

产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: AP Rab12024



产品概述 (Summary)

产品名称 (Production Name)	HIF-1 α Rabbit Polyclonal Antibody
描述 (Description)	Rabbit polyclonal Antibody
宿主 (Host)	Rabbit
应用 (Application)	WB,IHC,ICC/IF,ELISA,IP
种属反应性 (Reactivity)	Human,Mouse,Rat

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Unmodified
同种型 (Isotype)	IgG
克隆 (Clonality)	Polyclonal
形式 (Form)	Liquid
存放说明 (Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液 (Buffer)	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
纯化方式 (Purification)	Affinity purification

免疫原信息 (Immunogen)

基因名 (Gene Name)	HIF1A 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
别名 (Alternative Names)	
基因 ID (Gene ID)	3091.0
蛋白 ID (SwissProt ID)	Q16665.The antiserum was produced against synthesized peptide derived from human HIF-1alpha. AA range:328-377

产品应用 (Application)

稀释比 (Dilution Ratio)	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000,IP
----------------------	--

产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: AP Rab12024



1:20-1:300

蛋白分子量 (Molecular Weight) 92-130kDa

研究背景 (Background)

hypoxia inducible factor 1 alpha subunit(HIF1A) Homo sapiens This gene encodes the alpha subunit of transcription factor hypoxia-inducible factor-1 (HIF-1), which is a heterodimer composed of an alpha and a beta subunit. HIF-1 functions as a master regulator of cellular and systemic homeostatic response to hypoxia by activating transcription of many genes, including those involved in energy metabolism, angiogenesis, apoptosis, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. HIF-1 thus plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jul 2011],domain:Contains two independent C-terminal transactivation domains, NTAD and CTAD, which function synergistically. Their transcriptional activity is repressed by an intervening inhibitory domain (ID),function: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, 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. Binds to core DNA sequence 5'-[AG]CGTG-3' within the hypoxia response element (HRE) of target gene promoters. 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.,induction:Under reduced oxygen tension. Induced also by various receptor-mediated factors such as growth factors, cytokines, and circulatory factors such as PDGF, EGF FGF-2 FGF-2 IGF-2, TGF-1 beta, HGF, TNF alpha, IL-1 beta, angiotensin-2 and thrombin. However, this induction is less intense than that stimulated by hypoxia.,online information:Hypoxia inducible factor entry,PTM:In normoxia, is hydroxylated on Asn-803 by HIF1AN, thus abrogating interaction with CREBBP and EP300 and preventing transcriptional activation. This hydroxylation is inhibited by the Cu/Zn-chelator, Clotriquinol.,PTM:In normoxia, is hydroxylated on Pro-402 and Pro-564 in the oxygen-dependent degradation domain (ODD) by EGLN1/PHD1 and EGLN2/PHD2. EGLN3/PHD3 has also been shown to hydroxylate Pro-564. The hydroxylated prolines promote interaction with VHL, initiating rapid ubiquitination and subsequent proteasomal degradation. Under hypoxia, proline hydroxylation is impaired and ubiquitination is attenuated, resulting in stabilization.,PTM:Requires phosphorylation for DNA-binding.,PTM:S-nitrosylation of Cys-800 may be responsible for increased recruitment of p300 coactivator necessary for transcriptional activity of HIF-1 complex.,PTM:Sumoylated; by SUMO1 under hypoxia. Sumoylation is enhanced through interaction with RWDD3. Desumoylation by SENP1 leads to increased HIF1A stability and transcriptional activity.,PTM:The iron and 2-oxoglutarate dependent 3-hydroxylation of asparagine is (S) stereospecific within HIF CTAD domains.,PTM:Ubiquitinated; in normoxia, following hydroxylation and interaction with VHL. Lys-532 appears to be the principal site of ubiquitination. Clotriquinol, the Cu/Zn-chelator, inhibits ubiquitination through preventing hydroxylation at Asn-803.,similarity:Contains 1 basic helix-loop-helix (bHLH) domain.,similarity:Contains 1 PAC (PAS-associated C-terminal)

产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: AP Rab12024

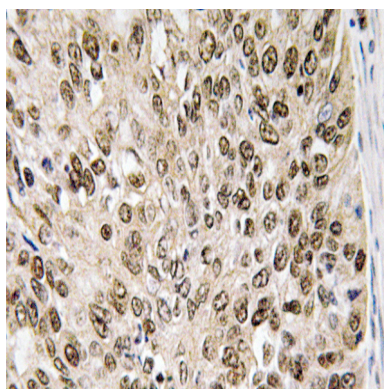


domain.,similarity:Contains 2 PAS (PER-ARNT-SIM) domains.,subcellular location:Cytoplasmic in normoxia, nuclear translocation in response to hypoxia. Colocalizes with SUMO1 in the nucleus, under hypoxia.,subunit:Interacts with the HIF1A beta/ARNT subunit; heterodimerization is required for DNA binding. Interacts with COPS5; the interaction increases the transcriptional activity of HIF1A through increased stability (By similarity). Interacts with CREBBP and EP300 (via TAZ-type 1 domains). Interacts with NCOA1, NCOA2, APEX and HSP90. Interacts (hydroxylated within the ODD domain) with VHL (via beta domain); the interaction, leads to polyubiquitination and subsequent HIF1A proteasomal degradation. During hypoxia, sumoylated HIF1A also binds VHL; the interaction promotes the ubiquitination of HIF1A. Interacts with SENP1; the interaction desumoylates HIF1A resulting in stabilization and activation of transcription. Interacts (Via the ODD domain) with ARD1A; the interaction appears not to acetylate HIF1A nor have any affect on protein stability, during hypoxia. Interacts with RWDD3; the interaction enhances HIF1A sumoylation. Interacts with TSGA10.,tissue specificity: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.,

