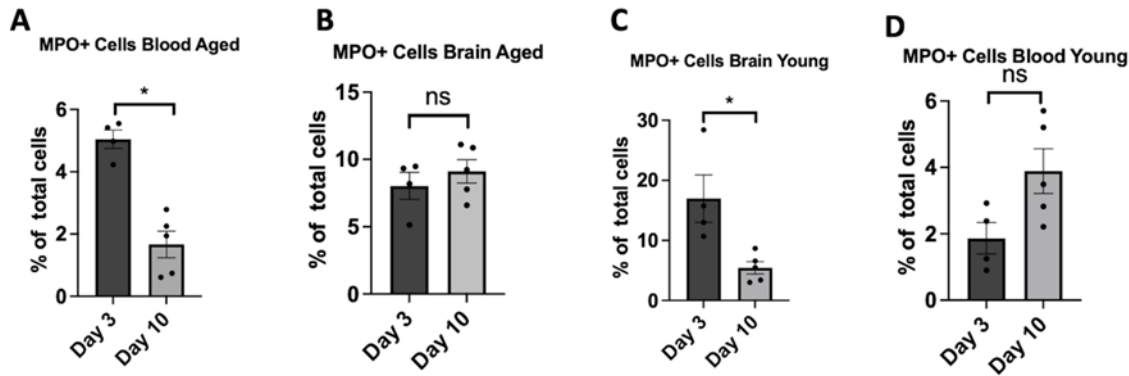


SUPPLEMENTARY DATA

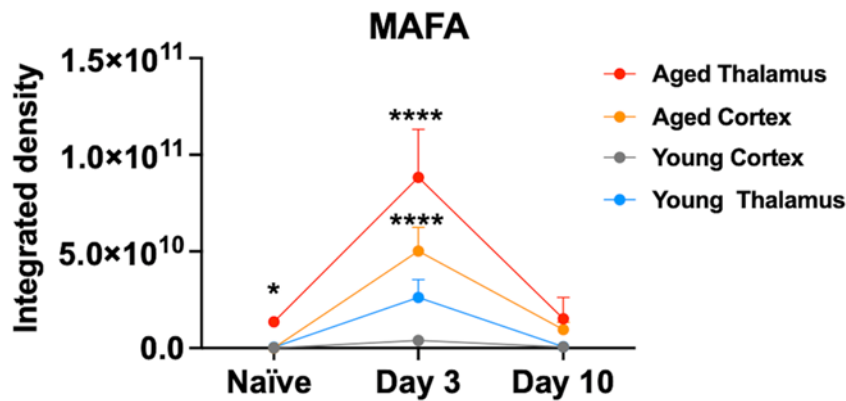
# **Aging Intensifies Myeloperoxidase Activity after Ischemic Stroke**

**Negin Jalali Motlagh, Cuihua Wang, Hyung-Hwan Kim, Yonghyun Jun, Daeki Kim, Seeun Lee, John W. Chen**

# SUPPLEMENTARY DATA



**Supplementary Figure 1.** The recruitment of MPO<sup>+</sup> cells decreased in young adult brains while there were no changes in aged brains comparing day 10 to day 3. MPO<sup>+</sup> cells in aged blood on day 3 were higher compared to aged blood on day 10 ( $p = 0.0073$ , Figure A). However, there were no significant differences between day 3 and day 10 in aged brains (Figure B). On the other hand, the percentage of these cells was significantly increased in young adult brains on day 3 compared to day 10 ( $p = 0.0159$ , Figure C) and there were no significant differences between MPO<sup>+</sup> cells on day 3 and day 10 in young adult blood (Figure D).

