

# HIF-1 $\alpha$ Polyclonal Antibody

Catalog # AP70316

## Product Information

Application	WB, IHC-P, IF
Primary Accession	<a href="#">Q16665</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	92670

## Additional Information

Gene ID	3091
Other Names	HIF1A; BHLHE78; MOP1; PASD8; 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 doma
Dilution	WB~~1:1000 IHC-P~~N/A IF~~IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## 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}

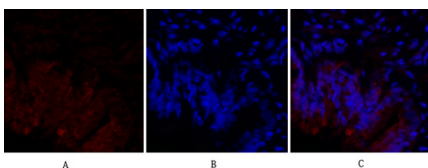
### Tissue Location

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.

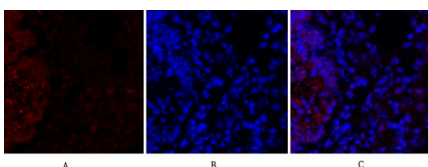
## Background

Functions as a master transcriptional regulator of the adaptive response to hypoxia. 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. Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. 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. Activity is enhanced by interaction with both, NCOA1 or NCOA2. Interaction with redox regulatory protein APEX seems to activate CTAD and potentiates activation by NCOA1 and CREBBP. Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia.

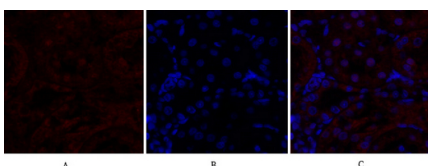
## Images



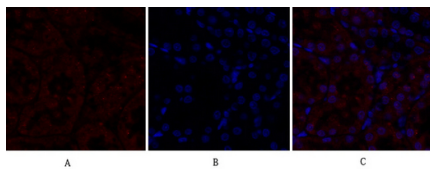
Immunofluorescence analysis of rat-lung tissue. 1, HIF-1 $\alpha$  Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



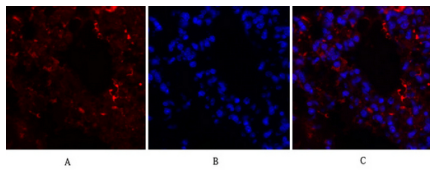
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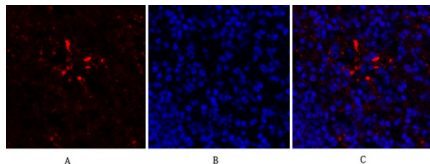
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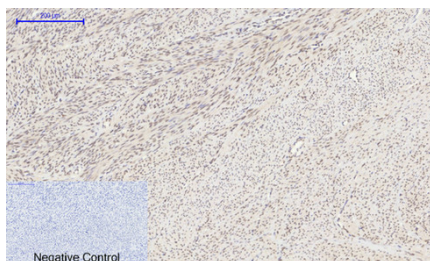
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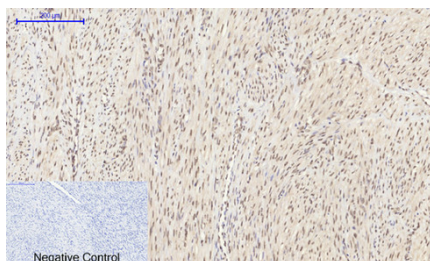
Immunofluorescence analysis of mouse-lung tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



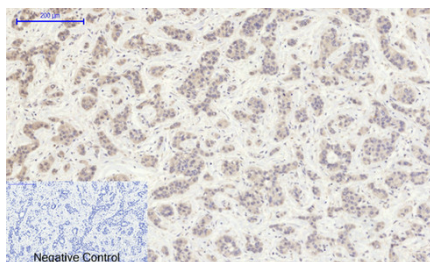
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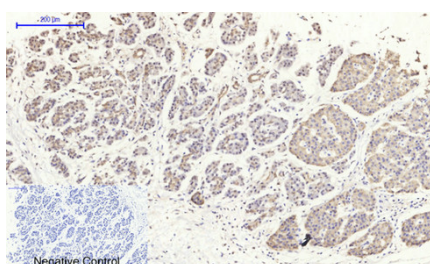
Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Human-uterus-cancer tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



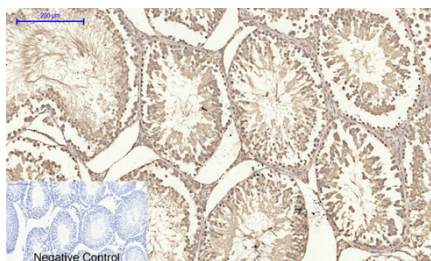
Immunohistochemical analysis of paraffin-embedded Human-liver-cancer tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



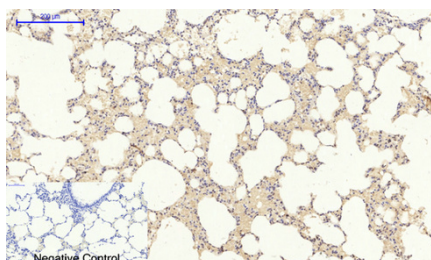
Immunohistochemical analysis of paraffin-embedded Human-stomach-cancer tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

