Fig 1

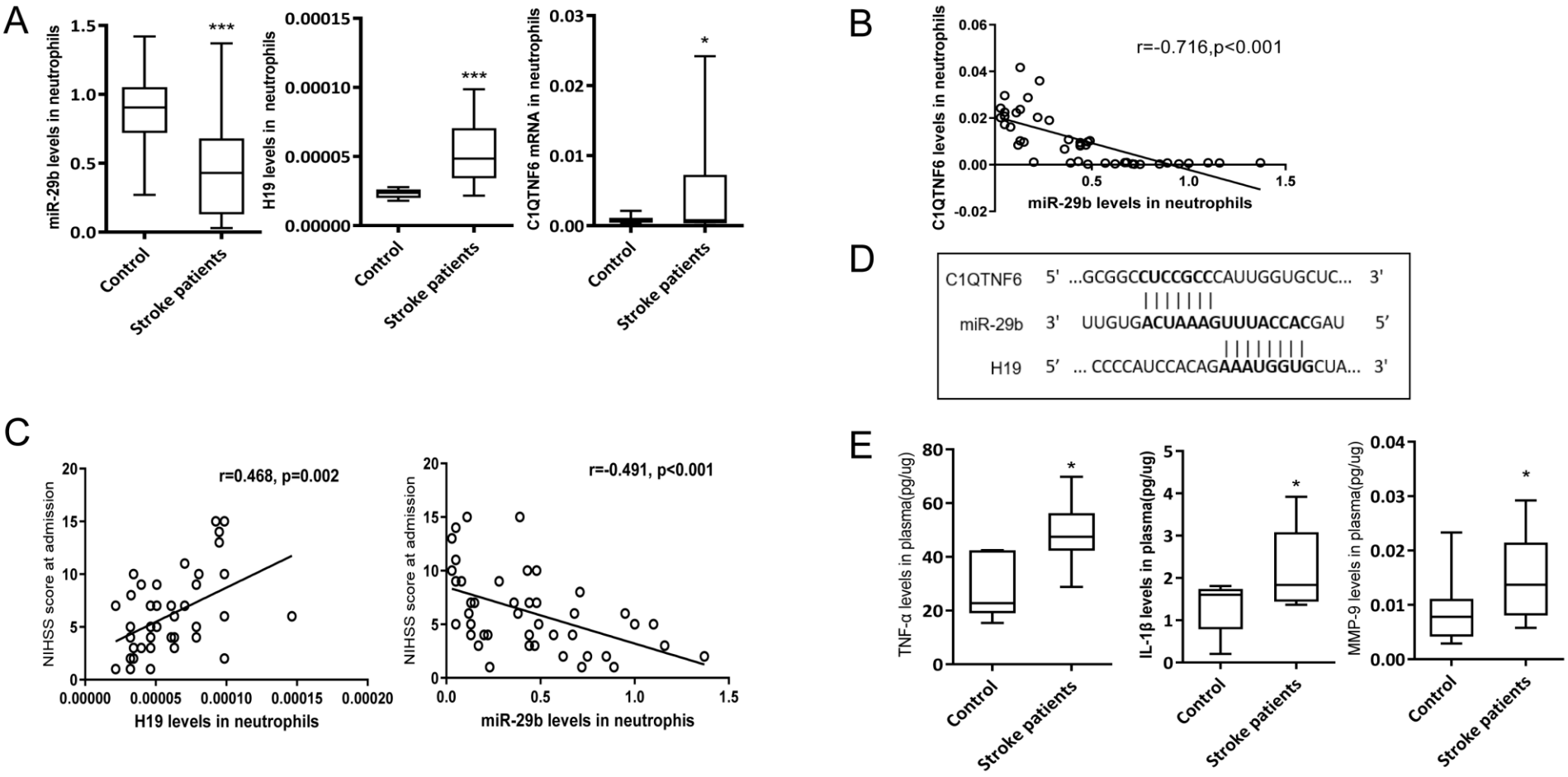

A
miR-29b levels in neutrophils
1.5
1.0
0.5
0.0
***
Control
Stroke patients
H19 levels in neutrophils
0.00015
0.00010
0.00005
0.00000
***
Control
Stroke patients
C1QTNF6 mRNA in neutrophils
0.03
0.02
0.01
0.00
*
Control
Stroke patients
B
C1QTNF6 levels in neutrophils
0.06
0.04
0.02
0.00
-0.02
r=-0.716,p<0.001
0.5
1.0
1.5
miR-29b levels in neutrophils
D
C1QTNF6 5' ...GCGGCCUCCGCCCAUUGGUGCUC... 3'
miR-29b 3' UUGUGACUAAAGUUUACCACGAU 5'
H19 5' ... CCCCAUCCACAGAAAUGGUGCUA... 3'
C
NIHSS score at admission
20
15
10
5
0
r=0.468, p=0.002
0.00000
0.00005
0.00010
0.00015
0.00020
H19 levels in neutrophils
NIHSS score at admission
r=-0.491, p<0.001
0.0
0.5
1.0
1.5
miR-29b levels in neutrophis
E
TNF-α levels in plasma(pg/ug)
80
60
40
20
0
*
Control
Stroke patients
IL-1β levels in plasma(pg/ug)
5
4
3
2
1
0
*
Control
Stroke patients
MMP-9 levels in plasma(pg/ug)
0.04
0.03
0.02
0.01
0.00
*
Control
Stroke patients

