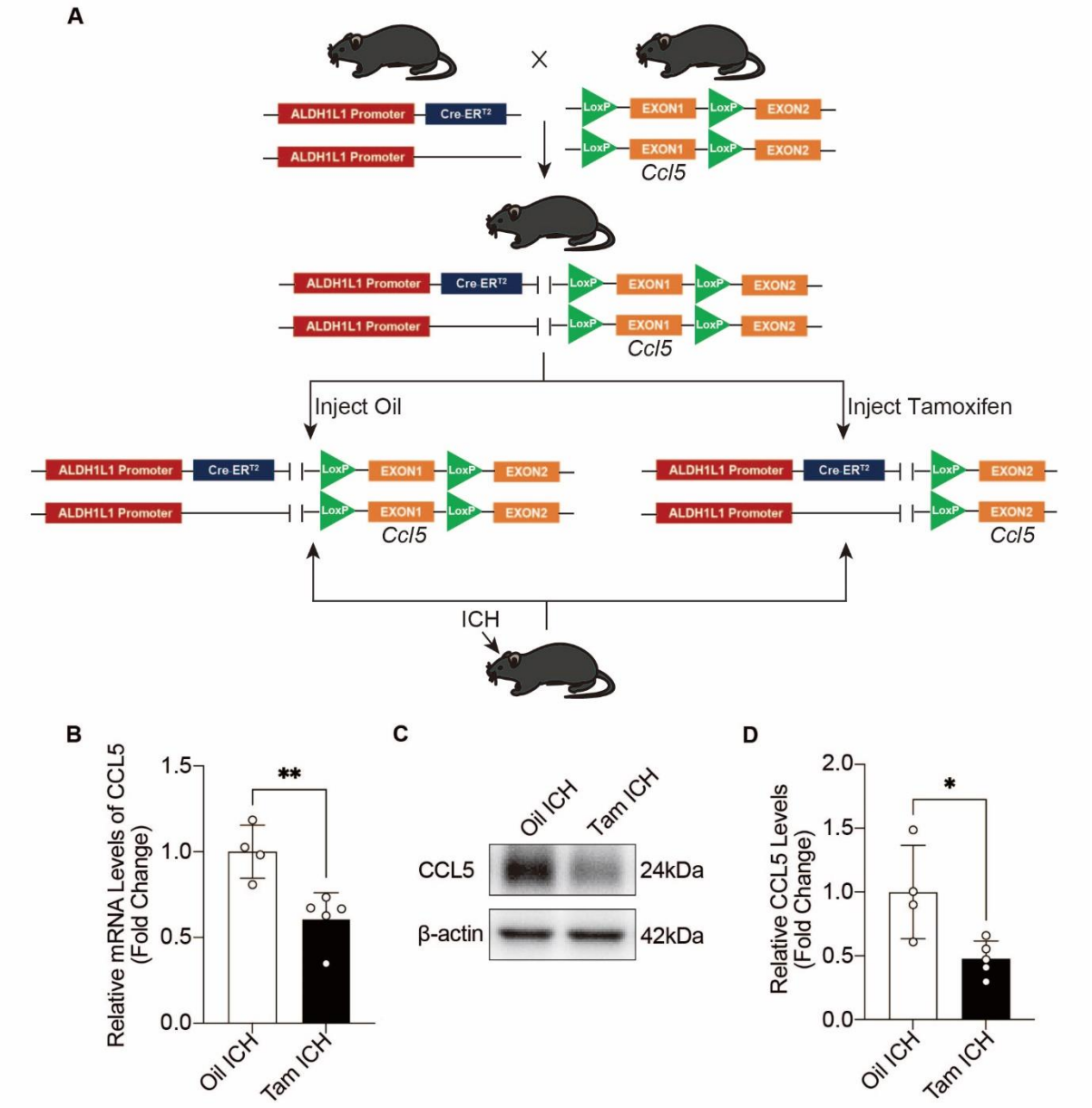
Supplementary Figure 1. Positive and negative probes for RNAscope



Representative RNAscope images of positive RNA (red) and negative RNA in the hemorrhagic perifocal area at day 3 of ICH. Scale bar = 50 μm. Arrows indicated the colocalization of positive RNA with DPAI.

