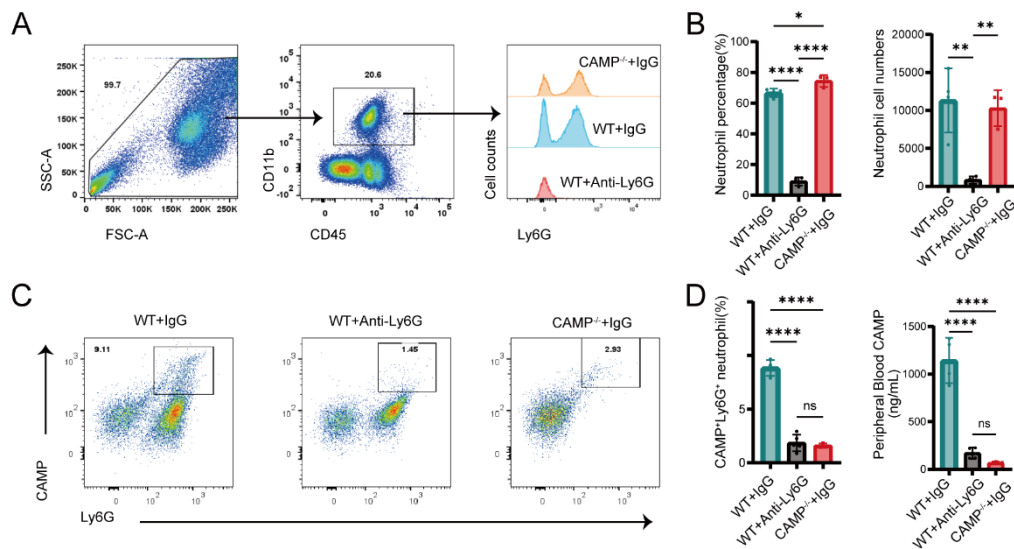


Supplement figures

Supplementary Figure 1



S1. Neutrophil depletion efficiency by using anti-Ly6G antibody. Related to figure2.

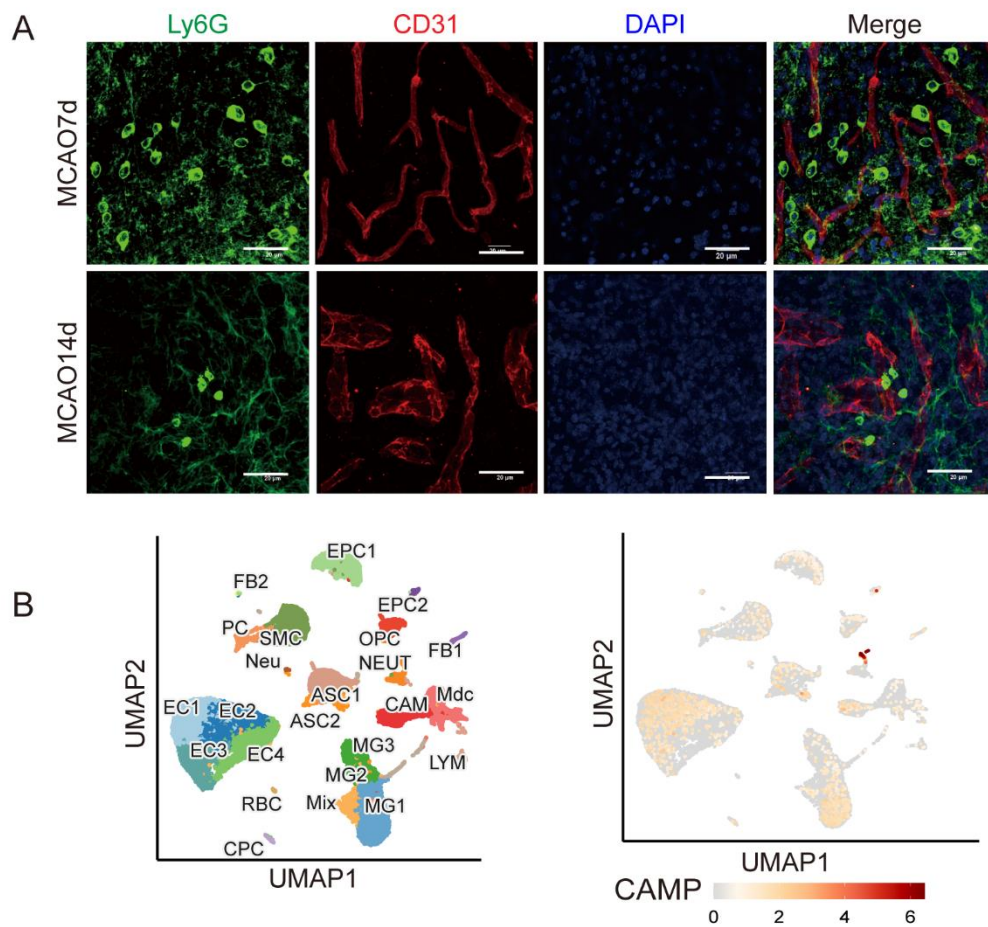
(A) Flow cytometry gating strategy and representative histogram of Ly6G⁺ neutrophils of peripheral blood from neutrophil depletion, IgG control and CAMP^{-/-} mice.

