



E90009

HIF1A Polyclonal Antibody

Catalog Number: E90009

Amount: 100ul

Background: Hypoxia-inducible factor 1 (HIF1) is a heterodimeric transcription factor that plays a critical role in the cellular response to hypoxia (1). The HIF1 complex consists of two subunits, HIF-1 α and HIF-1 β , which are basic helix-loop-helix proteins of the PAS (Per, ARNT, Sim) family (2). HIF1 regulates the transcription of a broad range of genes that facilitate responses to the hypoxic environment, including genes regulating angiogenesis, erythropoiesis, cell cycle, metabolism and apoptosis. The widely expressed HIF-1 α is typically degraded rapidly in normoxic cells by the ubiquitin/proteasomal pathway. Under normoxic conditions, HIF-1 α is prolinehydroxylated leading to a conformational change that promotes binding to the von Hippel-Lindau protein (VHL) E3 ligase complex; ubiquitination and proteasomal degradation follows (3,4). Both hypoxic conditions and chemical hydroxylase inhibitors (such as desferrioxamine and cobalt) inhibit HIF-1 α degradation and lead to its stabilization. In addition, HIF-1 α can be induced in an oxygen-independent manner by various cytokines through the PI3K-AKT-mTOR pathway (5-7). HIF-1 β is also known as AhR nuclear translocator (ARNT) due to its ability to partner with the aryl hydrocarbon receptor (AhR) to form a heterodimeric transcription factor complex (8). Together with AhR, HIF-1 β plays an important role in xenobiotics metabolism (8). In addition, a chromosomal translocation leading to a TEL-ARNT fusion protein is associated with acute myeloblastic leukemia (9). Studies also found that ARNT/HIF-1 β expression levels decrease significantly in pancreatic islets from patients with type 2 diabetes, suggesting that HIF-1 β plays an important role in pancreatic β -cell function (10).

Species: Rabbit

Isotype: IgG

Storage/Stability: Store at -20°C or -80°C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonyms: HIF1a ; ARNT interacting protein; HIF 1 alpha; HIF 1alpha; PASD8; MOP1

Immunogen: Recombinant protein of Human Hif1a

Purification: Affinity purification

Reactivity: H M R

Applications: IHCIF

Molecular Weight: 93kDa

Swiss-Prot No. : Q16665

Gene ID: 3091

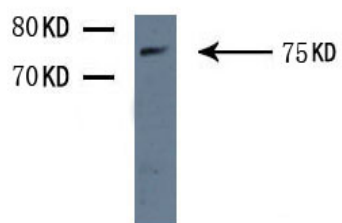
References: 1. Sharp, F.R. and Bernaudin, M. (2004) Nat Rev Neurosci 5, 437-48. 2. Wang, G.L. et al. (1995) Proc Natl Acad Sci U S A 92, 5510-4. 3. Jaakkola, P. et al. (2001) Science 292, 468-72. 4. Maxwell, P.H. et al. (1999) Nature 399, 271-5. 5. Fukuda, R. et al. (2002) J Biol Chem 277, 38205-11. 6. Jiang, B.H. et al. (2001) Cell Growth Differ 12, 363-9. 7. Laughner, E. et al. (2001) Mol Cell Biol 21, 3995-4004. 8. Walisser, J.A. et al. (2004) Proc Natl Acad Sci U S A 101, 16677-82. 9. Salomon-Nguyen, F. et al. (2000) Proc Natl Acad Sci U S A 97, 6757-62. 10. Gunton, J.E. et al. (2005) Cell 122, 337-49.

For Research Use Only

IHC 1:50 - 1:100

IF 1:20 - 1:50

Western blot-ATF6 antibody



ATF6 antibody at 1/1000 dilution

293 cell lysate

Predicted band size: 75KD

Observed band size: 75KD