Immunohistochemical analysis of paraffin-embedded Rat-testis tissue. 1,HIF-1 $\alpha$  Polyclonal Antibody was diluted

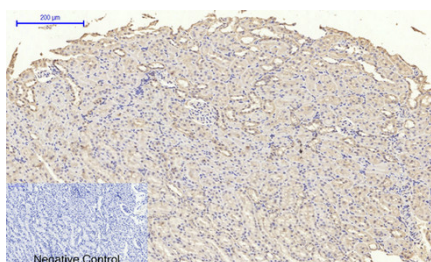




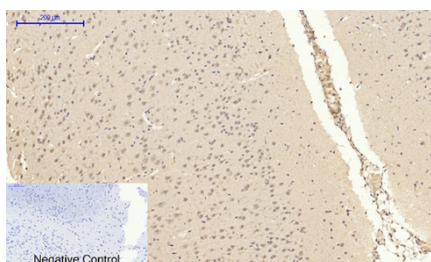
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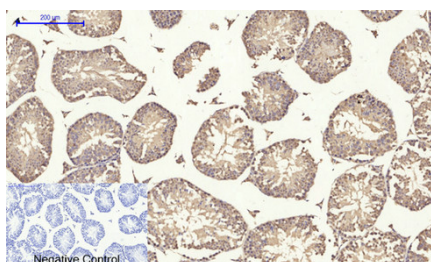
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,HIF-1α Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



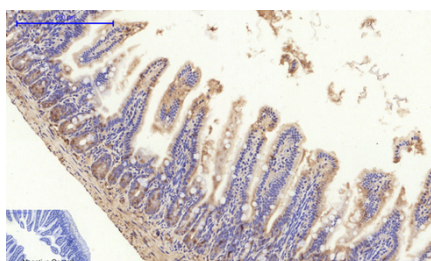
Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1,HIF-1α Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Rat-brain tissue. 1,HIF-1α Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

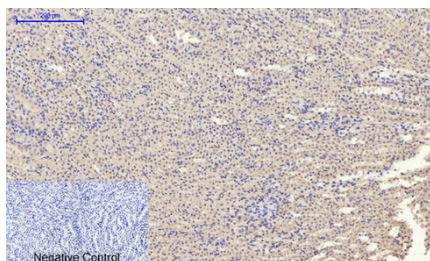


Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1,HIF-1α Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

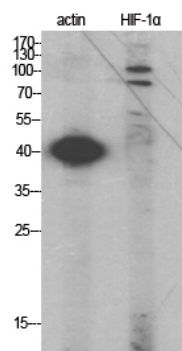


Immunohistochemical analysis of paraffin-embedded Mouse-colon tissue. 1,HIF-1α Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

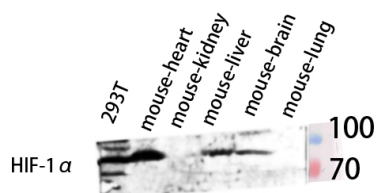
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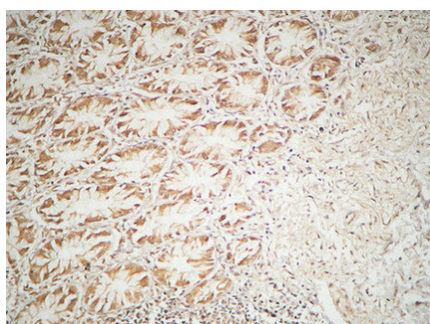
secondary antibody only.



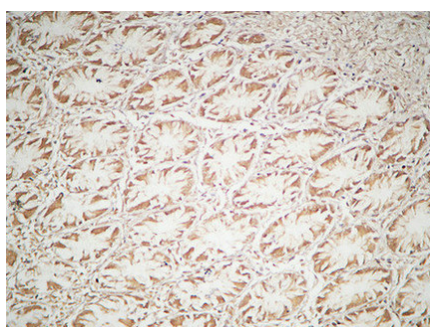
Western Blot analysis of various cells using HIF-1 $\alpha$   
 Polyclonal Antibody diluted at 1 : 2000



Western blot analysis of 293T MOUSE-BRAIN  
 MOUSE-SPLEEN MOUSE-HEART lysis using HIF-1 $\alpha$   
 antibody. Antibody was diluted at 1:2000

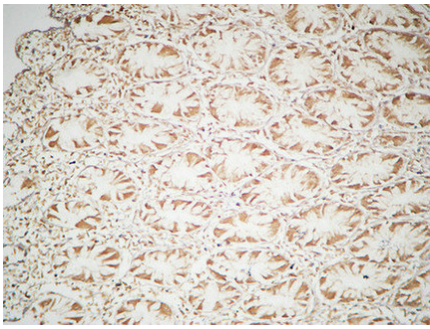


Immunohistochemical analysis of paraffin-embedded  
 Human colon. 1, Antibody was diluted at  
 1:100(4°,overnight). 2, High-pressure and temperature  
 EDTA, pH8.0 was used for antigen retrieval. 3,Secondary  
 antibody was diluted at 1:200(room temperature, 30min).



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