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Product datasheet for TA325528

HIF-1 alpha (HIF1A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:500-1:2000; IHC: 1:50-1:200
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthesized peptide derived from human HIF1A
Formulation:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration:	lot specific
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific peptide.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	120 kDa
Gene Name:	hypoxia inducible factor 1 alpha subunit
Database Link:	NP_851397 Entrez Gene 15251 MouseEntrez Gene 29560 RatEntrez Gene 3091 Human Q16665

View online »

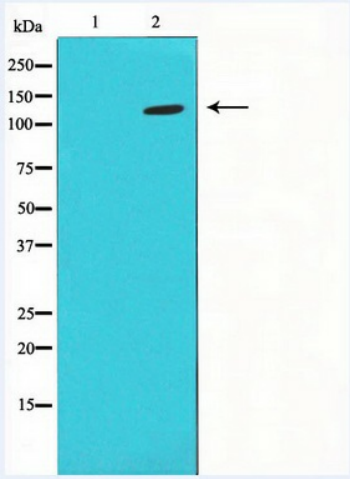
Background: Hypoxia-inducible factor 1 (HIF1) is a heterodimeric transcription factor that plays a critical role in the cellular response to hypoxia. The HIF1 complex consists of two subunits, HIF-1a and HIF-1β, which are basic helix-loop-helix proteins of the PAS (Per, ARNT, Sim) family . HIF1 regulates 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-1a is typically degraded rapidly in normoxic cells by the ubiquitin/proteasomal pathway. Under normoxic conditions, HIF-1a is proline hydroxylated leading to a conformational change that promotes binding to the von Hippel Lindau protein (VLH) E3 ligase complex; ubiquitination and proteasomal degradation follows (3,4). Both hypoxic conditions and chemical hydroxylase inhibitors (such as desferrioxamine and cobalt) inhibit HIF-1a degradation and lead to its stabilization. In addition, HIF-1a can be induced in an oxygen-independent manner by various cytokines through the PI3K-AKT-mTOR pathway (5-7).HIF-1β 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 . Together with AhR, HIF-1β plays an important role in xenobiotics metabolism .

Synonyms: bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8

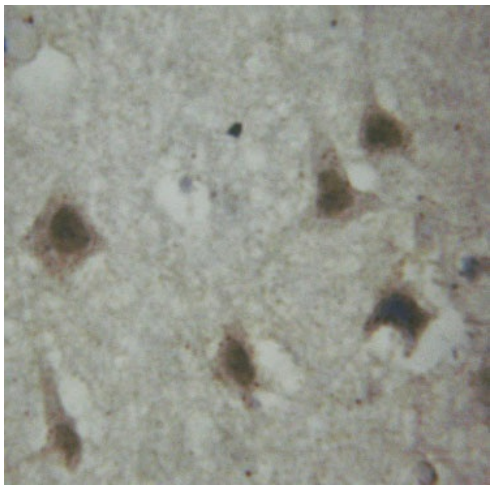
Protein Families: Transcription Factors

Protein Pathways: mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma

Product images:



Western blot analysis of extract from HUVEC cells using HIF-1aantibody, The lane on the left is treated with the antigen-specific peptide.



Immunohistochemistry analyzes of HIF-1a antibody in paraffin-embedded human brain tissue.