



Rabbit Anti-HIF-1 Alpha antibody

SL0737R

Product Name:	HIF-1 Alpha
Chinese Name:	缺氧诱导因子1 α /低氧诱导因子-1抗体
Alias:	ARNT interacting protein; ARNT-interacting protein; Basic helix loop helix PAS protein MOP1; Basic-helix-loop-helix-PAS protein MOP1; bHLHe78; Class E basic helix-loop-helix protein 78; HIF 1A; HIF 1alpha; HIF-1-alpha; HIF1 A; HIF1 Alpha; HIF1; HIF1-alpha; HIF1A; HIF1A_HUMAN; Hypoxia inducible factor 1 alpha; Hypoxia inducible factor 1 alpha isoform I.3; Hypoxia inducible factor 1 alpha subunit; Hypoxia inducible factor 1 alpha subunit basic helix loop helix transcription factor; Hypoxia inducible factor 1, alpha subunit (basic helix loop helix transcription factor); Hypoxia inducible factor 1alpha; Hypoxia-inducible factor 1-alpha; Hypoxia-inducible factor-1a; Member of PAS protein 1; Member of PAS superfamily 1; Member of the PAS Superfamily 1; MOP 1; MOP1; PAS domain-containing protein 8; PASD 8; PASD8.
文献引用 PubMed	<p>Specific References(10) SL0737R has been referenced in 10 publications.</p> <p>[IF=2.91]Shou, Zhu, et al. "Expression and prognosis of FOXO3a and HIF-1?? in nasopharyngeal carcinoma."Journal of cancer research and clinical oncology 138.4 (2012): 585-593..WB;Human.</p> <p style="text-align: right;">PubMed:22209974</p> <p>[IF=4.91]Fan, Shengjun, et al. "Opposite angiogenic outcome of curcumin against ischemia and Lewis lung cancer models:in silico, in vitro and in vivo studies." Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease (2014).WB;Mouse.</p> <p style="text-align: right;">PubMed:24970744</p> <p>[IF=1.64]Guo, Wei, et al. "Transplantation of endothelial progenitor cells in treating rats with IgA nephropathy." BMC Nephrology 15.1 (2014): 110.WB;Rat.</p> <p style="text-align: right;">PubMed:25012471</p>

[IF=5.08]Zhang, Huimin, et al. "Vascular Normalization Induced by Sinomenine Hydrochloride Results in Suppressed Mammary Tumor Growth and Metastasis." Scientific Reports 5 (2015).**IHC-P;Mouse.**

[PubMed:25749075](#)

[IF=3.53]Woolf, Eric C., et al. "The Ketogenic Diet Alters the Hypoxic Response and Affects Expression of Proteins Associated with Angiogenesis, Invasive Potential and Vascular Permeability in a Mouse Glioma Model." PLOS ONE10.6 (2015): e0130357.**WB;Mouse.**

[PubMed:26083629](#)

[IF=4.44]Madka, Venkateshwar, et al. "Targeting mTOR and p53 signaling inhibits muscle invasive bladder cancer in vivo." Cancer Prevention Research 9.1 (2016): 53-62.**IHC-P;Mouse.**

[PubMed:26577454](#)

[IF=1.55]Yang, Jinjiang, Ying Lu, and Ai Guo. "Platelet-rich plasma protects rat chondrocytes from interleukin-1 β -induced apoptosis." Molecular Medicine Reports 14.5 (2016): 4075-4082.**WB;Rat.**

[PubMed:27665780](#)

[IF=4.19]Talwar, Harvinder, et al. "MKP-1 negatively regulates LPS-mediated IL-1 β production through p38 activation and HIF-1 α expression." Cellular Signalling (2017).**Mouse.**

[PubMed:28238855](#)

[IF=2.49]Yang, Ya, et al. "Expression of RAP1B is associated with poor prognosis and promotes an aggressive phenotype in gastric cancer." Oncology reports 34.5 (2015): 2385-2394.**IHC-P;Human.**

[PubMed:26329876](#)

[IF=0.50]Talwar, Harvinder, et al. "The dataset describes: HIF-1 α expression and LPS mediated cytokine production in MKP-1 deficient bone marrow derived murine macrophages." Data in Brief (2017).**WB;Mouse.**

[PubMed:0](#)

Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1 μ g/TestIF=1:100-500 (Paraffin sections need antigen repair)

	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	92kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from middle of human HIF-1 Alpha:341-450/826
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>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. Two alternative transcripts encoding different isoforms have been identified.</p> <p>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.</p> <p>Subunit: Interacts with COP5 subunit of COP9 signalosome complex, leading to the regulation of its stability. Interacts with TSGA10 (By similarity). Efficient DNA binding requires heterodimerization of an alpha and a beta/ARNT subunit. Binds to the TAZ-type 1 domains of CREBBP and EP300. Interacts with NCOA1, NCOA2, APEX and HSP90. Interacts with VHL which docks HIF1 to the E3 ubiquitin ligase complex for subsequent destruction. Interaction, via the ODD domain, with the beta domain of VHL, protects HIF1A from destruction by competing against the destructive targeting initiated by VHL.</p>

Subcellular Location:

Cytoplasm. Nucleus.

