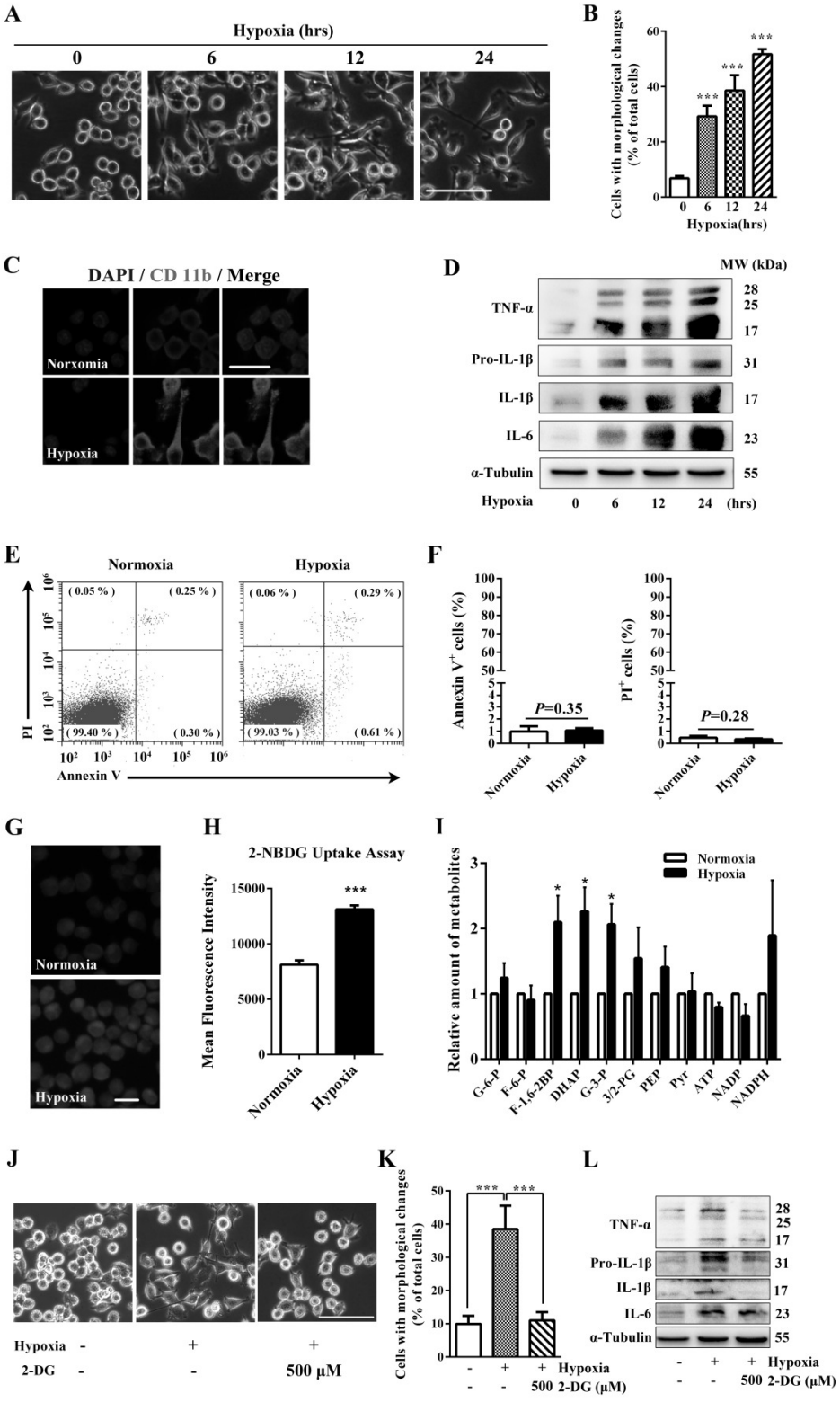

A
Hypoxia (hrs)
0
6
12
24
B
Cells with morphological changes (% of total cells)
Hypoxia(hrs)
C
DAPI / CD 11b / Merge
Norxomia
Hypoxia
D
MW (kDa)
TNF-α
Pro-IL-1β
IL-1β
IL-6
α-Tubulin
Hypoxia 0 6 12 24 (hrs)
E
Normoxia
Hypoxia
PI
Annexin V
F
Annexin V+ cells (%)
PI+ cells (%)
P=0.35
P=0.28
G
Normoxia
Hypoxia
H
2-NBDG Uptake Assay
Mean Fluorescence Intensity
I
Relative amount of metabolites
G-6-P
F-6-P
F-1,6-2BP
DHAP
G-3-P
3/2-PG
PEP
Pyr
ATP
