

# HIF-1 $\alpha$ Antibody

Mouse Monoclonal Antibody (Mab)

Catalog # AD80293

## Product Information

Application	IHC
Primary Accession	<a href="#">Q16665</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Clone Names	152E2B4
Calculated MW	92670

## Additional Information

Gene ID	3091
Gene Name	HIF1A {ECO:0000303   PubMed:7539918}
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}
Dilution	IHC~~Ready-to-use
Storage	Maintain refrigerated at 2-8°C.
Precautions	HIF-1 $\alpha$ Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## 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: <a href="#">11292861</a> , PubMed: <a href="#">11566883</a> , PubMed: <a href="#">15465032</a> , PubMed: <a href="#">16973622</a> , PubMed: <a href="#">17610843</a> , PubMed: <a href="#">18658046</a> , PubMed: <a href="#">20624928</a> , PubMed: <a href="#">22009797</a> , PubMed: <a href="#">30125331</a> , PubMed: <a href="#">9887100</a> ). 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: <a href="#">11292861</a> , PubMed: <a href="#">11566883</a> , PubMed: <a href="#">15465032</a> , PubMed: <a href="#">16973622</a> , PubMed: <a href="#">17610843</a> , PubMed: <a href="#">20624928</a> , PubMed: <a href="#">22009797</a> , PubMed: <a href="#">30125331</a> , PubMed: <a href="#">9887100</a> ). Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease (PubMed: <a href="#">22009797</a> ). 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

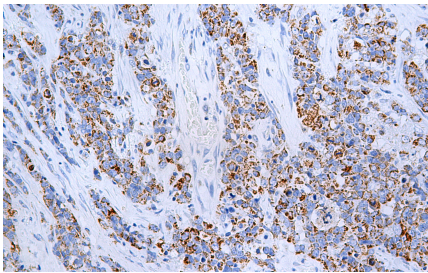
Cytoplasm. Nucleus. Nucleus speckle {ECO:0000250|UniProtKB:Q61221}. Note=Colocalizes with HIF3A in the nucleus and speckles (By similarity). Cytoplasmic in normoxia, nuclear translocation in response to hypoxia (PubMed:9822602) {ECO:0000250|UniProtKB:Q61221, ECO:0000269|PubMed:9822602}

#### 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

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Immunohistochemical analysis of paraffin-embedded breast cancer tissue using AD80293 performed on the Abcarta® FAIP-48 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a Citrate buffer (pH6. 0). Samples were incubated with primary antibody (Ready-to-use) for 15 min at room temperature. AmpSee™ Detection Systems (Abcepta:ADR005) was used as the secondary antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.