(B) Quantification of neutrophils cell percentage and numbers in peripheral blood (n = 3-5 per group, one-way ANOVA with Bonferroni multiple comparisons test).

(C) Representative flow cytometry plots of CAMP⁺ Ly6G⁺ neutrophils in peripheral blood from neutrophil depletion, IgG control and CAMP^{-/-} groups 7 days after MCAO.

(D) Quantification of CAMP⁺ Ly6G⁺ neutrophils cell numbers and percentage (n = 3-5 per group, one-way ANOVA with Bonferroni multiple comparisons test).

Supplementary Figure 2

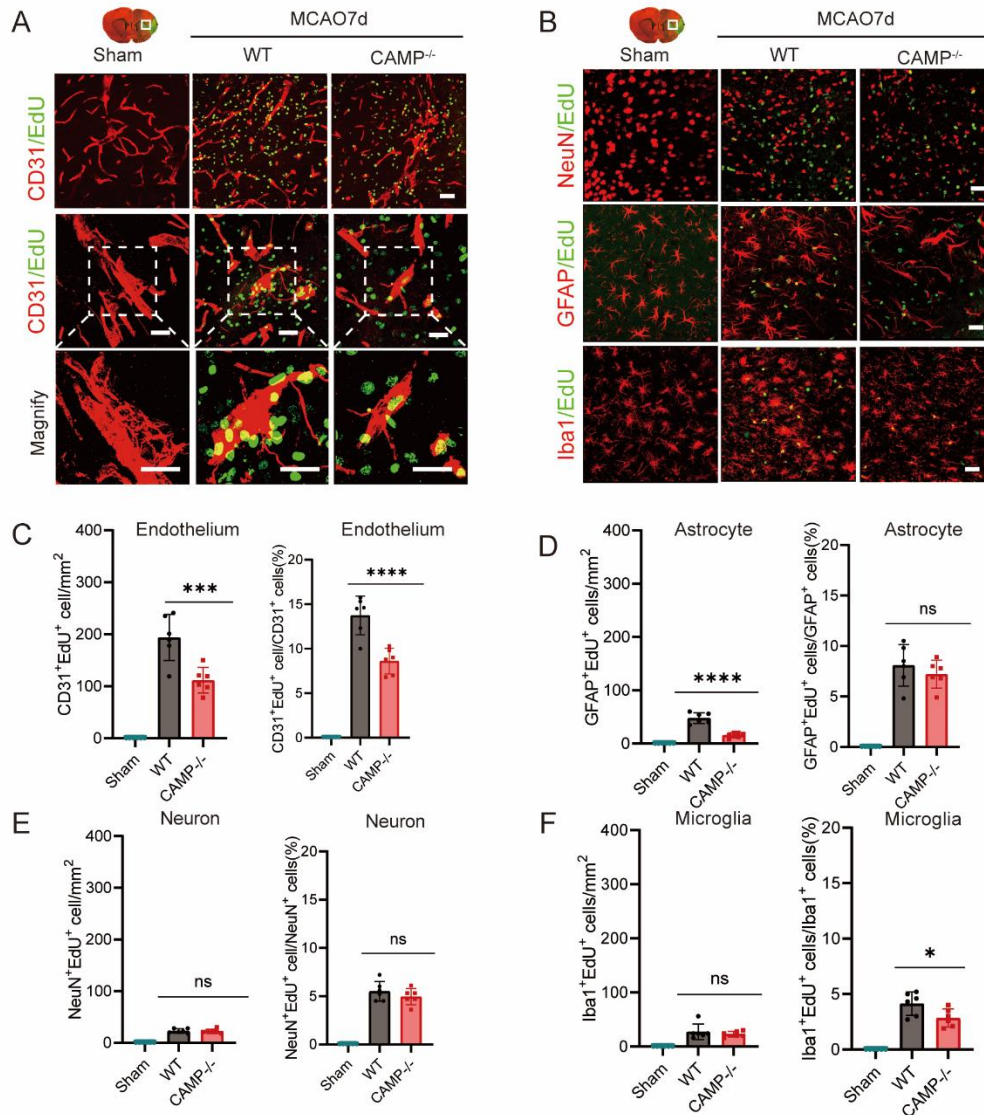


S2. CAMP is mainly derived from neutrophils. Related to figure2

(A) Representative images of neutrophils infiltrating into the brain parenchyma 7 days and 14 days after MCAO, scale bar: 50 μ m.

(B) UMAP plot display clusters of single cells colored by cell types and the expression distribution of CAMP 1 day after MCAO. (GSE174574) Single cell RNA sequencing dataset (GSE174574) collected the same left cerebral hemispheres from three sham mice and three mice with MCAO1d.

Supplementary Figure 3



S3. Proliferation of different cell types in neurovascular unit after MCAO. Related to figure3.