NADP
NADPH
J
Hypoxia
2-DG
500 μM
K
Cells with morphological changes (% of total cells)
Hypoxia
500 2-DG (μM)
L
TNF-α
Pro-IL-1β
IL-1β
IL-6
α-Tubulin
Hypoxia
2-DG (μM)

Fig. 1

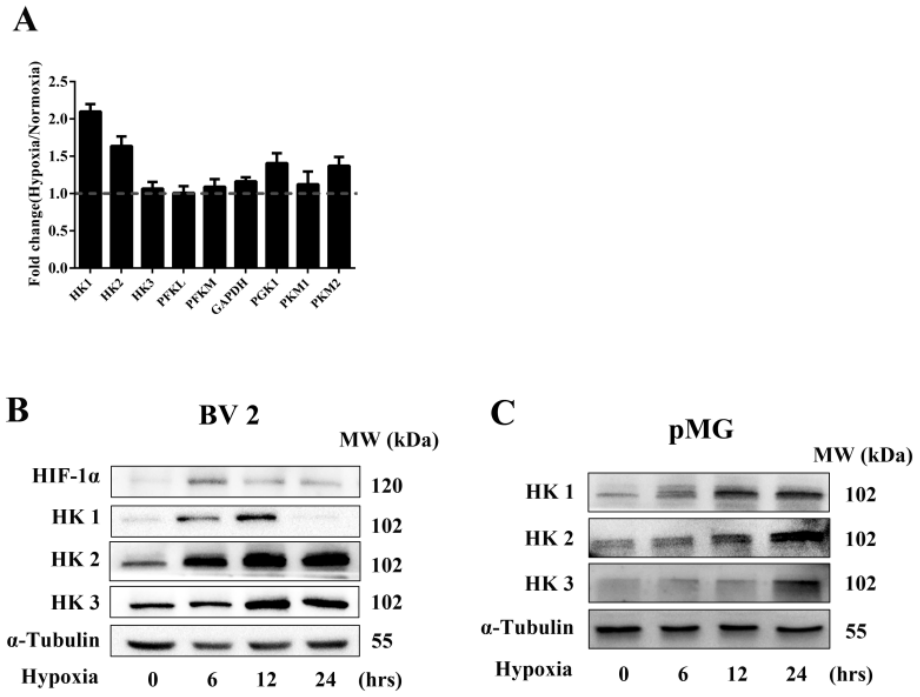

A
Fold change(Hypoxia/Normoxia)
2.5
2.0
1.5
1.0
0.5
0.0
HK1
HK2
HK3
PFKL
PFKM
GAPDH
PGK1
PKMI
PKM2
B
BV 2
MW (kDa)
HIF-1α
HK 1
HK 2
HK 3
α-Tubulin
120
102
102
102
55
Hypoxia
0
6
12
24
(hrs)
C
pMG
MW (kDa)
HK 1
HK 2
HK 3
α-Tubulin
102
102
102
55
Hypoxia
0
6
12
24
(hrs)