Fig 2

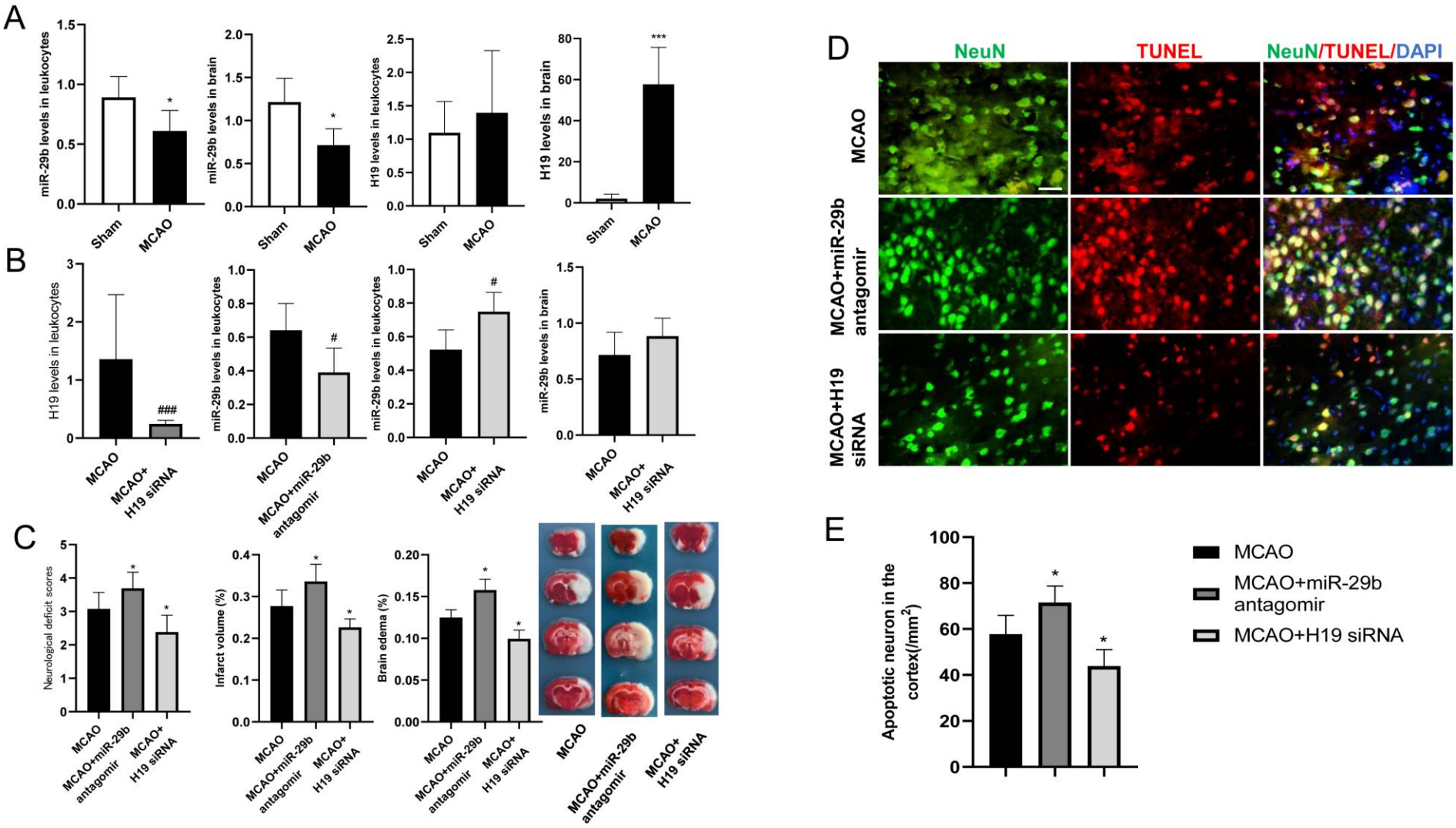

A
miR-29b levels in leukocytes
miR-29b levels in brain
H19 levels in leukocytes
H19 levels in brain
Sham
MCAO
B
H19 levels in leukocytes
miR-29b levels in leukocytes
miR-29b levels in brain
MCAO
MCAO+ H19 siRNA
MCAO+miR-29b antagomir
C
Neurological deficit scores
Infarct volume (%)
Brain edema (%)
MCAO
MCAO+miR-29b antagomir
MCAO+ H19 siRNA
D
NeuN
TUNEL
NeuN/TUNEL/DAPI
MCAO
MCAO+miR-29b antagomir
MCAO+H19 siRNA
E
Apoptotic neuron in the cortex(/mm2)
MCAO
MCAO+miR-29b antagomir
MCAO+H19 siRNA

