



# HIF-1 $\alpha$ Polyclonal Antibody

<b>Catalog No</b>	BYab-01776
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	IF;WB;IHC;IP;ELISA
<b>Gene Name</b>	HIF1A
<b>Protein Name</b>	Hypoxia-inducible factor 1-alpha
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human HIF-1alpha. AA range:328-377
<b>Specificity</b>	HIF-1 $\alpha$ Polyclonal Antibody detects endogenous levels of HIF-1 $\alpha$ protein.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Polyclonal, Rabbit,IgG
<b>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	IF: 1:50-200 Western Blot: 1/500 - 1/2000.IP 1:200 Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	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
<b>Observed Band</b>	92-130kD
<b>Cell Pathway</b>	Cytoplasm . Nucleus . Nucleus speckle . Colocalizes with HIF3A in the nucleus and speckles (By similarity). Cytoplasmic in normoxia, nuclear translocation in response to hypoxia (PubMed:9822602). .
<b>Tissue Specificity</b>	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.
<b>Function</b>	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

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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 CREBPB and EP300. Acti

**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],

**matters needing attention**

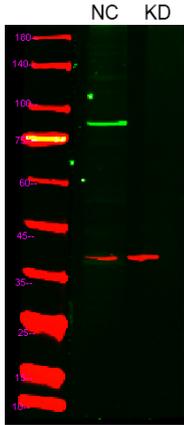
Avoid repeated freezing and thawing!

**Usage suggestions**

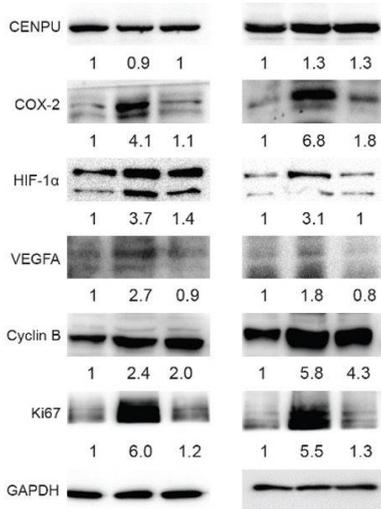
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



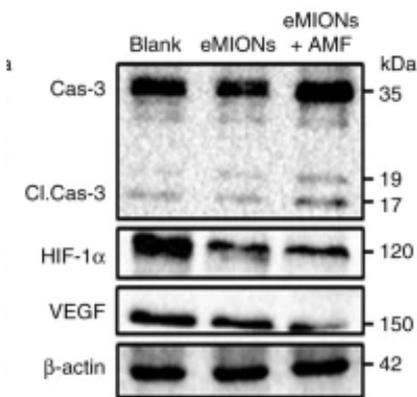
## Products Images



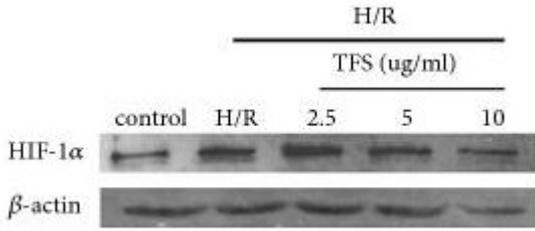
Western blot analysis of lysates from 1) Hela cell, 2) Hela cells knockdown by siRNA (F:GCCACAUUCACGUUAUUGATT,R:UCAUAUACGUGAAUGUGGCTT), (Green) primary antibody was diluted at 1:1000, 4° over night, Dylight 800 secondary antibody (Immunoway:RS23920) was diluted at 1:10000, 37° 1 hour. (Red) GAPDH Monoclonal Antibody (5B7) (Immunoway:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night, Dylight 680 secondary antibody (Immunoway:RS23710) was diluted at 1:10000, 37° 1 hour.



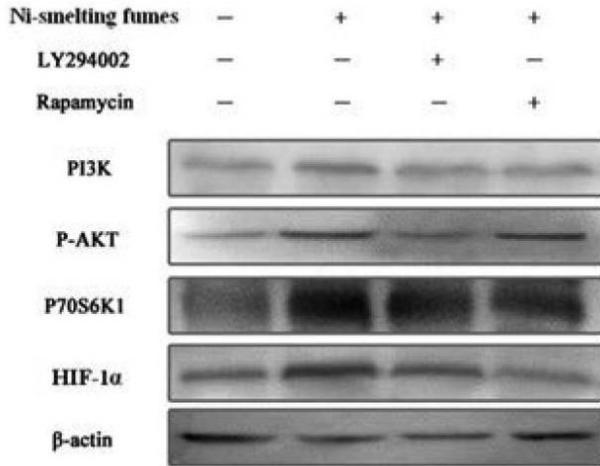
Zhao, Shaorong et al. "Deciphering the performance of polo-like kinase 1 in triple-negative breast cancer progression according to the centromere protein U-phosphorylation pathway." American journal of cancer research vol. 11,5 2142-2158. 15 May. 2021



Zhang, Y., Wang, X., Chu, C. et al. Genetically engineered magnetic nanocages for cancer magneto-catalytic theranostics. Nat Commun 11, 5421 (2020).



Jiang, Ruibin, et al. "Total Flavonoids from *Carya cathayensis* Sarg. Leaves Alleviate H9c2 Cells Hypoxia/Reoxygenation Injury via Effects on miR-21 Expression, PTEN/Akt, and the Bcl-2/Bax Pathway." *Evidence-Based Complementary and Alternative Medicine* 2018 (2018).



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