Fig. 2

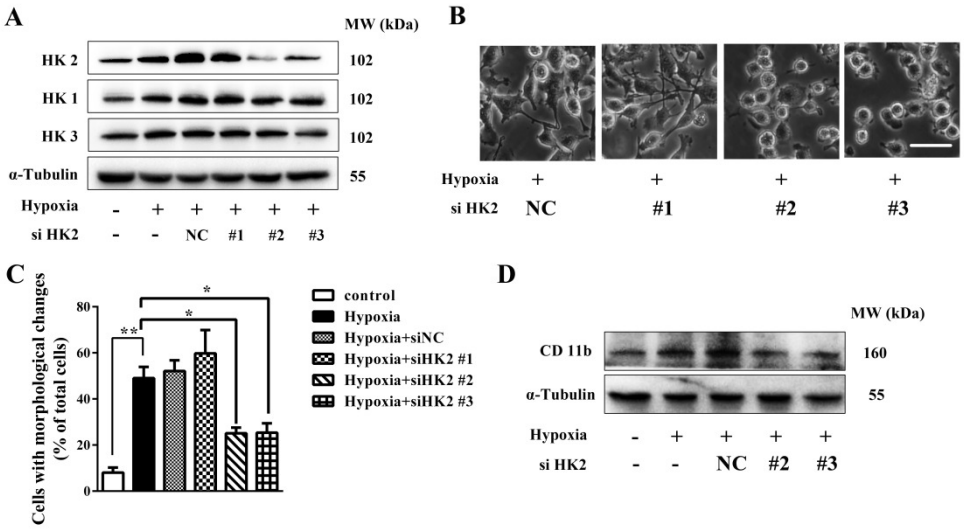

A
MW (kDa)
HK 2
HK 1
HK 3
α-Tubulin
102
102
102
55
Hypoxia
si HK2
NC
#1
#2
#3
B
Hypoxia
si HK2
NC
#1
#2
#3
C
Cells with morphological changes
(% of total cells)
control
Hypoxia
Hypoxia+siNC
Hypoxia+siHK2 #1
Hypoxia+siHK2 #2
Hypoxia+siHK2 #3
D
MW (kDa)
CD 11b
α-Tubulin
160
55
Hypoxia
si HK2
NC
#2
#3

