MolecularMedicine

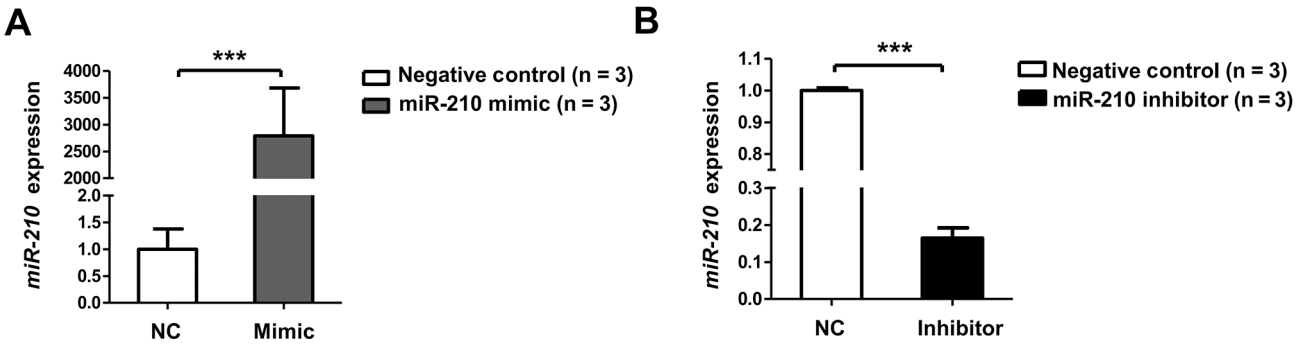
Supplemental Data

miR-210 Protects Renal Cell Against Hypoxia-induced Apoptosis by Targeting HIF-1 Alpha

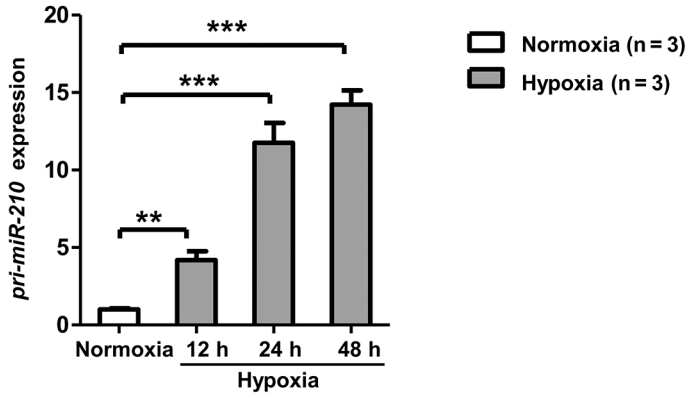
Li-Li Liu,[1,2] Dahu Li,[1] Yun-Ling He,[1] Yan-Zhao Zhou,[1] Sheng-Hui Gong,[1] Li-Ying Wu,[1] Yong-Qi Zhao,[1] Xin Huang,[1] Tong Zhao,[1] Lun Xu,[1] Kui-Wu Wu,[1] Ming-Gao Li,[2] Ling-Ling Zhu,[1,3*] and Ming Fan[1,3,4*]*

Online address: http://www.molmed.org

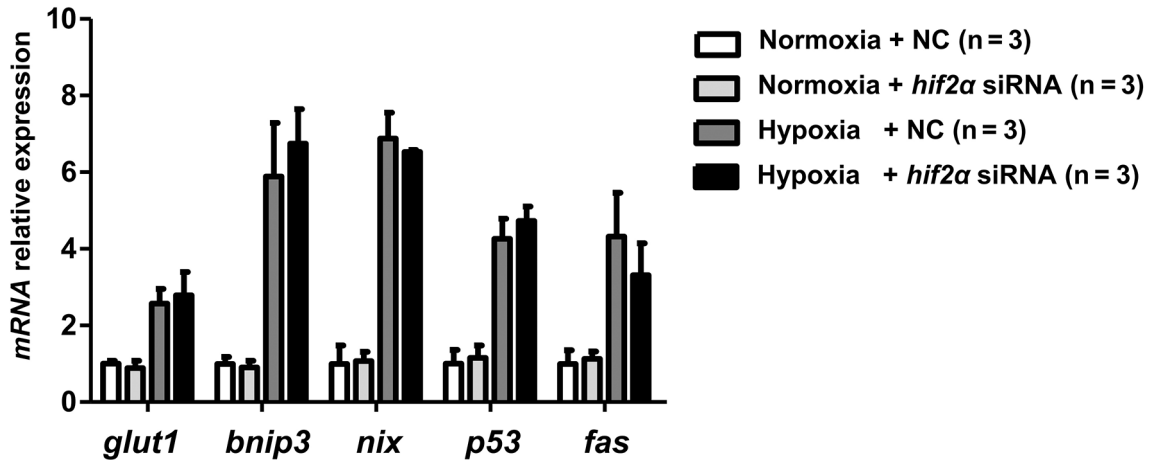
Feinstein Institute
for Medical Research
Northwell Health