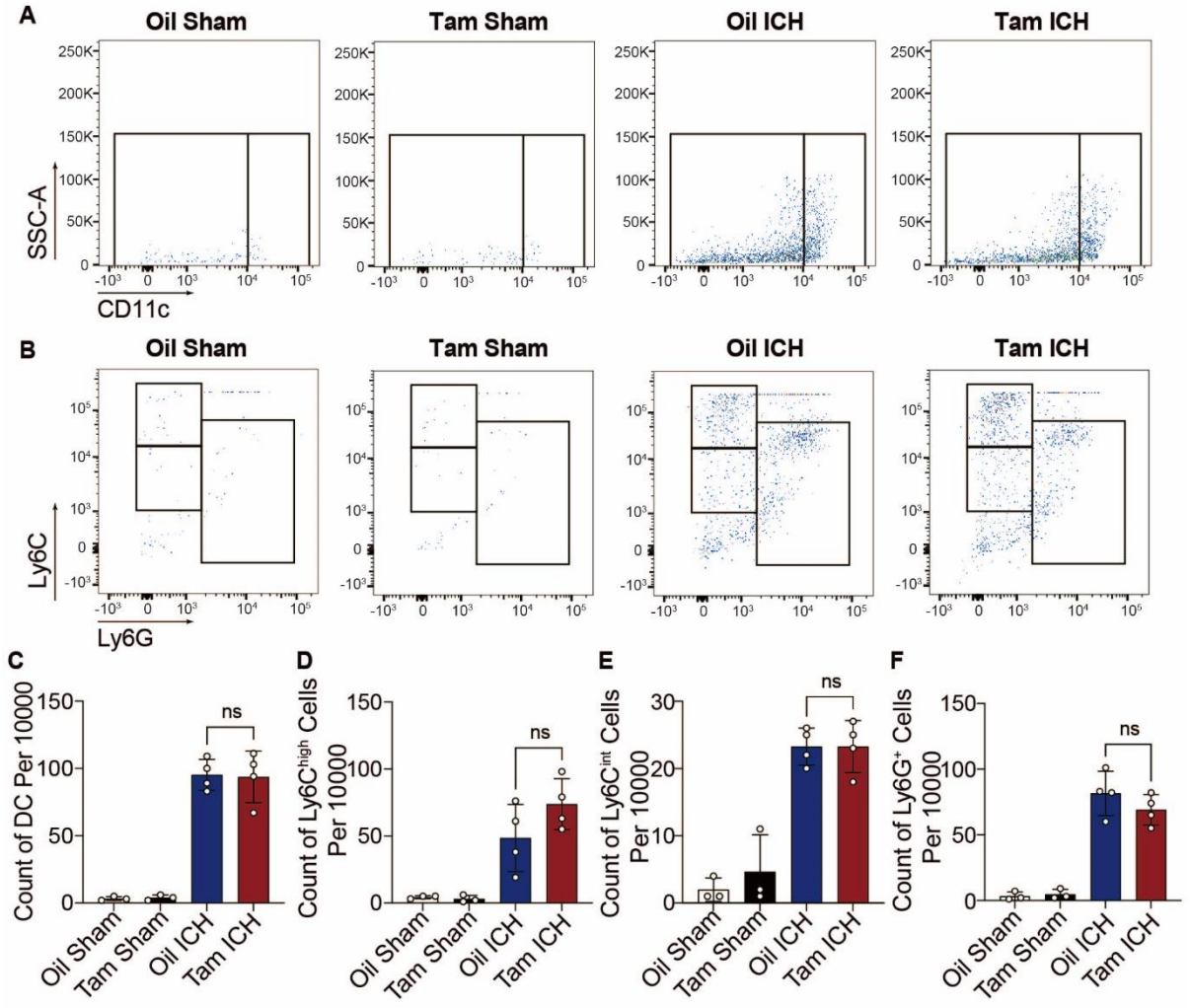
Supplementary Figure 2. The construction of Aldh1l1$^{CreERT2+/-}$: CCL5$^{f/f}$ mice and verification of CCL5 knockout efficiency



