

HIF-1 alpha Antibody

Rabbit mAb

Catalog # AP90247

Product Information

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|--------------------------|---|
| Application | WB, IHC, IF, FC, ICC, IP, IHF |
| Primary Accession | Q16665 |
| Reactivity | Human |
| Clonality | Monoclonal |
| Other Names | HIF1; MOP1; PASD8; bHLHe78; HIF-1alpha; HIF1-ALPHA; HIF1A |
| Isotype | Rabbit IgG |
| Host | Rabbit |
| Calculated MW | 92670 |

Additional Information

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|-------------------------------------|--|
| Dilution | WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:30 FC 1:30 |
| Purification | Affinity-chromatography |
| Immunogen | A synthesized peptide derived from human HIF-1 alpha |
| Description | Hypoxia-inducible factor-1 (HIF1) is a transcription factor found in mammalian cells cultured under reduced oxygen tension that plays an essential role in cellular and systemic homeostatic responses to hypoxia. HIF1 is a heterodimer composed of an alpha subunit and a beta subunit. The beta subunit has been identified as the aryl hydrocarbon receptor nuclear translocator (ARNT). This gene encodes the alpha subunit of HIF-1. |
| Storage Condition and Buffer | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |

Protein Information

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|-----------------|---|
| 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](#)).

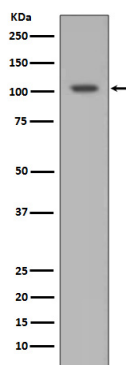
Cellular Location

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.

Images



Western blot analysis of HIF-1 alpha expression in Ramos cell lysate.

Image not found : 202311/AP90247-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human kidney, using HIF-1 alpha Antibody.

Image not found : 202311/AP90247-IF.jpg

Immunofluorescent analysis of HeLa cells, using HIF-1 alpha Antibody.

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