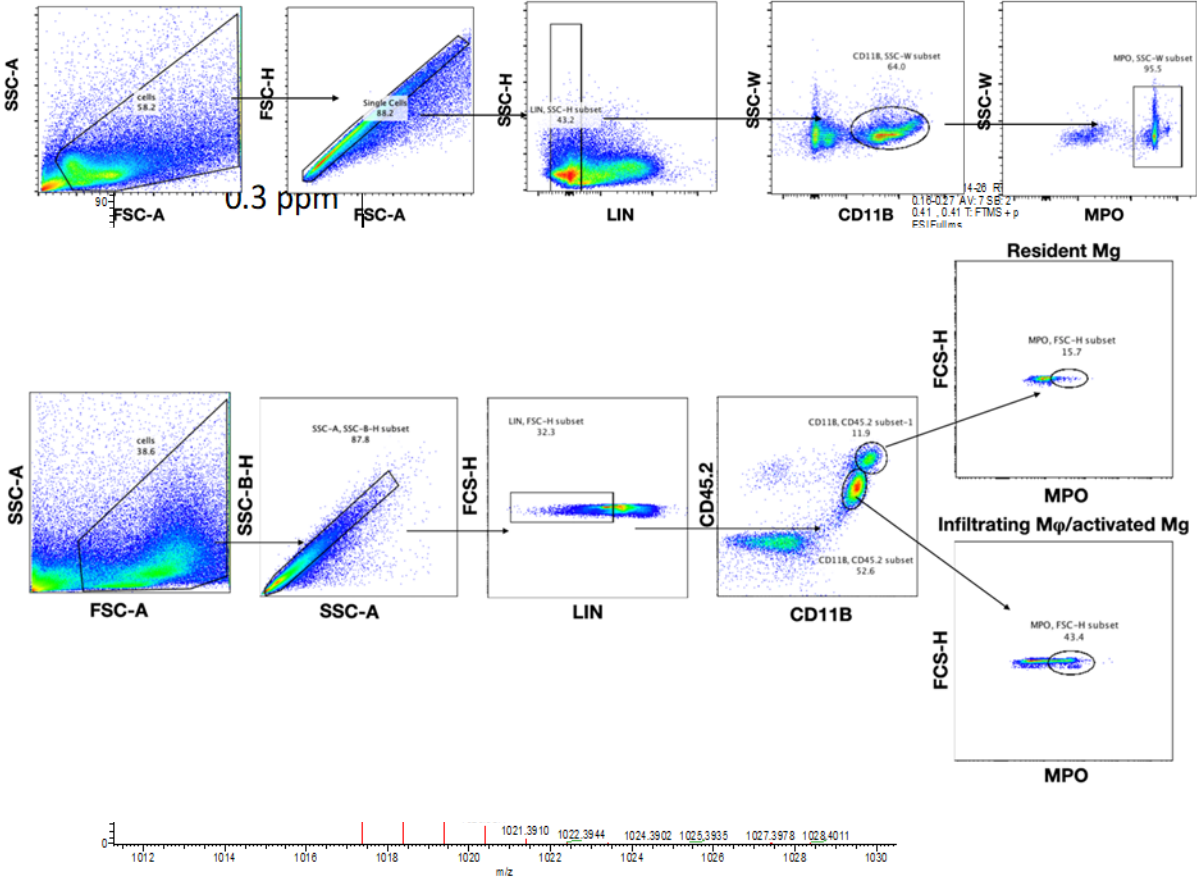


**Supplementary Figure 2.** Changes in MPO activity in the different ischemic areas over time. Analyses of MAFA imaging in the thalamic and cortical regions of aged and young adult brains revealed a higher MAFA signal in the thalamus and cortex of aged brains irrespective of stroke. These differences in MAFA signals in the naïve thalamus and in Day 3 thalamus and cortex between aged and young adults were statistically significant ( $p = 0.0442$  for naïve thalamus,  $p < 0.0001$  for thalamus and cortex day 3,  $n = 4$  per group, two-way ANOVA).