A. Schematic representation of Aldh1l1$^{CreERT2+/-}$: CCL5$^{f/f}$ mice construction. **B.** RT-PCR analysis of CCL5 mRNA expression levels in the hemorrhagic perifocal area at day 3 of ICH in Oil ICH and Tam ICH groups. n = 4 mice in Oil ICH group (3 females, 1 male), n = 5 mice in Tam ICH group (2 females, 3 male). GAPDH was used as an internal control. Two-sided, unpaired Student's test. **C.** Representative immunoblots of CCL5

protein expression levels in the hemorrhagic perifocal area at day 3 of ICH in Oil ICH and Tam ICH groups. **D.** Quantification of CCL5 protein expression levels in the hemorrhagic perifocal area at day 3 of ICH in Oil ICH and Tam ICH groups. n = 4 mice in Oil ICH group (3 female, 1 male), n = 5 mice in Tam ICH group (2 female, 3 male). β-actin was used as an internal control. Two-sided, unpaired Student's test. All data are presented as mean ± SD. *$p < 0.05$, **$p < 0.01$.

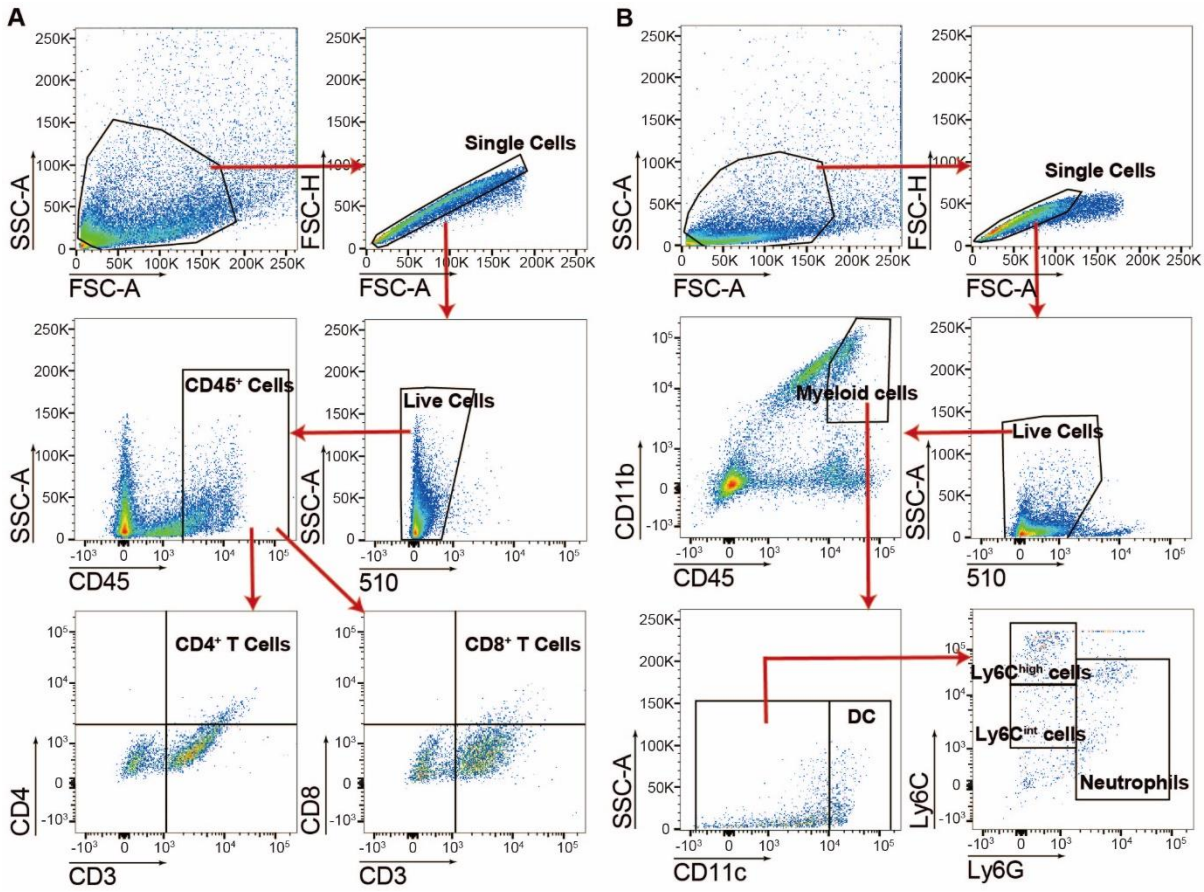
Supplementary Figure 3. Knockout of CCL5 in astrocytes did not alter myeloid cell infiltration