(A) Representative confocal images of double-label immunofluorescence for EdU and CD31⁺ cerebral endothelial cells in the penumbra regions of WT or CAMP^{-/-} mice 7 days after MCAO or sham operation. Scale bar, 50µm.

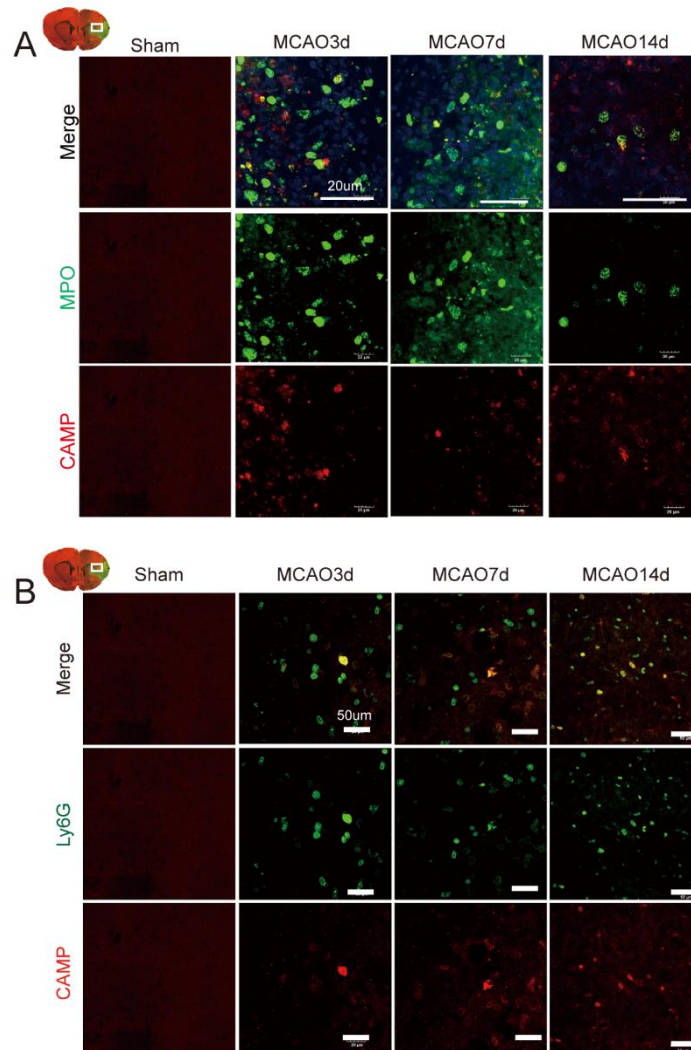
(B) Representative confocal images of double-label immunofluorescence for EdU and NeuN⁺ neurons, GFAP⁺ astrocytes, or Iba1⁺ microglia in the penumbra regions of WT or CAMP^{-/-} mice 7 days after MCAO or sham operation. Scale bar, 50µm.

(C-F) Quantification of EdU⁺ cell numbers and percentage in CD31⁺ cerebral endothelial cells, NeuN⁺ neurons, GFAP⁺ astrocytes, and Iba1⁺ microglia in the

penumbra regions 7 days after MCAO or sham operation (n = 6 per group, one-way ANOVA with Bonferroni multiple comparisons test).

All data are presented as means \pm SD, *P < 0.05, **P < 0.01, ***P < 0.001, ****P < 0.0001, ns, no significance.

Supplementary Figure4



S4. Ly6G⁺CAMP⁺ neutrophils infiltrate into the peri-infarct area after MCAO.

Related to figure 1.

(A) Representative images of MPO⁺CAMP⁺ neutrophils infiltrating into the peri-infarct area at 3, 7 and 14 days after MCAO, scale bar: 20 μm.

(B) Representative images of Ly6G⁺CAMP⁺ neutrophils infiltrating into the peri-infarct

area at 3, 7 and 14 days after MCAO, scale bar: 50 μ m.

Table S1: The baseline characteristics of the recruited patients. Related to figure1.

Number	Age	Gender	Time after stroke (day)	NIHSS (admission)
1	64	M	1	7
2	64	M	3	0
3	68	M	3	2
4	75	M	3	2
5	70	M	3	3
6	69	M	1	5
7	68	M	1	5
8	63	M	2	7
9	64	M	3	2
10	68	M	1	1
11	71	M	1	1
12	62	F	2	0
13	64	F	1	6
14	55	F	3	2
15	61	F	2	7
16	70	F	2	8
17	65	F	3	2
18	73	F	1	7

M: Male; F: Female

Table S2: The baseline characteristics of the recruited healthy control. Related to figure1.

Number	Age	Gender
1	71	M
2	73	M
3	75	M
4	75	M
5	61	M
6	54	M
7	73	M
8	66	M
9	74	M
10	77	M
11	59	F
12	55	F
13	61	F
14	53	F
15	58	F
16	65	F
17	65	F
18	70	F
19	58	F
20	51	F

M: Male; F: Female