score	Body symmetry	Circling behavior	front limb symmetry
0	normal	not present	not present
1	tilting on one side	predominant oneside turn	slight asymmetry
2	moderate asymmetry	circle to one side not constantly	marked asymmetry
3	promonant asymmetry	circle to one side constantly	prominent asymmetry
4	extreme asymmetry	pivoting or no movenent	no limb movement

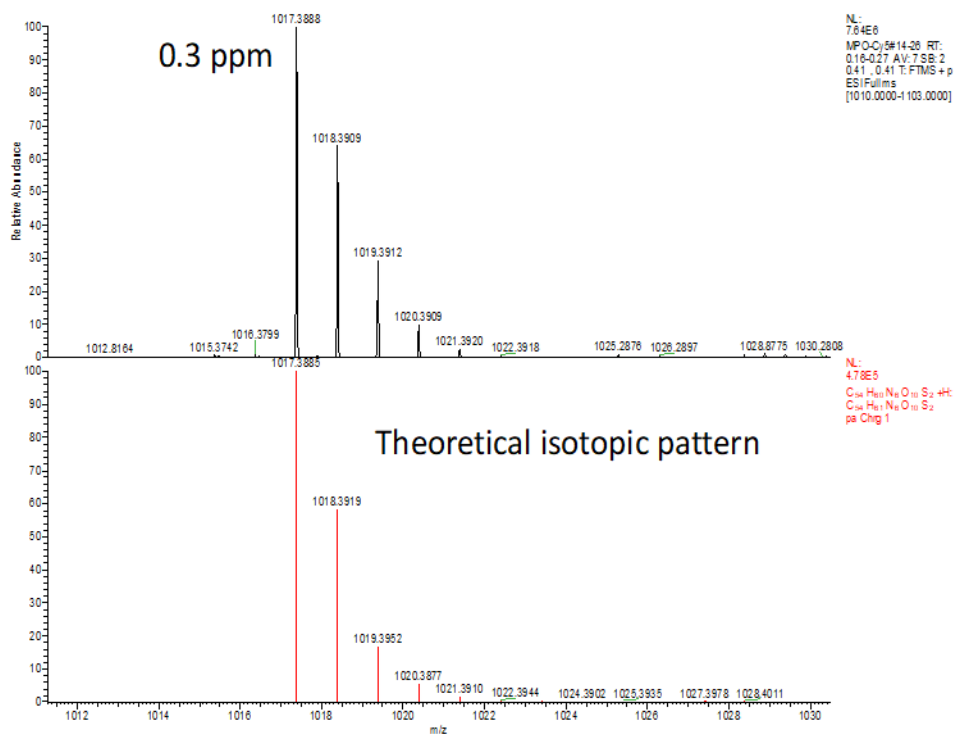
**Supplementary Figure 3.** Neurological deficit score.