A, B. Representative flow cytometry pseudocolor dot plots showed gating strategy of dendritic cells ($CD11c^+$) (**A**), monocytes ($Ly6C^{high}$, $Ly6C^{int}$) (**B**), and neutrophils ($Ly6G^+$) (**B**) in Oil Sham, Tam Sham, Oil ICH and Tam ICH groups. **C, D, E, F.** The number of dendritic cells ($CD11c^+$) (**C**), monocytes ($Ly6C^{high}$, $Ly6C^{int}$) (**D, E**), and neutrophils ($Ly6G^+$) per 10000 cells in Oil Sham, Tam Sham, Oil ICH and Tam ICH groups. n = 3 mice in Oil Sham and Tam Sham groups (1 female, 2 male), n = 4 mice in Oil ICH and Tam ICH groups (1 female, 3 male). (**C, E, F**) One-way ANOVA with Tukey's multiple

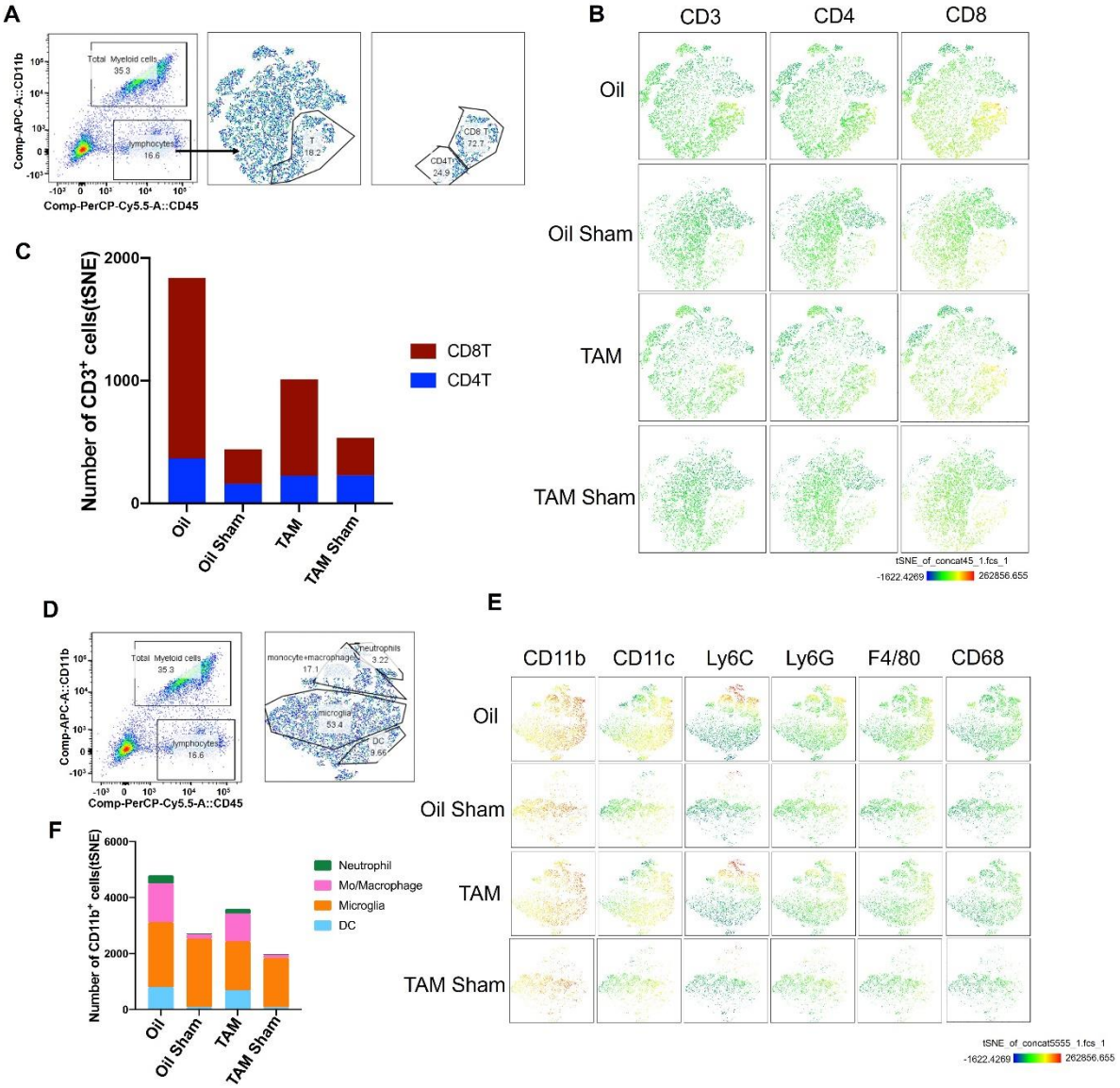
comparisons test. (**D**) Brown-Forsythe and Welch ANOVA tests with Dunnett T3 test. All data are presented as mean ± SD. ns, no significance.

