

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 Ig

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

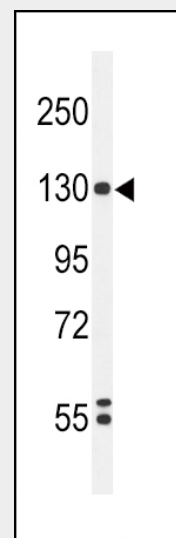
Purified polyclonal antibody supplied in PBS
with 0.09% (W/V) sodium azide. This
antibody is purified through a protein A
column, followed by peptide affinity
purification.

Storage

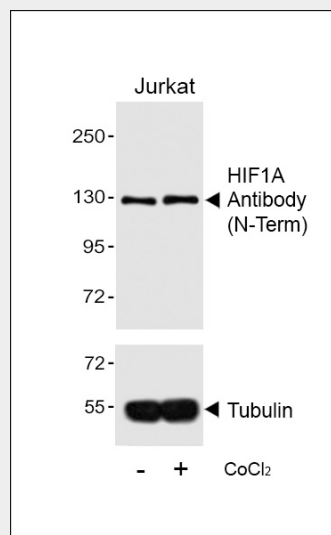
Maintain refrigerated at 2-8°C for up to 2
weeks. For long term storage store at -20°C
in small aliquots to prevent freeze-thaw
cycles.

Precautions

HIF1A Antibody is for research use only and



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).

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:<a href="http://www.uniprot.org/citations/11292861"

target="_blank">11292861,&br/>PubMed:<a href="http://www.uniprot.org/ci

tations/11566883"

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tations/22009797"

target="_blank">22009797,&br/>PubMed:<a href="http://www.uniprot.org/ci

tations/9887100"

target="_blank">9887100,&br/>PubMed:<a href="http://www.uniprot.org/ci

tations/30125331"

target="_blank">30125331). 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="http://www.uniprot.org/citations/11292861"

target="_blank">11292861,&br/>PubMed:<a href="http://www.uniprot.org/ci

tations/11566883"

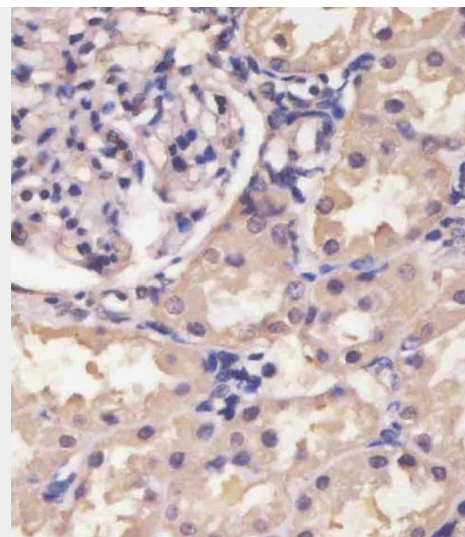
target="_blank">11566883,&br/>PubMed:<a href="http://www.uniprot.org/ci

tations/11566883"

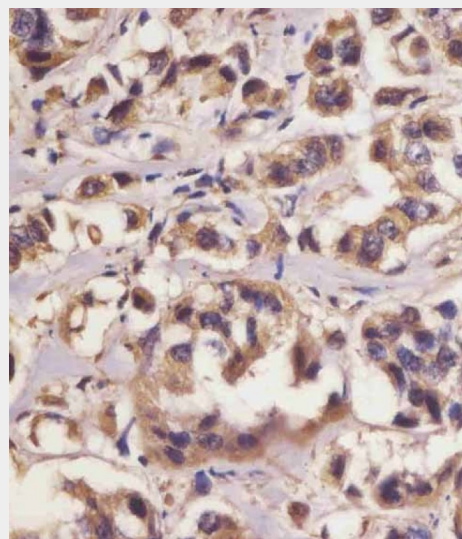
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AP4879D staining HIF1A in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

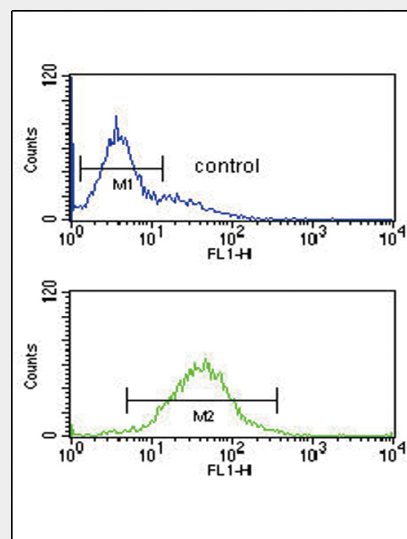


AP4879D staining HIF1A in human breast carcinoma sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1

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target="_blank">30125331). Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease (PubMed:<a href="http://www.uniprot.org/citations/22009797"
target="_blank">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:<a href="http://www.uniprot.org/citations/9887100"
target="_blank">9887100,
PubMed:<a href="http://www.uniprot.org/citations/16543236"
target="_blank">16543236). Activity is enhanced by interaction with NCOA1 and/or NCOA2 (PubMed:<a href="http://www.uniprot.org/citations/10594042"
target="_blank">10594042). Interaction with redox regulatory protein APEX1 seems to activate CTAD and potentiates activation by NCOA1 and CREBBP (PubMed:<a href="http://www.uniprot.org/citations/10202154"
target="_blank">10202154,
PubMed:<a href="http://www.uniprot.org/citations/10594042"
target="_blank">10594042). Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia (PubMed:<a href="http://www.uniprot.org/citations/19528298"
target="_blank">19528298).

Cellular Location

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)

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 Cytometry](#)
- [Cell Culture](#)