# SUPPLEMENTARY DATA

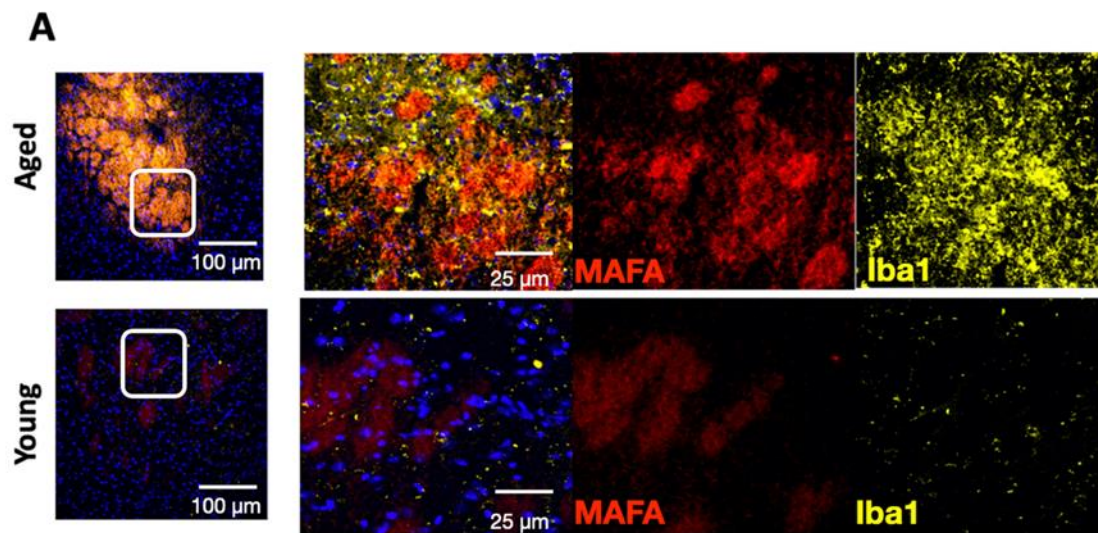


Supplementary Figure 4. Gating scheme for MPO<sup>+</sup> cells in the brain.