Supplementary Figure 4. Schematic diagram of the flow cytometry gating strategy for infiltrating peripheral immune cells



A, B. Representative flow cytometry pseudocolor dot plots showed the gating strategy of lymphocytes (**A**) and myeloid cells (**B**).

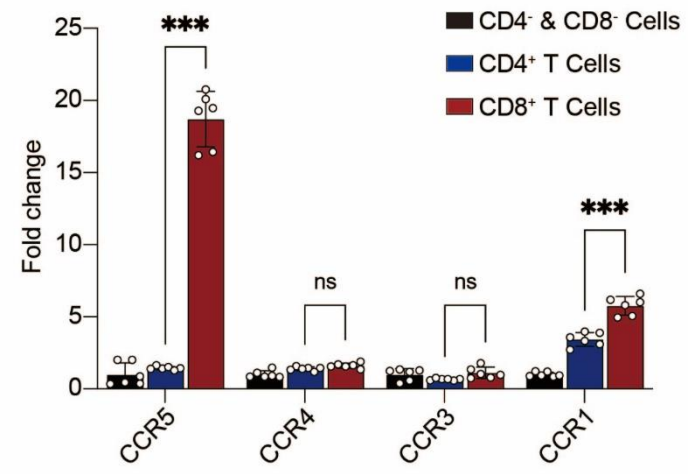
Supplementary Figure 5. tSNE analysis of infiltrating peripheral immune cells in hemorrhagic stroke brain



A. Gating strategy of Flowjo tSNE analysis of lymphocytes. **B.** tSNE analysis of CD3+ T cells. **C.** Bar graph showed that number of CD3+/CD4+ T cells and CD3+/CD8+ T cells. **D.** Gating strategy of Flowjo tSNE analysis of myeloid cells. **E.** tSNE analysis of CD45+CD11b+ cells. **F.** Bar graph showed that number of

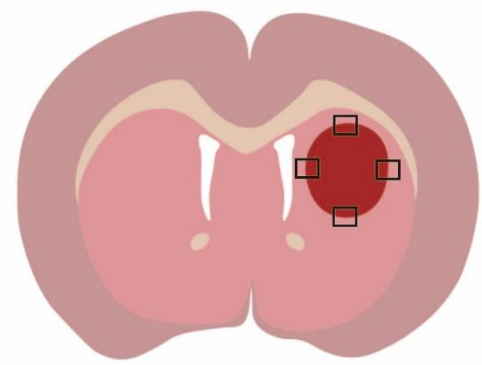
neutrophil, monocyte/macrophage, microglia and DC cells.