Fig 3

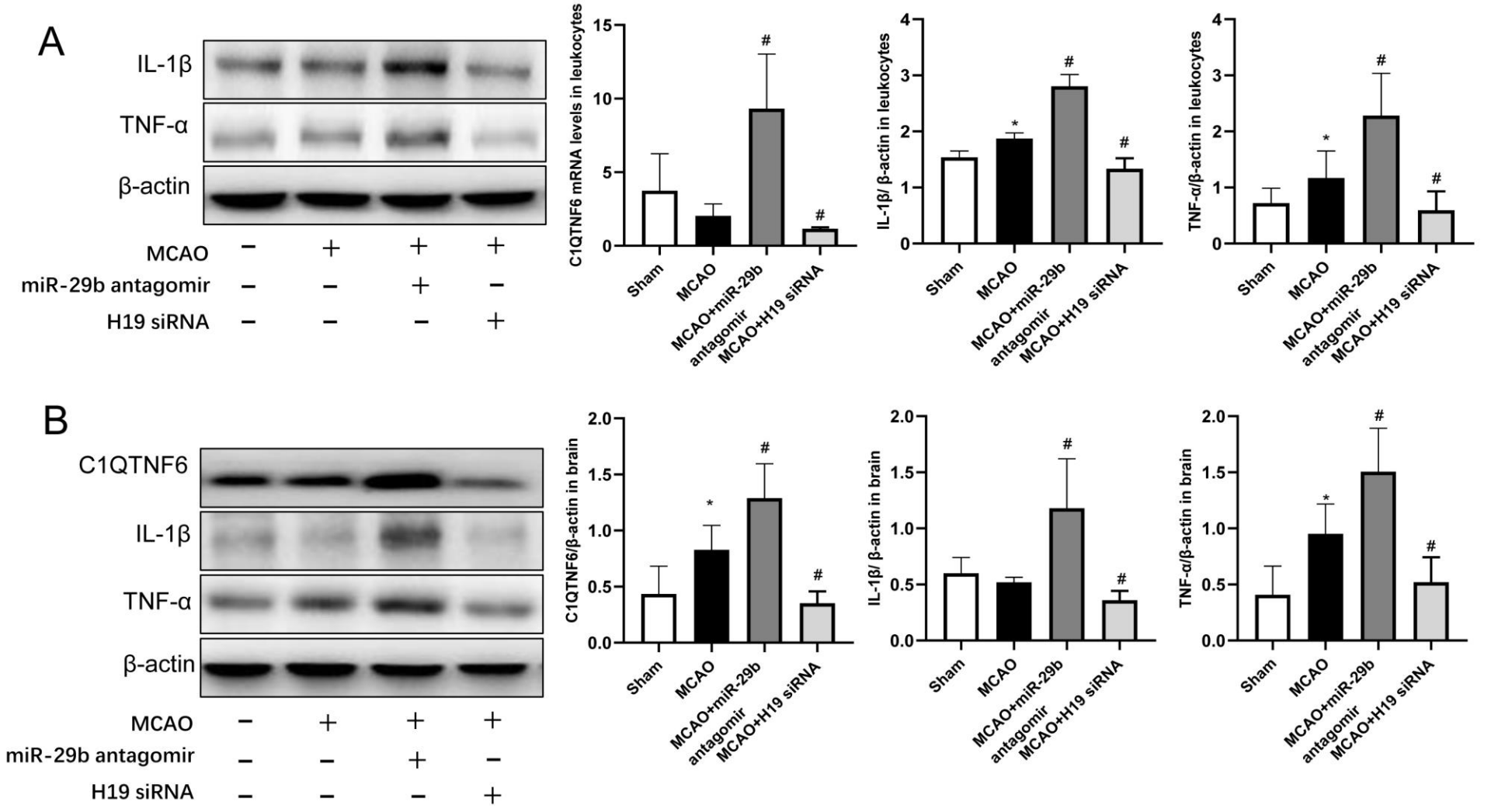

A
IL-1β
TNF-α
β-actin
MCAO
miR-29b antagomir
H19 siRNA
C1QTNF6 mRNA levels in leukocytes
IL-1β/ β-actin in leukocytes
TNF-α/β-actin in leukocytes
Sham
MCAO
MCAO+miR-29b antagomir
MCAO+H19 siRNA
B
C1QTNF6
IL-1β
TNF-α
β-actin
MCAO
miR-29b antagomir
H19 siRNA
C1QTNF6/β-actin in brain
IL-1β/ β-actin in brain
TNF-α/β-actin in brain
Sham
MCAO
MCAO+miR-29b antagomir
MCAO+H19 siRNA