Fig. 3

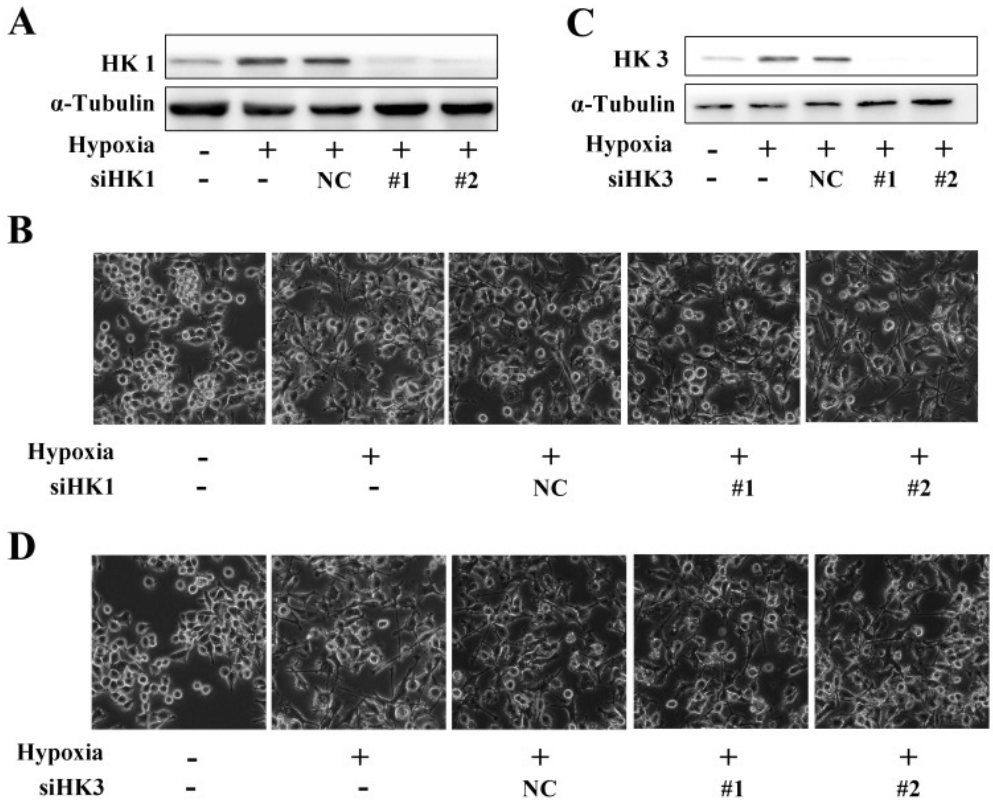

A
HK 1
α-Tubulin
Hypoxia - + + + +
siHK1 - - NC #1 #2
C
HK 3
α-Tubulin
Hypoxia - + + + +
siHK3 - - NC #1 #2
B
Hypoxia - + + + +
siHK1 - - NC #1 #2
D
Hypoxia - + + + +
siHK3 - - NC #1 #2

Fig. 4

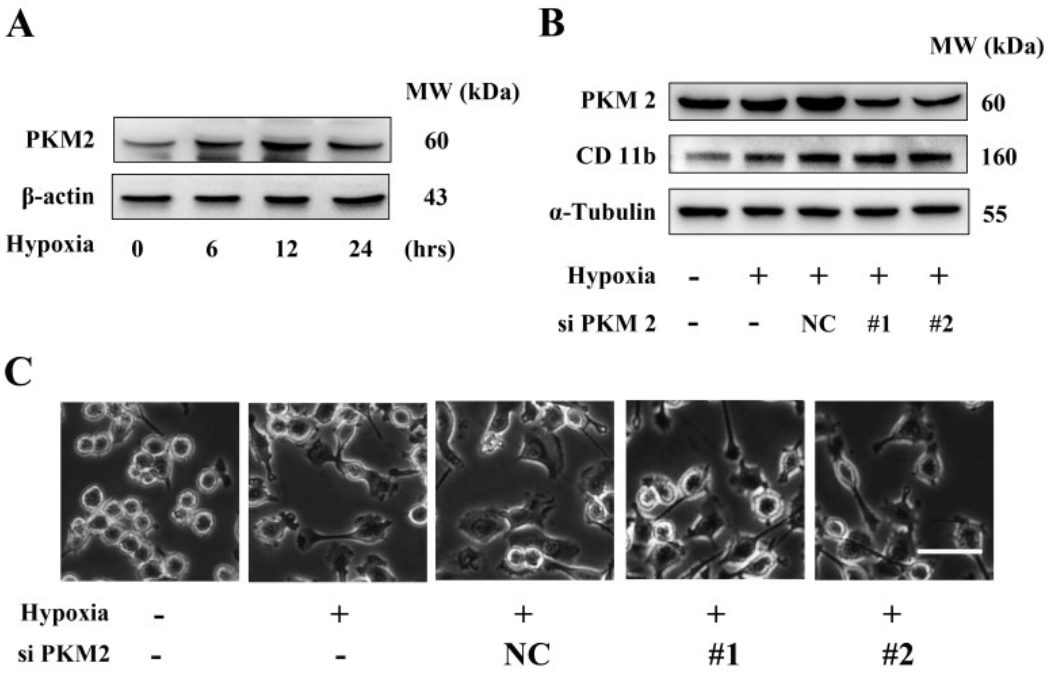

A
MW (kDa)
PKM2 60
β-actin 43
Hypoxia 0 6 12 24 (hrs)
B
MW (kDa)
PKM 2 60
CD 11b 160
α-Tubulin 55
Hypoxia - + + + +
si PKM 2 - - NC #1 #2
C
Hypoxia - + + + +
si PKM2 - - NC #1 #2