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.

Post-translational modifications:

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.

In normoxia, is hydroxylated on Asn-803 by HIF1AN, thus abrogating interaction with CREBBP and EP300 and preventing transcriptional activation.

S-nitrosylation of Cys-800 may be responsible for increased recruitment of p300 coactivator necessary for transcriptional activity of HIF-1 complex.

Acetylation of Lys-532 by ARD1 increases interaction with VHL and stimulates subsequent proteasomal degradation.

Requires phosphorylation for DNA-binding.

Similarity:

Contains 1 basic helix-loop-helix (bHLH) domain.

Contains 1 PAC (PAS-associated C-terminal) domain.

Contains 2 PAS (PER-ARNT-SIM) domains.

SWISS:

Q16665

Gene ID:

3091

Database links:

[Entrez Gene: 3091](#) Human

[Entrez Gene: 15251](#) Mouse

[Omim: 603348](#) Human

[SwissProt: Q16665](#) Human

[SwissProt: Q61221](#) Mouse

[Unigene: 597216](#)Human

[Unigene: 3879](#)Mouse

[Unigene: 446610](#)Mouse

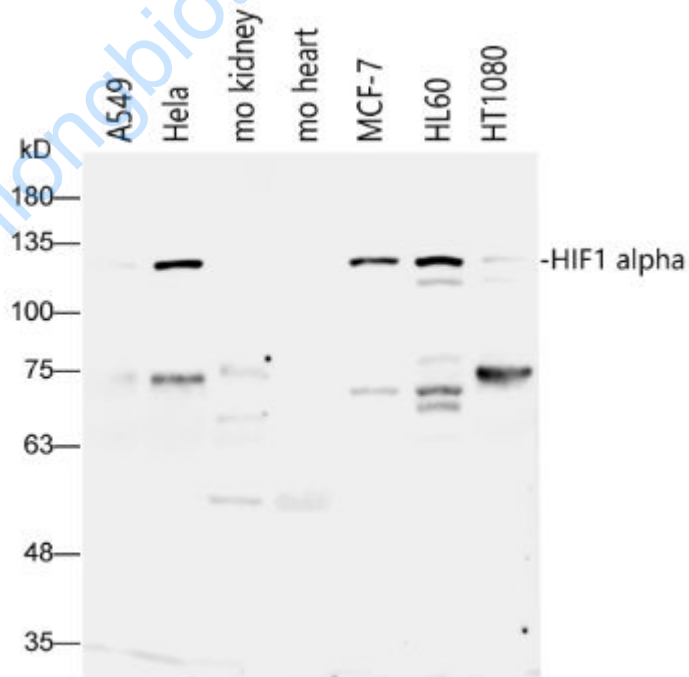
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

缺氧诱导因子1 α 不仅对于机体在缺氧条件下维持正常的生理功能具有特别重要的意义,并在Tumour的生长以及神经Apoptosis等病理过程中起重要作用. HIF1 alpha能调节许多下游基因的表达水平.

哺乳动物细胞在低氧压力条件下出现HIF. HIF是一种转录因子, 对细胞的缺氧起稳定作用。

Picture:



Sample:

