

Anti-HIF1 alpha Antibody

Rabbit polyclonal antibody to HIF1 alpha

Catalog # AP60012

Product Information

Application	WB, IHC
Primary Accession	Q16665
Other Accession	Q61221
Reactivity	Human, Mouse, Rat, Bovine, Drosophila
Host	Rabbit
Clonality	Polyclonal
Calculated MW	92670

Additional Information

Gene ID	3091
Other Names	BHLHE78; MOP1; PASD8; Hypoxia-inducible factor 1-alpha; HIF-1-alpha; HIF1-alpha; ARNT-interacting protein; Basic-helix-loop-helix-PAS protein MOP1; Class E basic helix-loop-helix protein 78; bHLHe78; Member of PAS protein 1; PAS domain-containing protein 8
Target/Specificity	Recognizes endogenous levels of HIF1 alpha protein.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	HIF1A {ECO:0000303 PubMed:7539918, ECO:0000312 HGNC:HGNC:4910}
Function	Functions as a master transcriptional regulator of the adaptive response to hypoxia (PubMed: 11292861 , PubMed: 11566883 , PubMed: 15465032 , PubMed: 16973622 , PubMed: 17610843 , PubMed: 18658046 , PubMed: 20624928 , PubMed: 22009797 , PubMed: 30125331 , PubMed: 9887100). Under hypoxic conditions, activates the transcription of over 40 genes, including erythropoietin, glucose transporters, glycolytic enzymes, vascular endothelial growth factor, HILPDA, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia (PubMed: 11292861 , PubMed: 11566883 , PubMed: 15465032 , PubMed: 16973622 , PubMed: 17610843 , PubMed: 20624928 , PubMed: 22009797 , PubMed: 30125331 , PubMed: 9887100). Plays an essential

role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease (PubMed:[22009797](#)). Heterodimerizes with ARNT; heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters (By similarity). Activation requires recruitment of transcriptional coactivators such as CREBBP and EP300 (PubMed:[16543236](#), PubMed:[9887100](#)). Activity is enhanced by interaction with NCOA1 and/or NCOA2 (PubMed:[10594042](#)). Interaction with redox regulatory protein APEX1 seems to activate CTAD and potentiates activation by NCOA1 and CREBBP (PubMed:[10202154](#), PubMed:[10594042](#)). Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia (PubMed:[19528298](#)).

Cellular Location

Cytoplasm. Nucleus. Nucleus speckle {ECO:0000250|UniProtKB:Q61221}. Note=Colocalizes with HIF3A in the nucleus and speckles (By similarity). Cytoplasmic in normoxia, nuclear translocation in response to hypoxia (PubMed:9822602) {ECO:0000250|UniProtKB:Q61221, ECO:0000269|PubMed:9822602}

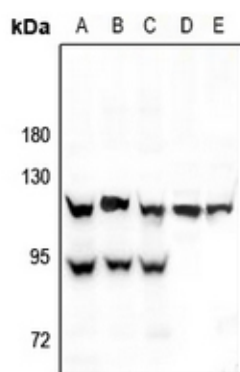
Tissue Location

Expressed in most tissues with highest levels in kidney and heart. Overexpressed in the majority of common human cancers and their metastases, due to the presence of intratumoral hypoxia and as a result of mutations in genes encoding oncoproteins and tumor suppressors. A higher level expression seen in pituitary tumors as compared to the pituitary gland.

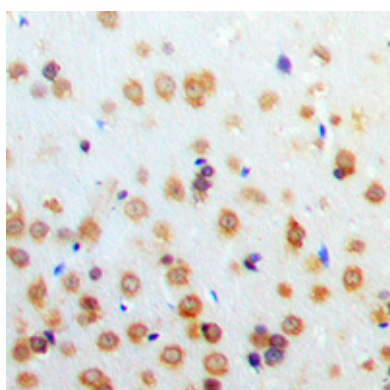
Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human HIF1 alpha. The exact sequence is proprietary.

Images



Western blot analysis of HIF1 alpha expression in HEK293T (A), A549 (B), MCF7 (C), H9C2 (D), SP20 (E) whole cell lysates.



Immunohistochemical analysis of HIF1 alpha staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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