Fig. 5

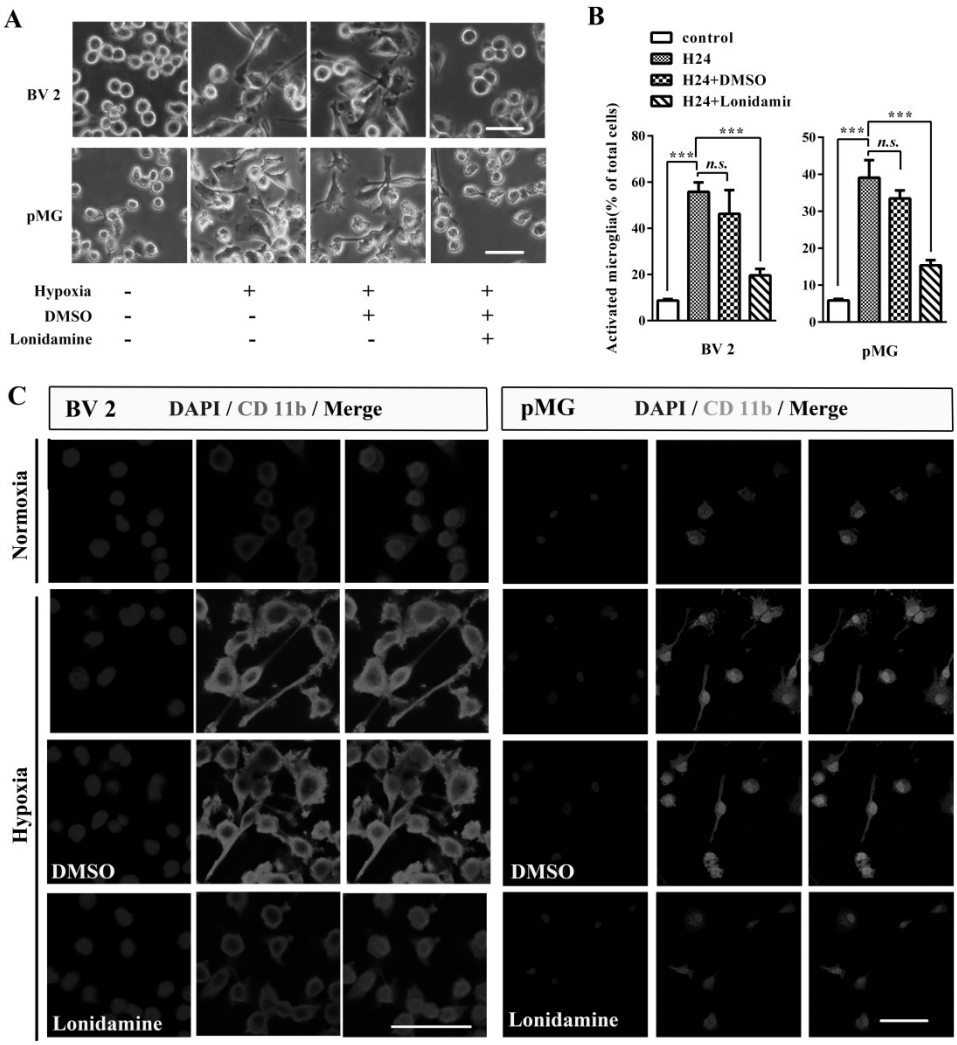

A
BV 2
pMG
Hypoxia - + + +
DMSO - - + +
Lonidamine - - - +
B
control
H24
H24+DMSO
H24+Lonidamin
Activated microglia(% of total cells)
***
n.s.
BV 2
pMG
C
BV 2 DAPI / CD 11b / Merge
pMG DAPI / CD 11b / Merge
Normoxia
Hypoxia
DMSO
Lonidamine