Supplementary Figure S1. Cellular miR-210 expression after miR-210-3p mimic or inhibitor transfection in HK-2 cells. We transfected miR-210-3p mimic or inhibitor into HK-2 cells and examined cellular miR-210 expression in hypoxia (0.3% O_2) and normoxia (21% O_2) for 48 h. Cellular miR-210 expression can be (A) elevated with miR-210 mimic (n = 3) and (B) suppressed with miR-210 inhibitor (n = 3) in HK-2 cells compared with the negative control separately. Real-time PCR analysis of miR-210 abundance compared with RNU6 and is shown as mean ± SD. NC, negative control. *P < 0.05; **P < 0.01; ***P < 0.001.



Supplementary Figure S2. Cellular pri-miR-210 expression after hypoxia in HK-2 cells. HK-2 cells were cultured in normoxia (21% O_2) or hypoxia (0.3% O_2) and harvested at 12 h, 24 h and 48 h. Real-time PCR analysis of pri-miR-210 levels in HK-2 cell. Cellular pri-miR-210 levels were normalized to β-actin (n = 3). Data are shown as mean ± SD. *P < 0.05; **P < 0.01; ***P < 0.001.



Supplementary Figure S3. HIF-2α knockdown showed no effect on hypoxia-related and apoptosis genes. Hypoxia-related genes (GLUT-1, BNIP3 and NIX) and apoptotic genes (p53 and FAS) were measured by real-time PCR in HK-2 cells transfected with HIF-2α siRNA and negative control under normoxia (21% O_2) or hypoxia (0.3% O_2) conditions for 48 h. All quantitative results are from three independent experiments. All mRNA expression levels were normalized to β-actin (n = 3) and are shown as mean ± SD.

Supplementary Table S1. Sequences of qPCR primers

Rat		
	Forward (5`→ 3`)	Reverse (5`→ 3`)
hif1α	CCGCAGTGTGGCTACAAGAA	GATGAGGAATGGGTTCACAAATC
hif2α	ACTTACCCAGGTAGAACTAACAG	GTGACGGTACACTTCATCCT
glut1	CATCAATGCTGTGTTCTACTACTC	GCCACGATACTCAGATAGGAC
bnip3	AAACAGCACTCTGTCTGAGGA	TCATGCTGAGAGTAGCTGTG
nix	ATTTCAGACACCCTAAGCGT	TCCGATATAGATGCCCAGCC
p53	AAGACTGGATAACTGTCATGGA	CATGGAATTAGGTGACCCTG
fas	CCCGGACCCAGAATACCAAG	TCTTCAAGTCCACACGAGGTG
β-actin	CCAGTTCGCCATGGATGAC	ATGCCGGAGCCGTTGTC
Human		
	Forward (5`→ 3`)	Reverse (5`→ 3`)
hif1α	AGGGCAGAATCATCACGAAGT	AGGGTCTCGATTGGATGGCA
hif2α	CGGAGGTGTTCTATGAGCTGG	AGCTTGTGTGTTCGCAGGAA
glut1	GGCCAAGAGTGTGCTAAAGAA	ACAGCGTTGATGCCAGACAG
bnip3	CAGGGCTCCTGGGTAGAACT	CTACTCCGTCCAGACTCATGC
nix	ATGTCGTCCCACCTAGTCGAG	TGAGGATGGTACGTGTTCCAG
p53	GAGGGATGTTTGGGAGATGTAAGAAATG	TTCACAGATATGGGCCTTGAAGTTAGAGAA
fas	CCAATTCTGCCATAAGCCT	CCACTTCTAAGCCATGTCCT
pri-miR-210	CTCGGACGCCCAAGTTGGAG	CACAGATCAGCCGCTGTCAC
β-actin	CATGTACGTTGCTATCCAGGC	CTCCTTAATGTCACGCACGAT