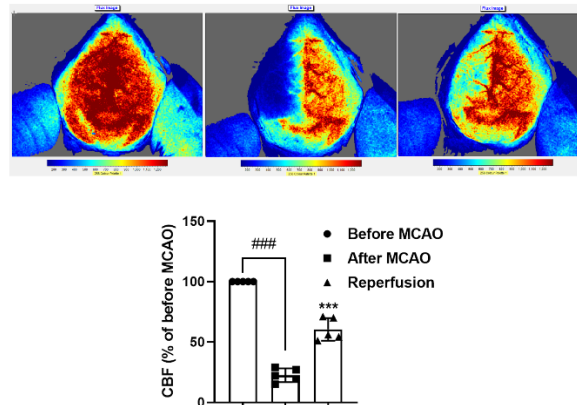
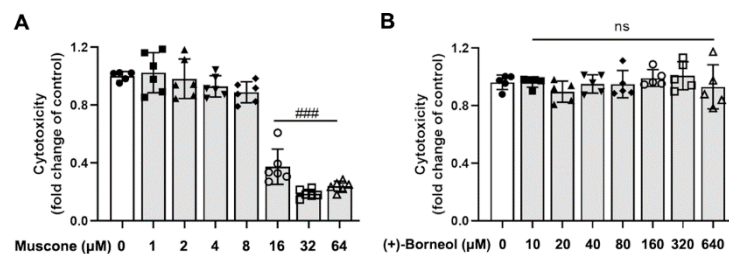


**Figure S1 The structure of muscone and (+)-borneol.** (A) muscone, (B) (+)-borneol.



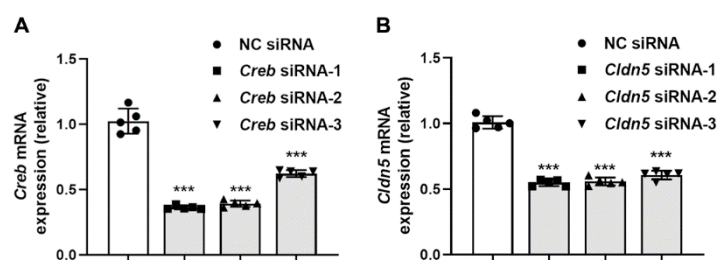
**Figure S2 The local cerebral blood flow of MCAO mice.** cerebral blood flow before MCAO, after MCAO, and reperfusion (CBF, blood flow in the infarct area/blood flow in the contralateral corresponding area \*100%) was reported ( $n = 5$ ). Data are presented as mean  $\pm$  SD ( $n = 5$ ). \*\*\* $p < 0.001$  vs. after MCAO; ### $p < 0.001$  vs. indicated group.  $p$  values are determined by one-way ANOVA followed by Tukey's test.



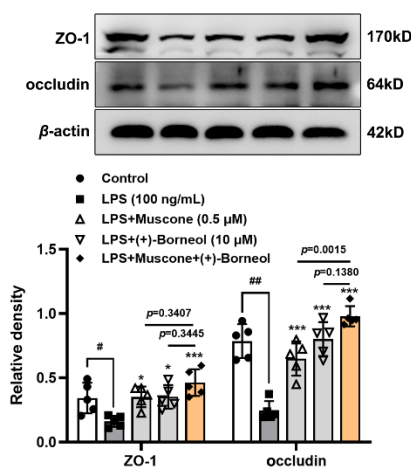
**Figure S3 Cytotoxicity of muscone and (+)-borneol on bEnd.3 cells.** Cell viability of bEnd.3 cells when treated with the indicated concentrations of muscone (A) or (+)-

borneol (**B**) was measured by CCK-8 ( $n = 5$ ). Data are presented as mean  $\pm$  SD ( $n = 5$ ).

###  $p < 0.001$  vs. untreated group; ns: no significant difference.  $p$  values are determined by one-way ANOVA followed by Tukey's test.



**Figure S4 Small interfering RNA (siRNA) screening.** bEnd.3 cells were transfected with *Creb* siRNA, *Cldn5* siRNA, or NC siRNA using Lipofectamine 3000 transfection reagent for 48 h. (A-B): the gene expressions of *Creb* and *Cldn5* were determined by qRT-PCR ( $n = 5$ ). All data are presented as mean  $\pm$  SD of five independent experiments. \*\*\*  $p < 0.001$  vs. NC siRNA.  $p$  values are determined by one-way ANOVA followed by Tukey's test.



**Figure S5 Muscone and (+)-borneol increased ZO-1 and occludin expression.**

Protein levels of ZO-1 and occludin in LPS-induced bEnd.3 cells treated with muscone and (+)-borneol for 16 h ( $n = 5$ ). Data are presented as mean  $\pm$  SD ( $n = 5$ ). \*  $p < 0.05$ ,

\*\*\* $p < 0.001$  vs. LPS treatment; # $p < 0.05$ , ### $p < 0.01$  vs. indicated treatment.  $p$  values are determined by one-way ANOVA followed by Tukey's test.

**Table S1. Primer sequences for qRT-PCR**

<b>Primers</b>		<b>Sequences</b>	<b>Accession number</b>
<i>Il1β</i>	Forward	5'- TCGCAGCAGCACATCAACAAGAG -3'	AK225002
	Reverse	5'- AGGTCCACGGGAAAGACACAGG -3'	
<i>Cldn5</i>	Forward	5'- TGGTGCTGTGTCTGGTAGGATGG -3'	AK077282
	Reverse	5'- GTCACGATGTTGTGGTCCAGGAAG -3'	
<i>Creb</i>	Forward	5'- CCAGGTCCATGGCGTTATCC -3'	AF448507
	Reverse	5'- ACTGCCCCACTGCTAGTTTGG -3'	
<i>Actb</i>	Forward	5'- CTACCTCATGAAGATCCTGACC -3'	AK147787
	Reverse	5'- CACAGCTTCTCTTTGATGTCAC -3'	

**Table S2. Primer sequences for ChIP-qPCR**

<b>Primers</b>		<b>Sequences</b>	<b>Accession number</b>
<i>Cldn5</i> promoter (site 1)	Forward	5'- TCTCCCGCCGTCTTCTAAGA-3'	AC083895
	Reverse	5'- TCCCTGCTCCCTTTGTTTCC-3'	
<i>Cldn5</i> promoter (site 2)	Forward	5'- CTGCTGTCCCAGGATTCCAG-3'	
	Reverse	5'- CAACCACCGCCTACAGTTCT-3'	