Fig. 6

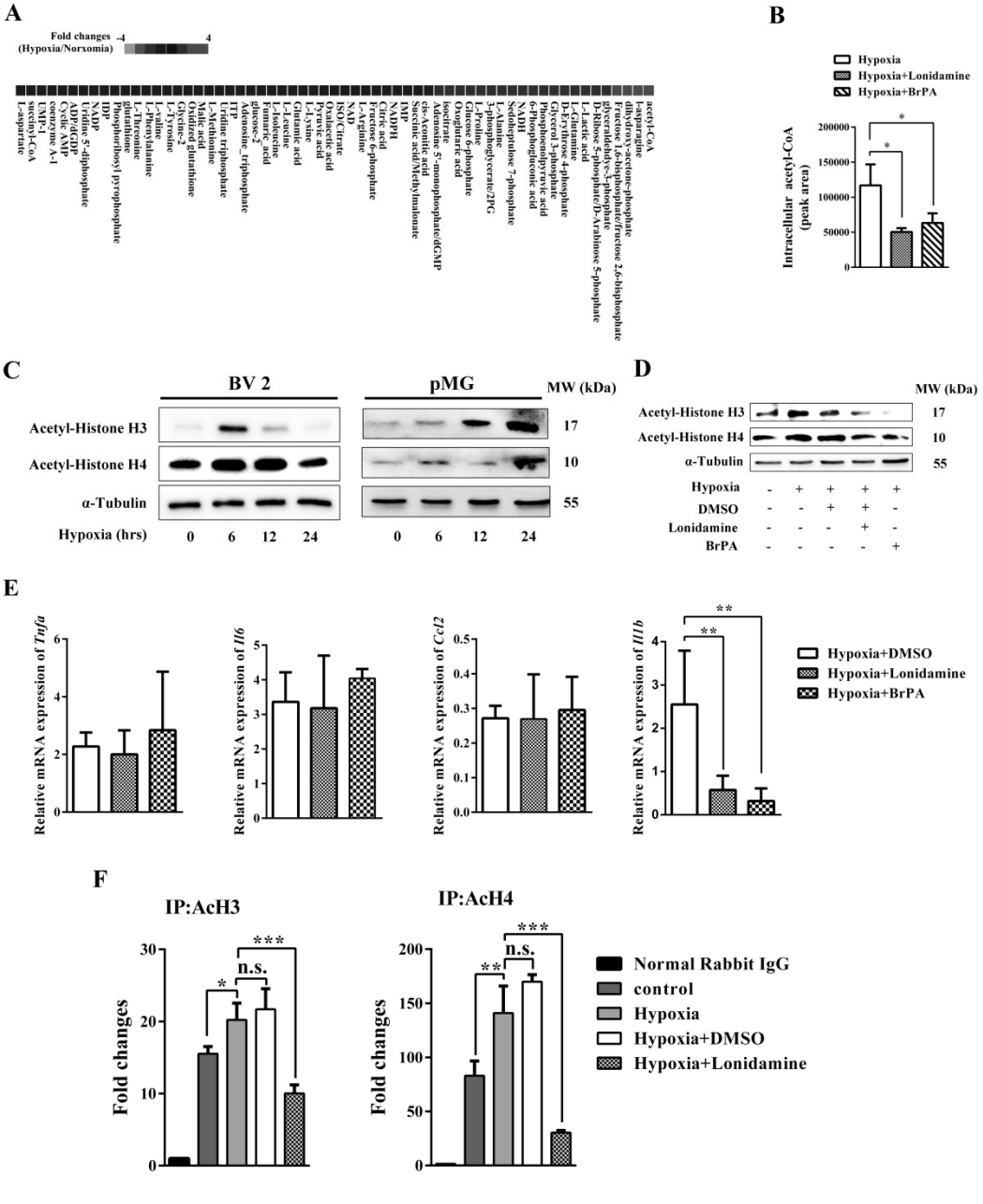

A
Fold changes (Hypoxia/Norxomia)
-4
4
L-aspartate
succinyl-CoA
UMP-1
coenzyme A-1
Guanosine-5'-diphosphate
ADP-ribose
Uridine 5'-diphosphate
NADP
DP
Phosphoribosyl pyrophosphate
Histamine
L-Threonine
L-Phenylalanine
L-valine
L-Tyrosine
L-Serine
Oxidized glutathione
Malic acid
L-Methionine
Uridine triphosphate
ITP
Guanosine_triphosphate
glucose-2
Fumaric acid
L-Isoleucine
L-Glutamic acid
L-Lysine
Pyruvic acid
Oxaloacetic acid
ISO Citrate
NAD(P)
L-Arginine
Fructose 6-phosphate
Citric acid
NADPH
Methylmalonic acid/Methylmalonate
Succinic acid
cis-Aconitic acid
Adenosine 5'-monophosphate/dGMP
Oxoglutaric acid
L-Proline
Glucose 1-phosphate
3-phosphoglycerate/2PG
L-Alanine
Sedoheptulose 7-phosphate
6-Phosphogluconic acid
NAD(P)H
Phosphoenolpyruvic acid
Glycerol 3-phosphate
D-Erythrose 4-phosphate
L-Glutamine
L-Lactic acid
D-Ribose 5-phosphate/D-Arabinose 5-phosphate