Fig 4

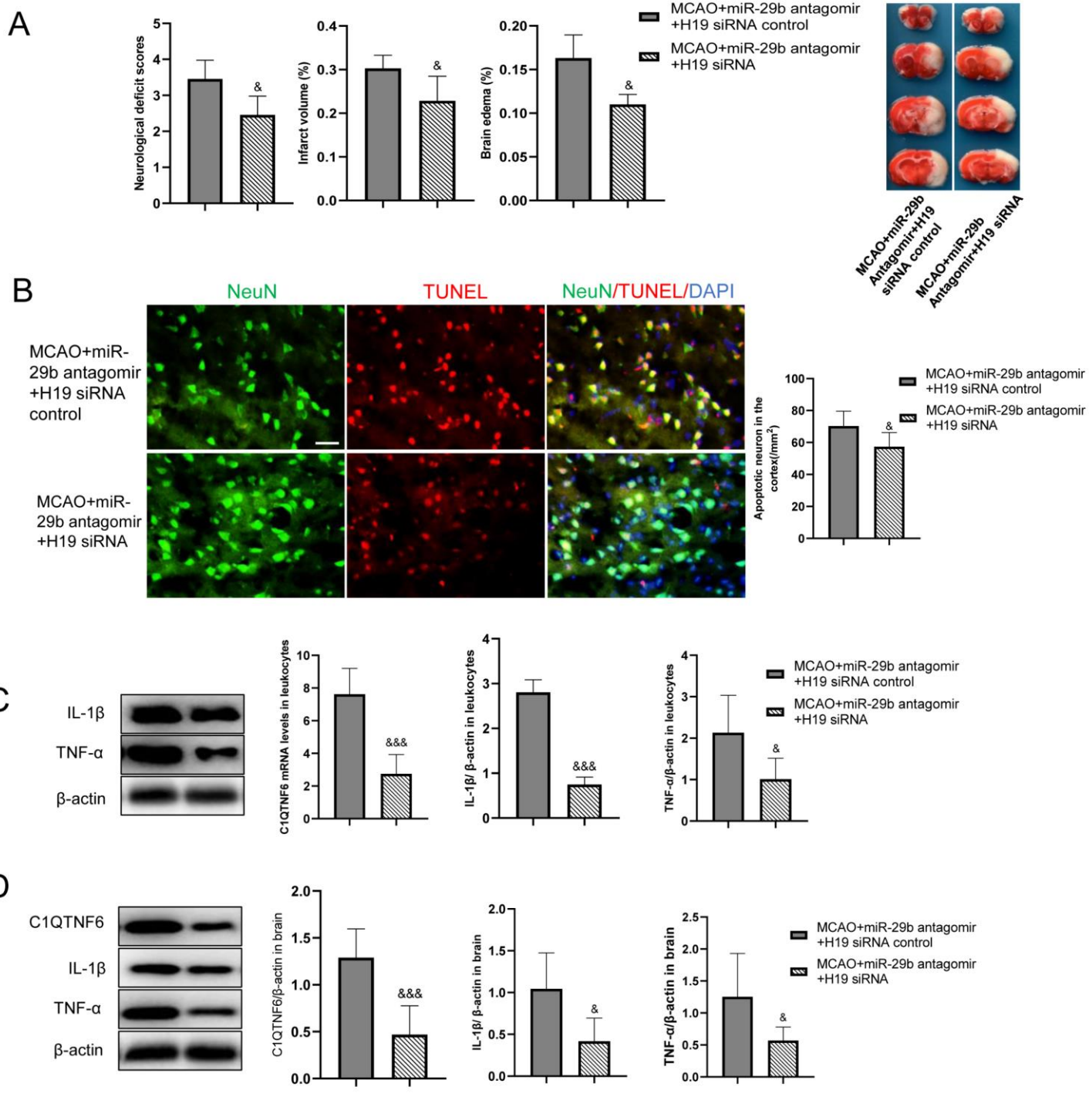