# SUPPLEMENTARY DATA

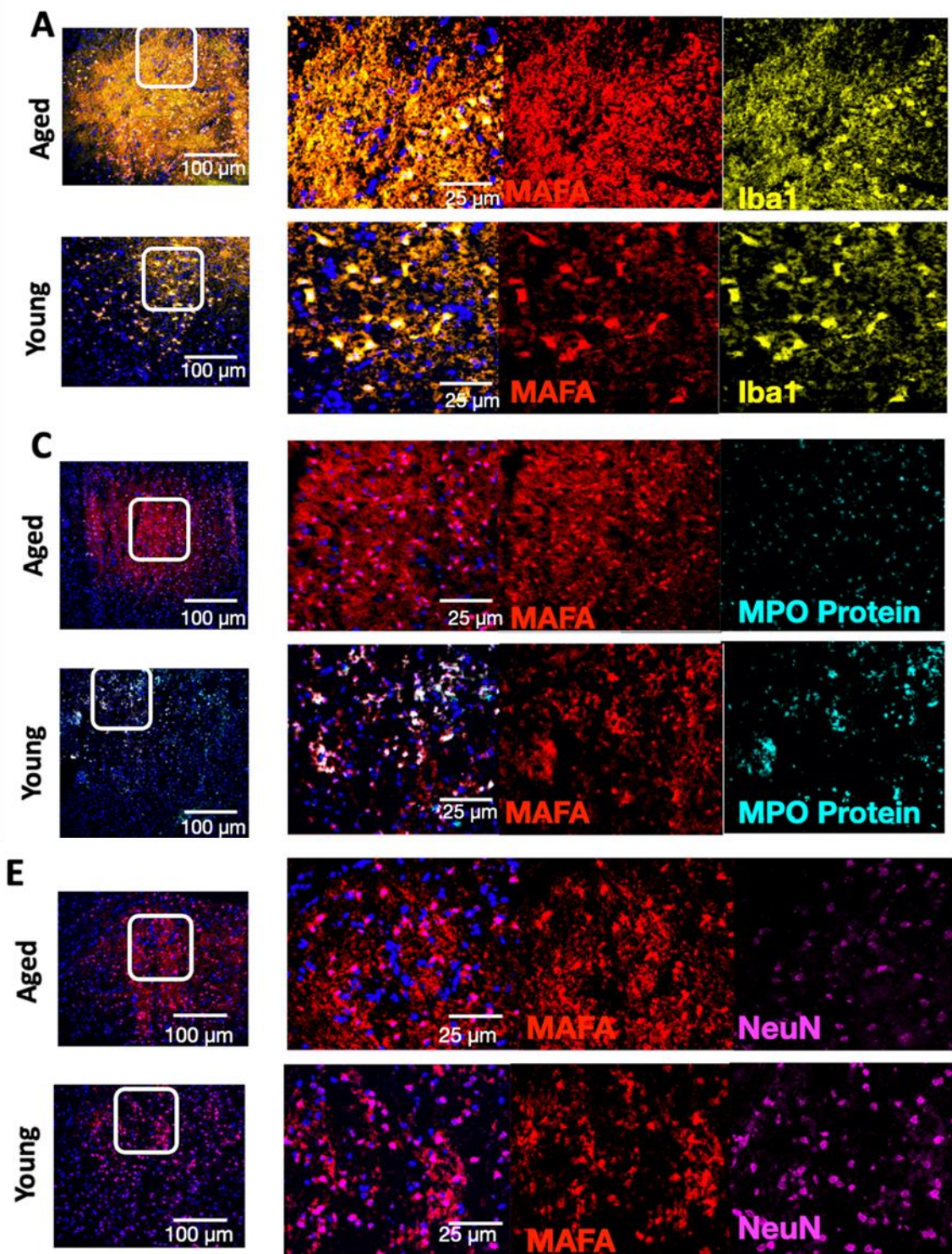


Supplementary Figure 5. High-resolution mass spectrometry (HRMS) of MAFA.



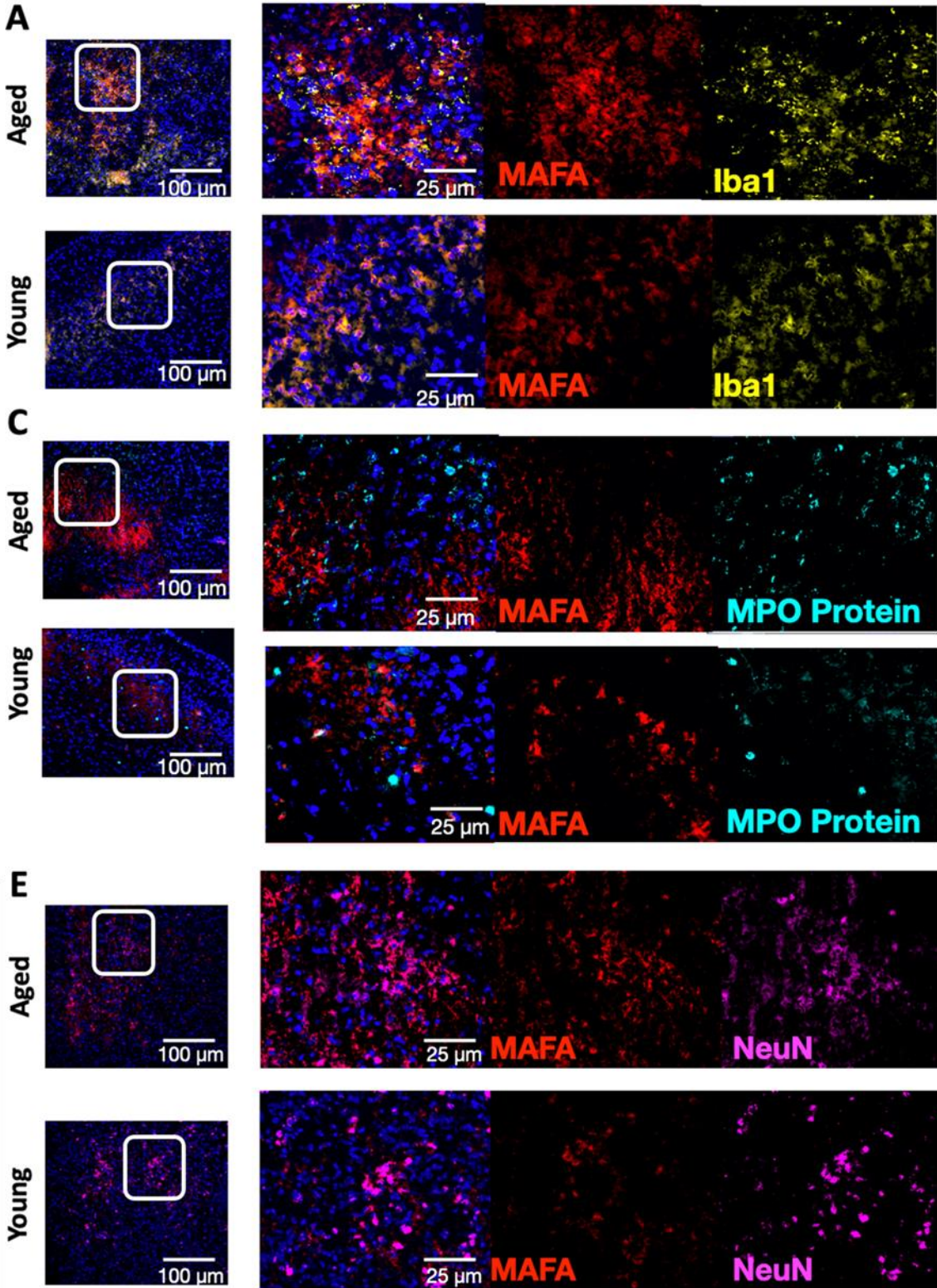
Supplementary Figure 6-1. MAFA signals increased with aging (for Fig. 4).