glyceraldehyde-3-phosphate
Fructose 1,6-bisphosphate/fructose 2,6-bisphosphate
dihydroxyacetone-phosphate
sedoheptulose
acetyl-CoA
B
Hypoxia
Hypoxia+Lonidamine
Hypoxia+BrPA
Intracellular acetyl-CoA (peak area)
200000
150000
100000
50000
0
*
*
C
BV 2
pMG
MW (kDa)
Acetyl-Histone H3
Acetyl-Histone H4
α-Tubulin
17
10
55
Hypoxia (hrs)
0
6
12
24
D
MW (kDa)
Acetyl-Histone H3
Acetyl-Histone H4
α-Tubulin
17
10
55
Hypoxia
DMSO
Lonidamine
BrPA
E
Relative mRNA expression of Tnfa
Relative mRNA expression of Il6
Relative mRNA expression of Ccl2
Relative mRNA expression of Il1b
**
**
Hypoxia+DMSO
Hypoxia+Lonidamine
Hypoxia+BrPA
F
IP:AcH3
IP:AcH4
Fold changes
*
n.s.
***
**
n.s.
***
Normal Rabbit IgG
control
Hypoxia
Hypoxia+DMSO
Hypoxia+Lonidamine

Fig. 7

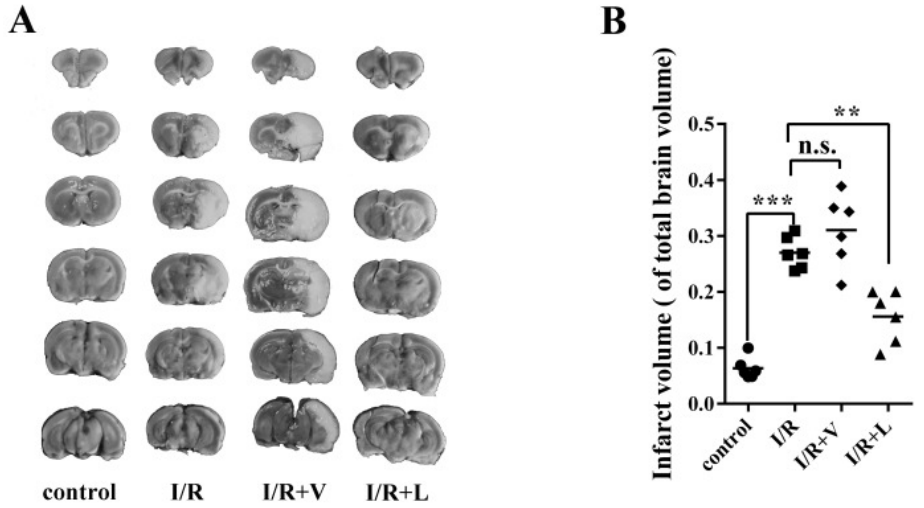

A
control
I/R
I/R+V
I/R+L
B
Infarct volume (of total brain volume)
0.5
0.4
0.3
0.2
0.1
0.0
**
n.s.
***
control
I/R
I/R+V
I/R+L

