10320 Camino Santa Fe, Suite G
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HIF1A Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP4879d

Specification

HIF1A Antibody - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	Q16665
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

HIF1A Antibody - Additional Information

Gene ID 3091

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, BHLHE78, MOP1, PASD8

Target/Specificity
This HIF1A antibody is generated from rabbits immunized with HIF1A recombinant protein.

Dilution
WB~~1:1000
IHC-P~~1:25
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
HIF1A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

HIF1A Antibody - 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.

HIF1A Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HIF1A Antibody - Images

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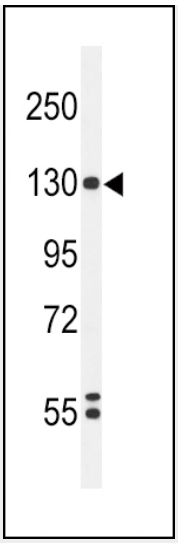
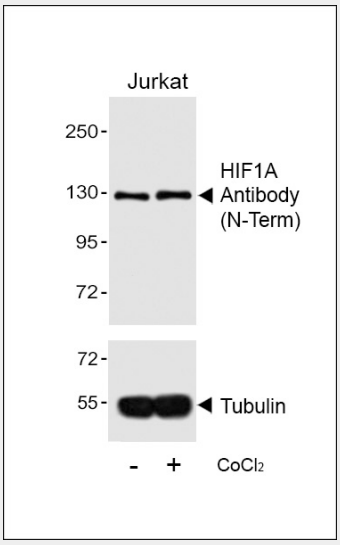
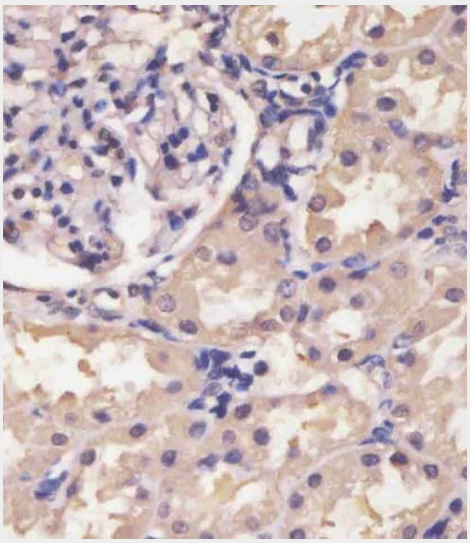


Western blot analysis of HIF1A Antibody (Cat. #AP4879d) in K562 cell line lysates (35ug/lane). HIF1A (arrow) was detected using the purified Pab.



Western blot analysis of lysates from Jurkat cell line, untreated or treated with CoCl2, 0. 1mM, using 157999101(Cat. #AP4879d)(upper) or Tubulin (lower).



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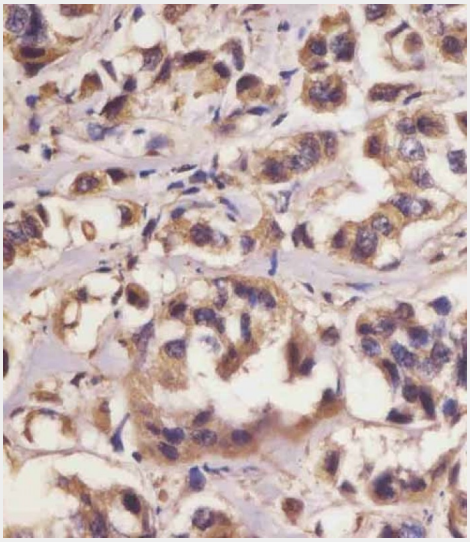
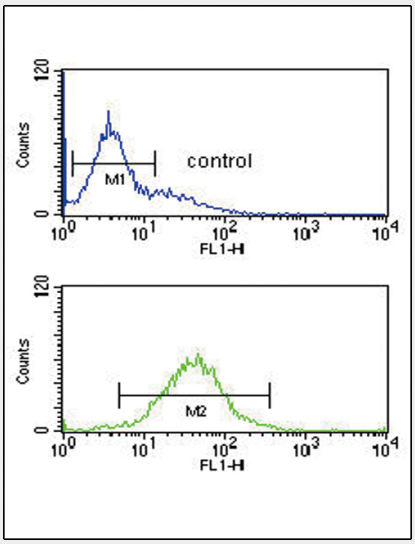
AP4879D staining HIF1A in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



AP4879D staining HIF1A in human breast carcinoma sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



HIF1A Antibody (Cat. #AP4879d) flow cytometric analysis of K562 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

HIF1A Antibody - Background

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. Overexpression of a natural antisense transcript (aHIF) of this

gene has been shown to be associated with nonpapillary renal carcinomas.

HIF1A Antibody - References

Lee, M.N., et al. J. Natl. Cancer Inst. 102(6):426-442(2010)
Mayer, A., et al. Adv. Exp. Med. Biol. 662, 399-405 (2010)
Brouwer, E., et al. Clin. Exp. Rheumatol. 27(6):945-951(2009)