# SUPPLEMENTARY DATA



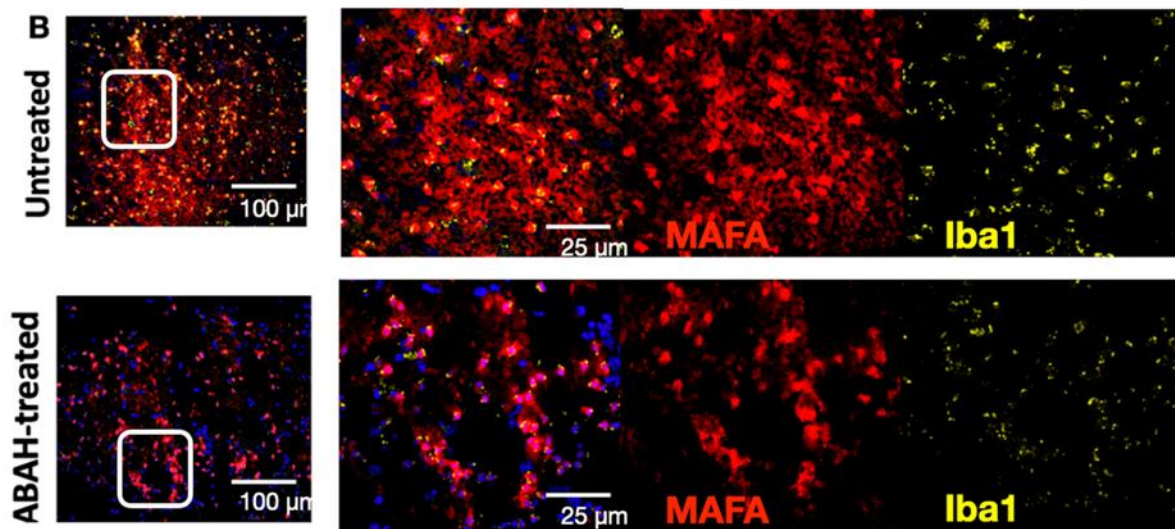
Supplementary Figure 6-2. Immunofluorescent imaging of MPO activity compared to Iba1, MPO protein, and neuronal integrity at the early subacute stage (day 3) after stroke (for Fig. 6).

SUPPLEMENTARY DATA



Supplementary Figure 6-3. Immunofluorescent imaging of MPO activity compared to Iba1, MPO protein, and neuronal integrity at the late subacute stage (day 10) after stroke (for Fig. 7).

## SUPPLEMENTARY DATA



Supplementary Figure 6-4. Neurobehavioral evaluation and survival rate show a beneficial effect of MPO inhibitor on stroke outcome in the aged group (for Fig. 8).