Supplementary Figure 6. Expression of CCR1, CCR3, CCR4 and CCR5 in $CD4^+$ T and $CD\ 8^+$ T cells



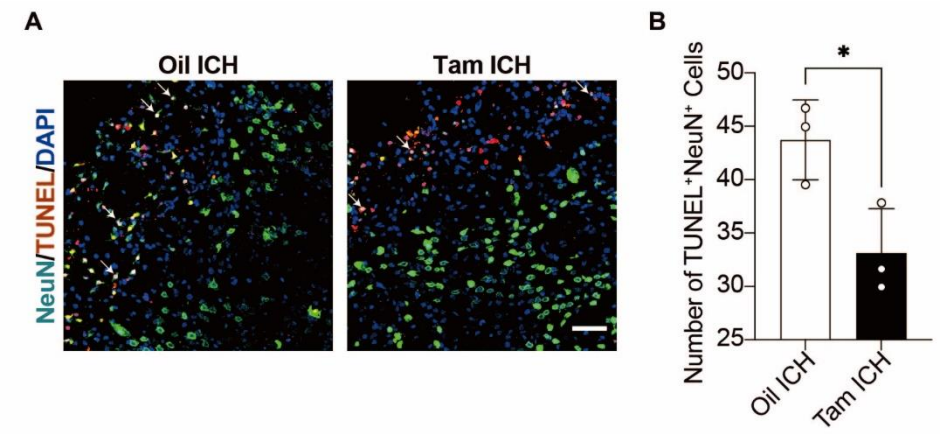
RT-PCR analysis of CCR1, CCR3, CCR4 and CCR5 in different immune cells at 3 days after ICH. n = 6 mice per group (all male). GAPDH was used as an internal control. Two-way ANOVA with Bonferroni multiple comparisons test. All data are presented as mean ± SD. ***$p < 0.001$.

Supplementary Figure 7. Schematic representation of the location of ICH



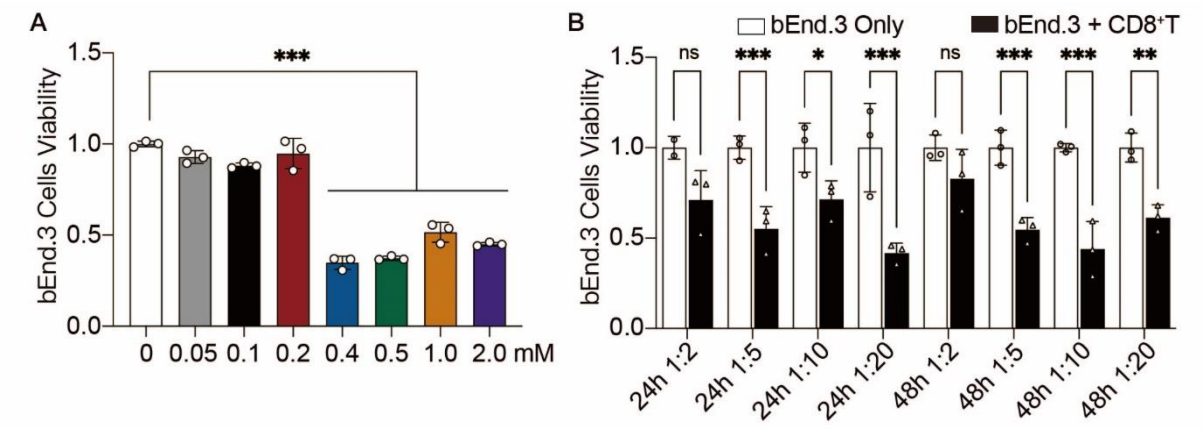
Location of the peri-hemorrhagic zone.

Supplementary Figure 8. Specific knockout of CCL5 in astrocytes reduced neuronal apoptosis



A. Representative immunostaining images of NeuN (green) and TUNEL (red) in the hemorrhagic perifocal area at day 3 of ICH in Oil ICH and Tam ICH groups. Scale bar = 50 μm. Arrows indicated the colocalization of NeuN with TUNEL. **B.** Number of apoptotic neurons in the hemorrhagic perifocal area at day 3 of ICH in Oil ICH and Tam ICH groups. n = 3 mice per group (all male). Two-sided, unpaired Student's test. All data are presented as mean ± SD. *$p < 0.05$.