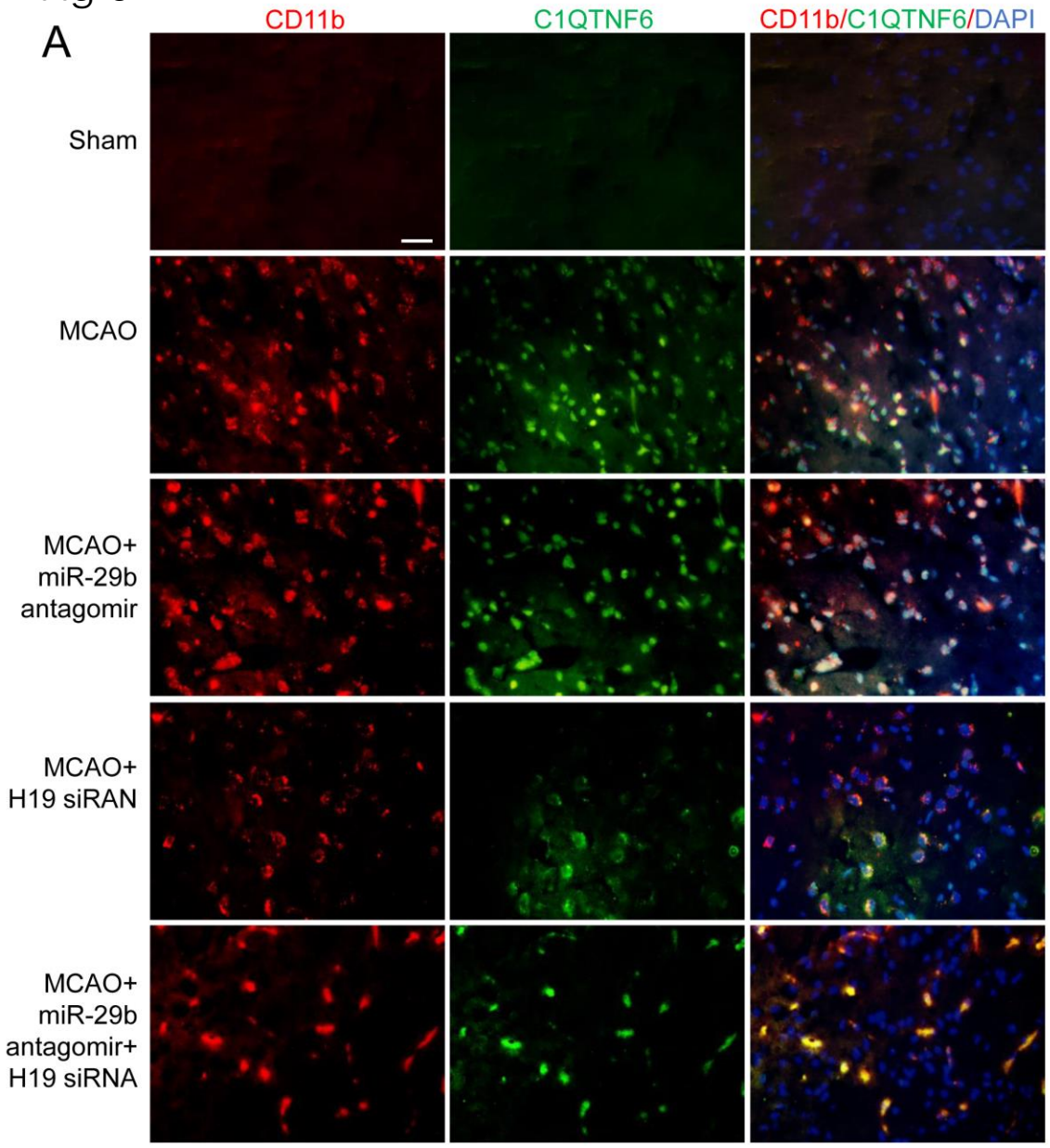
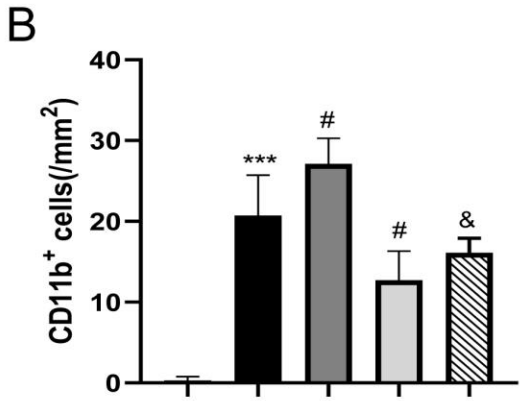

