



#### HIF-1α

Rabbit Monoclonal Antibody (Mab)
Catalog # APA472

# **Specification**

## HIF-1α - Product Information

Application IHC
Primary Accession Q16665
Host Rabbit
Clonality Monoclonal
Calculated MW 92670 Da

### $HIF-1\alpha$ - Additional Information

Gene ID 3091

Gene Name HIF1A {ECO:0000303|PubMed:7539918,

ECO:0000312|HGNC:HGNC:4910}

#### **Other Names**

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, HIF1A {ECO:0000303|PubMed:7539918, ECO:0000312|HGNC:HGNC:4910}

#### **Dilution**

IHC~~1:100~500

Storage Maintain refrigerated at 2-8°C for up to 2

weeks. For long term storage store at -20°C in small aliquots to prevent

freeze-thaw cycles.

Precautions HIF-1 $\alpha$  is for research use only and not for

use in diagnostic or therapeutic

procedures.

## HIF-1α - Protein Information

Name HIF1A {ECO:0000303|PubMed:7539918, ECO:0000312|HGNC:HGNC:4910}

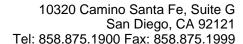
Function Functions as a master transcriptional

regulator of the adaptive response to

hypoxia (PubMed: 11292861,

PubMed:11566883, PubMed:15465032, PubMed:16973622, PubMed:17610843, PubMed:18658046, PubMed:20624928, PubMed:22009797, PubMed:9887100, PubMed:30125331). Under hypoxic

conditions, activates the transcription of over 40 genes, including erythropoietin, glucose transporters, glycolytic enzymes,





(PubMed: 11292861, PubMed: 11566883, PubMed: 15465032, PubMed: 16973622, PubMed: 17610843, PubMed: 20624928, PubMed: 22009797, PubMed: 9887100, PubMed: 30125331). 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: 9887100, PubMed: 16543236). 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).

vascular endothelial growth factor, HILPDA, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia

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} 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.

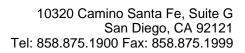
Cellular Location

Tissue Location

# HIF-1α - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence





• Immunoprecipitation

- Flow Cytomety
- Cell Culture

HIF-1α - Images