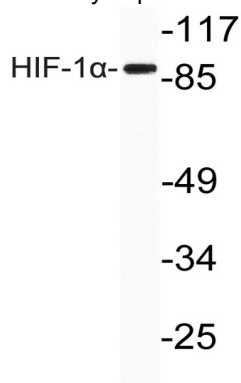
研究领域 (Research Area)

Regulates Angiogenesis; mTOR; Protein_Acetylation

图片 (Image Data)



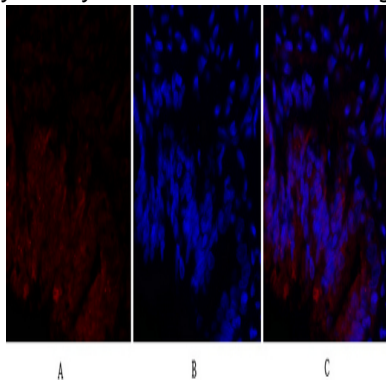
Immunohistochemistry analysis of HIF-1 α antibody in paraffin-embedded human brain tissue.



产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: APRab12024

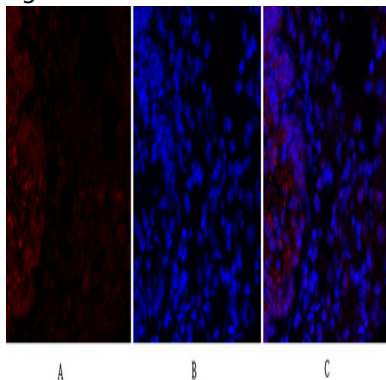


Western blot analysis of lysate from LOVO cells, using HIF-1 α antibody.



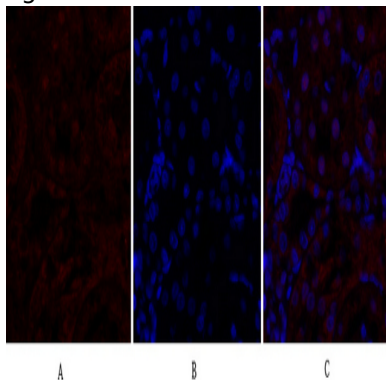
Immunofluorescence analysis of rat-lung tissue. 1, HIF-1 α Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight) .
2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min.

Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



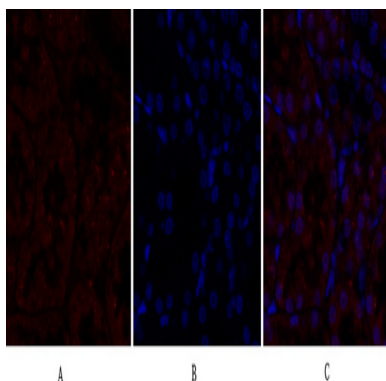
Immunofluorescence analysis of rat-lung tissue. 1, HIF-1 α Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight) .
2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min.

Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

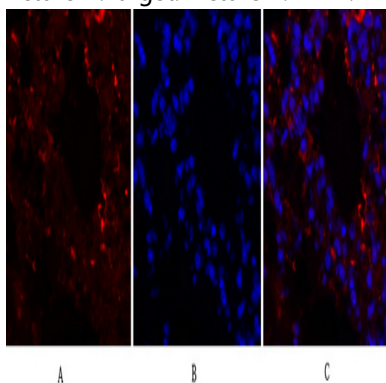


Immunofluorescence analysis of rat-kidney tissue. 1, HIF-1 α Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight) . 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min) .3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

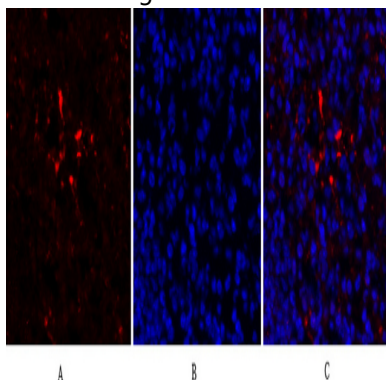
产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: AP Rab12024



Immunofluorescence analysis of rat-kidney tissue. 1, HIF-1 α 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

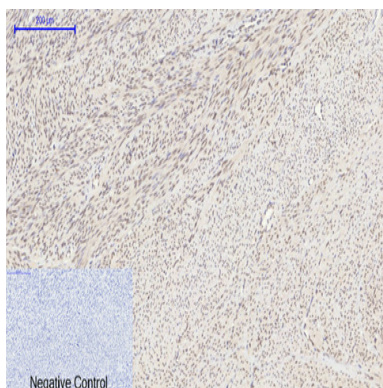


Immunofluorescence analysis of mouse-lung tissue. 1, HIF-1 α Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of mouse-lung tissue. 1, HIF-1 α 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

产品名称: HIF-1 α Rabbit Polyclonal Antibody
产品货号: APRab12024



Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,HIF-1 α 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.

注意事项 (Note)

For research use only .