A
Neurological deficit scores
Infarct volume (%)
Brain edema (%)
MCAO+miR-29b antagomir +H19 siRNA control
MCAO+miR-29b antagomir +H19 siRNA
MCAO+miR-29b Antagomir+H19 siRNA control
MCAO+miR-29b Antagomir+H19 siRNA
B
NeuN
TUNEL
NeuN/TUNEL/DAPI
MCAO+miR-29b antagomir +H19 siRNA control
MCAO+miR-29b antagomir +H19 siRNA
Apoptotic neuron in the cortex(/mm²)
C
IL-1β
TNF-α
β-actin
C1QTNF6 mRNA levels in leukocytes
IL-1β/ β-actin in leukocytes
TNF-α/β-actin in leukocytes
D
C1QTNF6
IL-1β
TNF-α
β-actin
C1QTNF6/β-actin in brain
IL-1β/ β-actin in brain
TNF-α/β-actin in brain

Fig 5


A
CD11b
C1QTNF6
CD11b/C1QTNF6/DAPI
Sham
MCAO
MCAO+ miR-29b antagomir
MCAO+ H19 siRAN
MCAO+ miR-29b antagomir+ H19 siRNA


B
CD11b+ cells(/mm2)
40
30
20
10
0
***
#
#
&

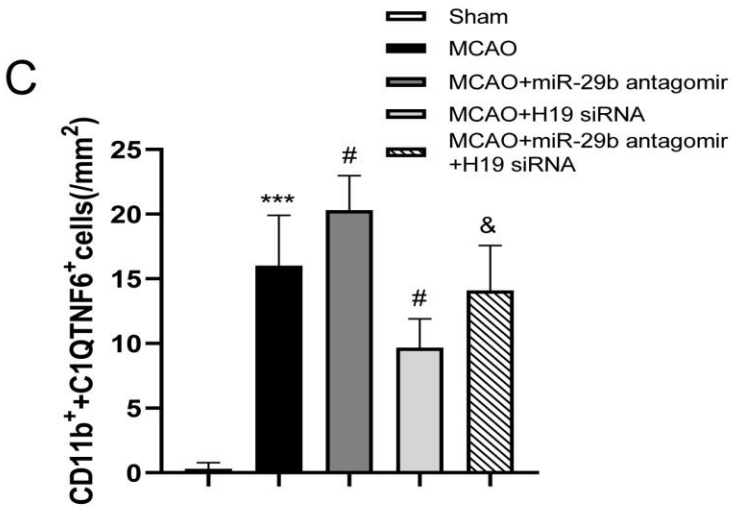

C
CD11b+C1QTNF6+cells(/mm2)
25
20
15
10
5
0
***
#
#
&
Sham
MCAO
MCAO+miR-29b antagomir
MCAO+H19 siRNA
MCAO+miR-29b antagomir +H19 siRNA