Fig. 8

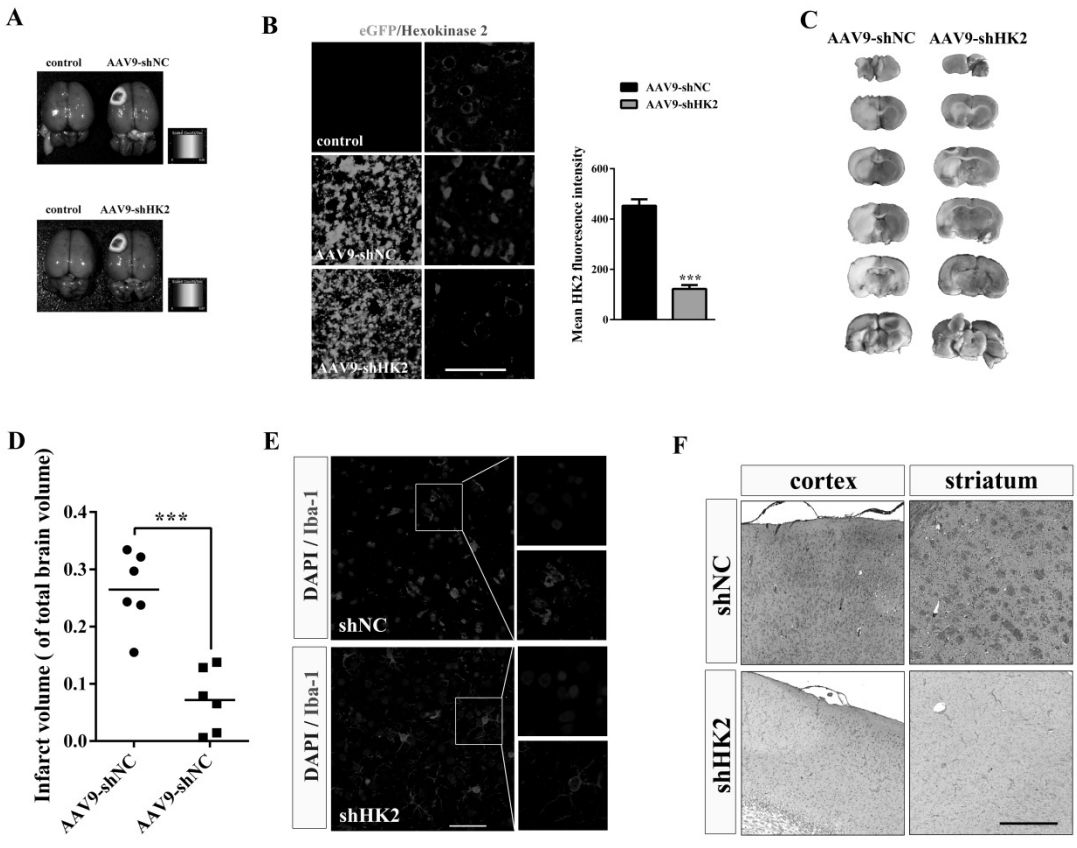

A
control
AAV9-shNC
control
AAV9-shHK2
B
eGFP/Hexokinase 2
control
AAV9-shNC
AAV9-shHK2
AAV9-shNC
AAV9-shHK2
Mean HK2 fluoresence intensity
600
400
200
0
***
C
AAV9-shNC
AAV9-shHK2
D
Infarct volume (of total brain volume)
0.4
0.3
0.2
0.1
0.0
***
AAV9-shNC
AAV9-shNC
E
DAPI / Iba-1
shNC
DAPI / Iba-1
shHK2
F
cortex
striatum
shNC
shHK2

Fig. 9