Supplementary Figure 9. Viability of bEnd.3 cells that treated with EGTA and co-cultured with CD8⁺ T cells.



A. Viability of bEnd.3 cells treated with different concentration of EGTA for 24 h. n = 3 biologically independent bEnd.3 cell cultures. One-way ANOVA with Tukey's multiple comparisons test. **B.** Viability of bEnd.3 cells co-cultured with $CD8^+$ T cells at cell ratios of 1:2, 1:5, 1:10 and 1:20 for 24h and 48h. Two-way ANOVA with Bonferroni multiple comparisons test. n = 3 biologically independent bEnd.3 cell cultures. All data are presented as mean ± SD. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, ns, no significance.

Supplementary Figure 10. Raw data of western blot

Figure 1D

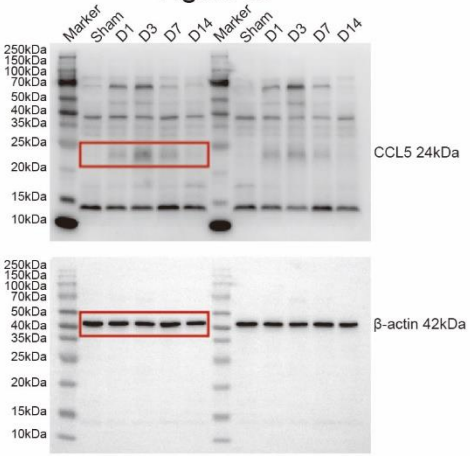
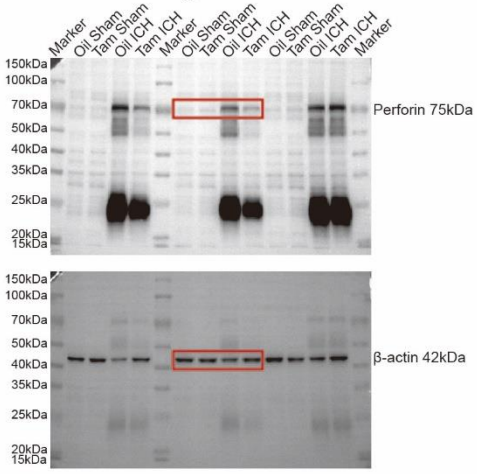


Figure 6A



Supp. Figure 1A

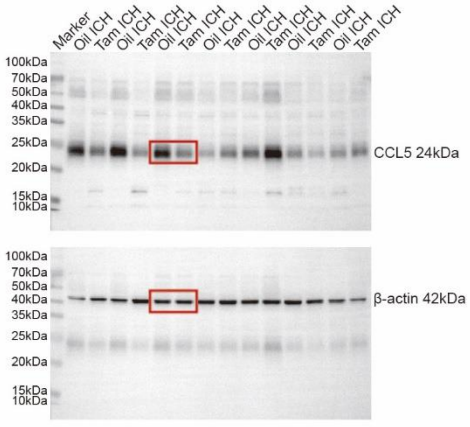


Figure 3F

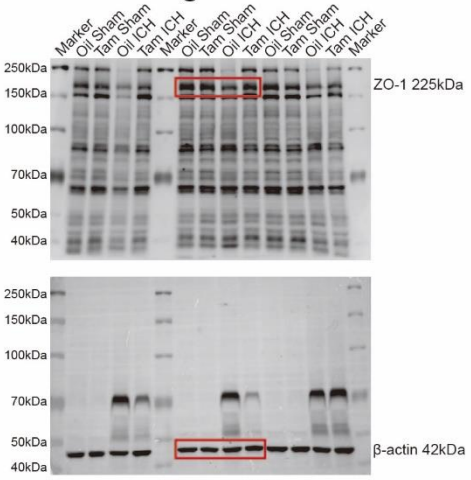


Figure 6A