Fig 6

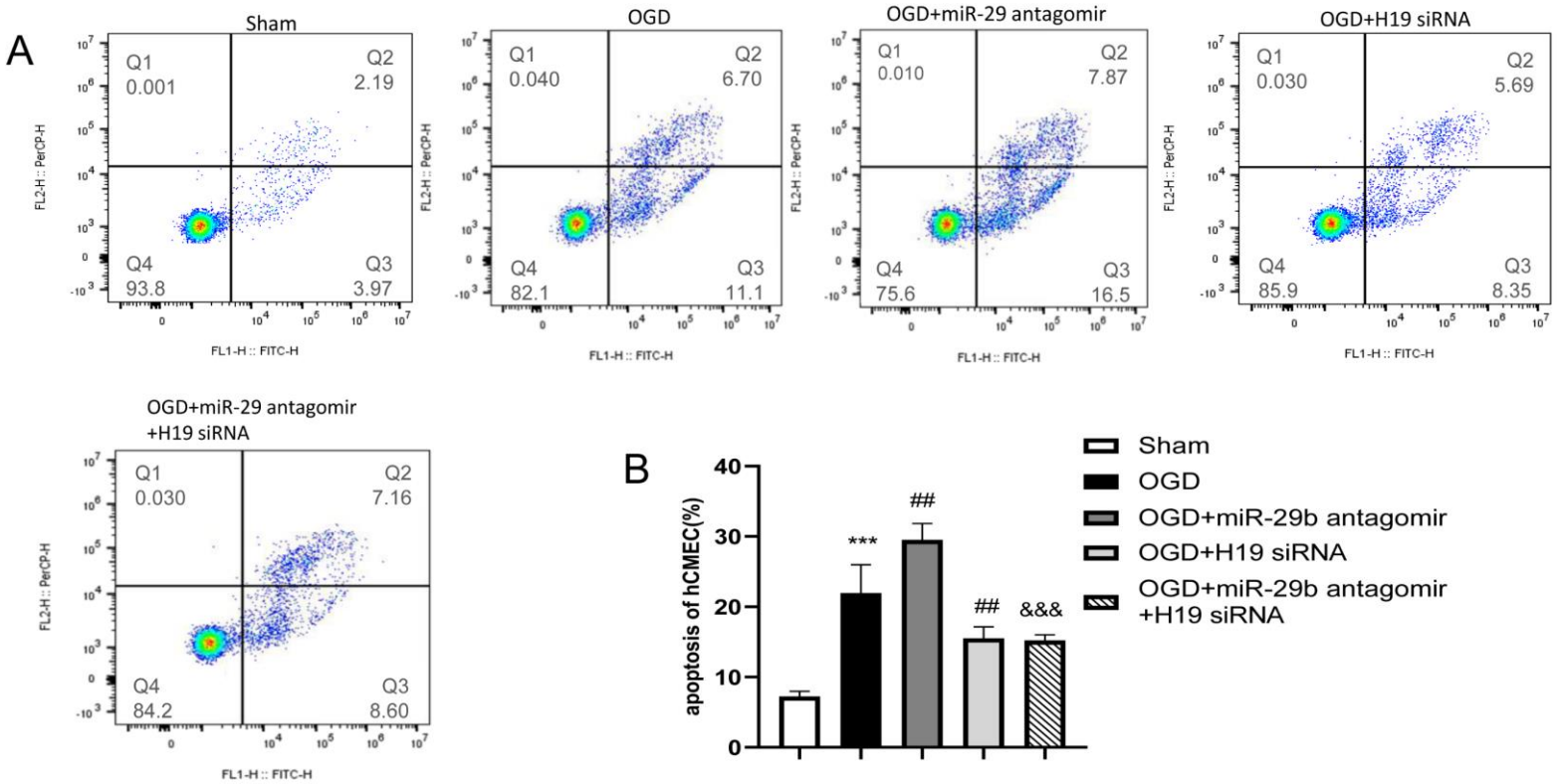
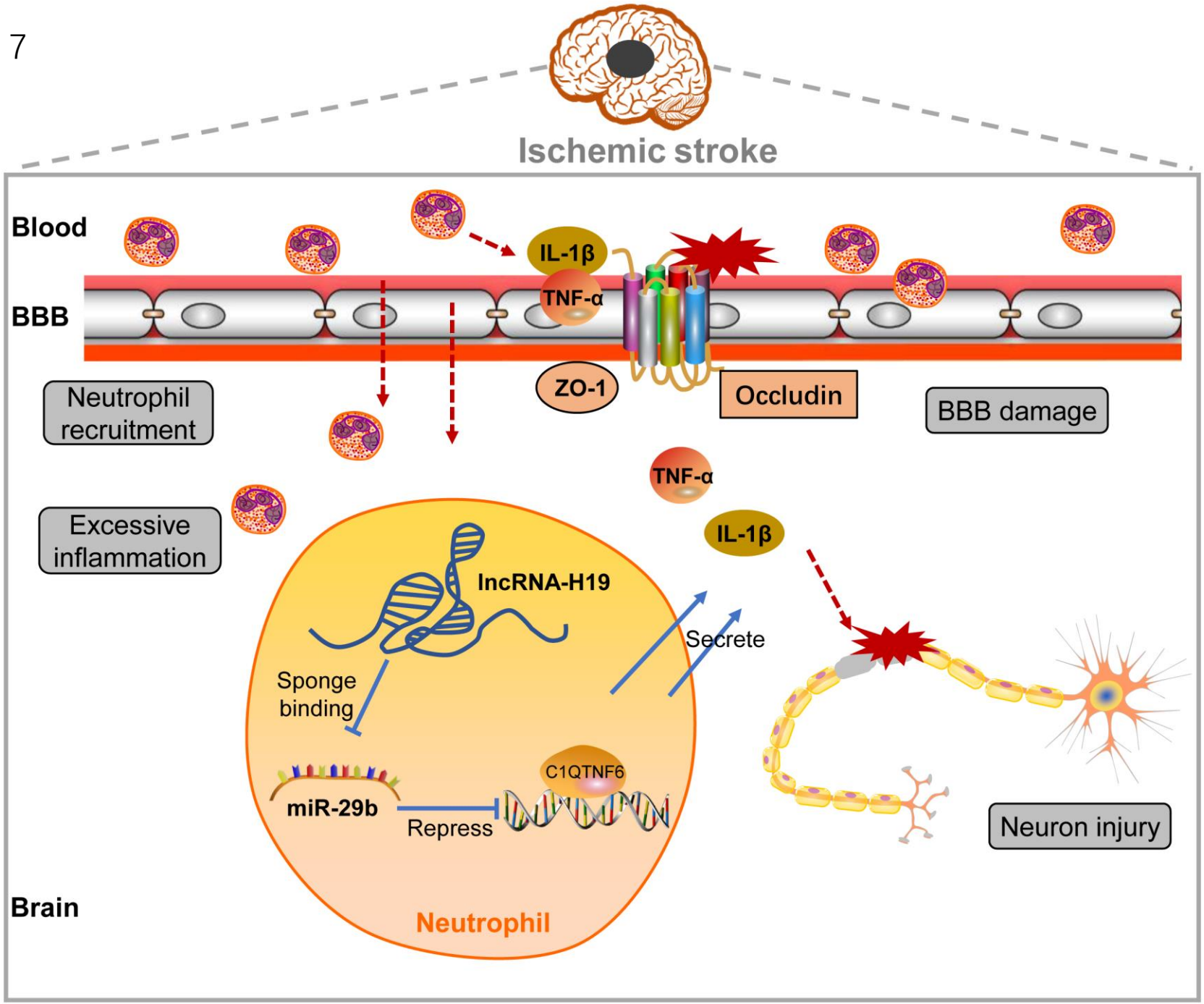

A
Sham
Q1 0.001
Q2 2.19
Q4 93.8
Q3 3.97
OGD
Q1 0.040
Q2 6.70
Q4 82.1
Q3 11.1
OGD+miR-29 antagomir
Q1 0.010
Q2 7.87
Q4 75.6
Q3 16.5
OGD+H19 siRNA
Q1 0.030
Q2 5.69
Q4 85.9
Q3 8.35
OGD+miR-29 antagomir +H19 siRNA
Q1 0.030
Q2 7.16
Q4 84.2
Q3 8.60
FL2-H :: PerCP-H
FL1-H :: FITC-H
B
apoptosis of hCMEC(%)
***
##
##
&&&
Sham
OGD
OGD+miR-29b antagomir
OGD+H19 siRNA
OGD+miR-29b antagomir +H19 siRNA
C
C1QTNF6
IL-1β
TNF-α
miR-29b antagomir
H19 siRNA
C1QTNF6/β-actin in HL-60 cells
IL-1β/β-actin in HL-60 cells
TNF-α/β-actin in HL-60 cells
D
Occludin
ZO-1
β-actin
OGD
ZO-1/β-actin in hCMEC/D3 cells
Occludin/β-actin in hCMEC/D3 cells
Sham
OGD
OGD+miR-29b antagomir
OGD+H19 siRNA
OGD+miR-29b antagomir +H19 siRNA

Fig 7


Ischemic stroke
Blood
BBB
IL-1β
TNF-α
ZO-1
Occludin
Neutrophil recruitment
BBB damage
Excessive inflammation
TNF-α
IL-1β
lncRNA-H19
Secrete
Sponge binding
C1QTNF6
miR-29b
Repress
Neuron injury
Brain
Neutrophil