1. A549 Cell (Human) Lysate at 40 ug

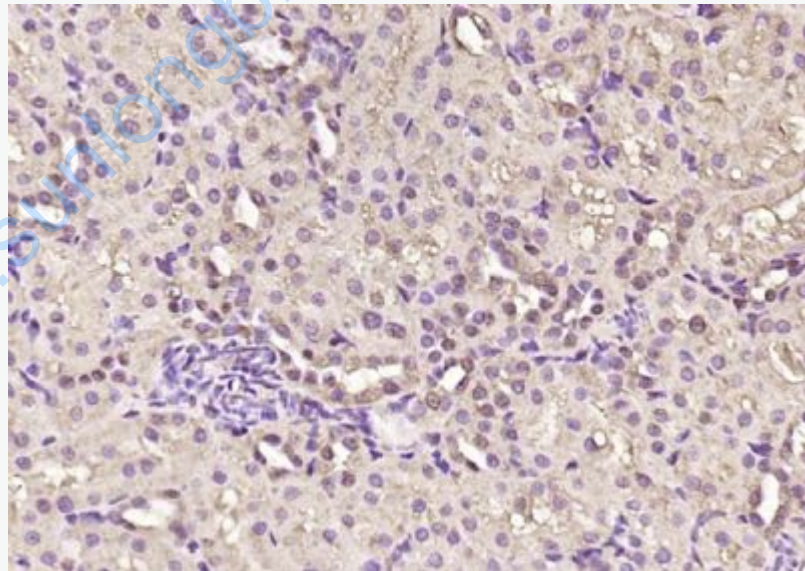
2. Hela Cell (Human) Lysate at 40 ug
3. Kidney (Mouse) Lysate at 40 ug
4. Heart (Mouse) Lysate at 40 ug
5. MCF-7 Cell (Human) Lysate at 40 ug
6. HL60 Cell (Human) Lysate at 40 ug
7. Ht1080 Cell (Human) Lysate at 40 ug

Primary: Anti- HIF-1 alpha (SL0737R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

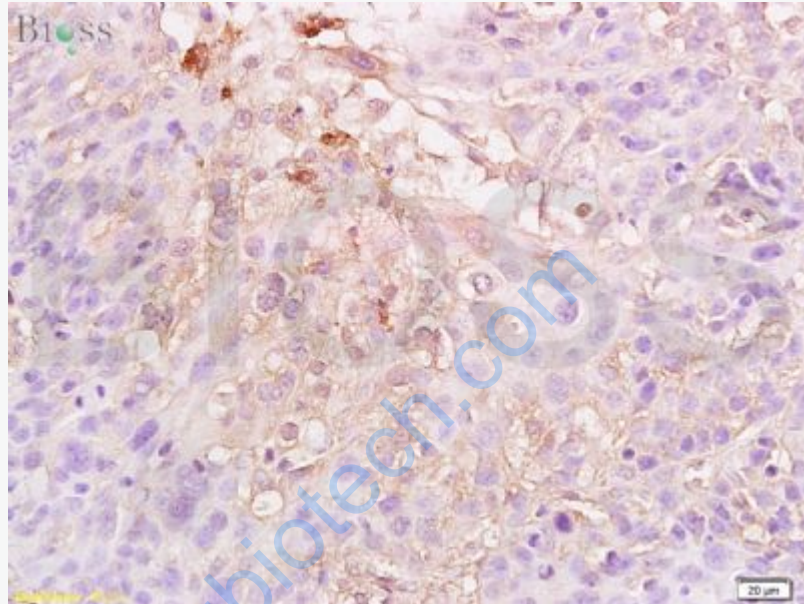
Predicted band size: 92 kD

Observed band size: 120kD



Paraformaldehyde-fixed, paraffin embedded (rat kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HIF-1 Alpha) Polyclonal Antibody,

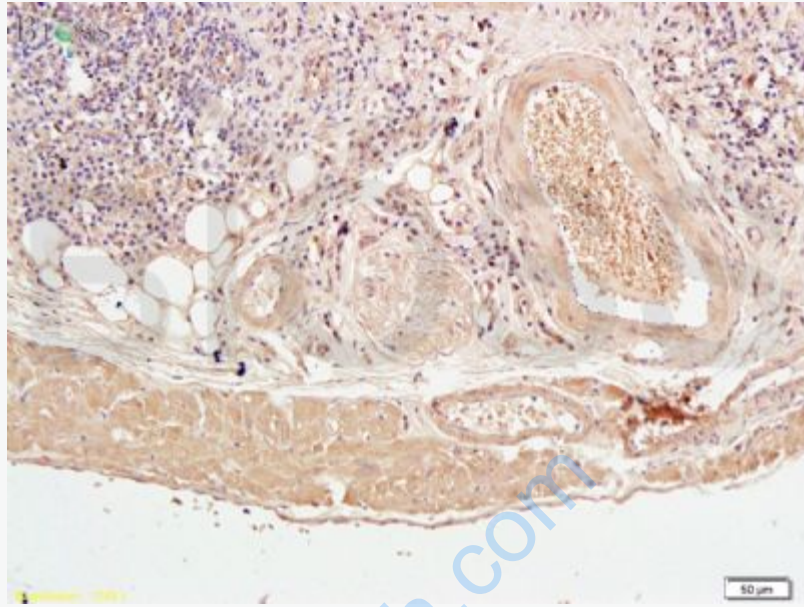
Unconjugated (SL0737R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: human cervical carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

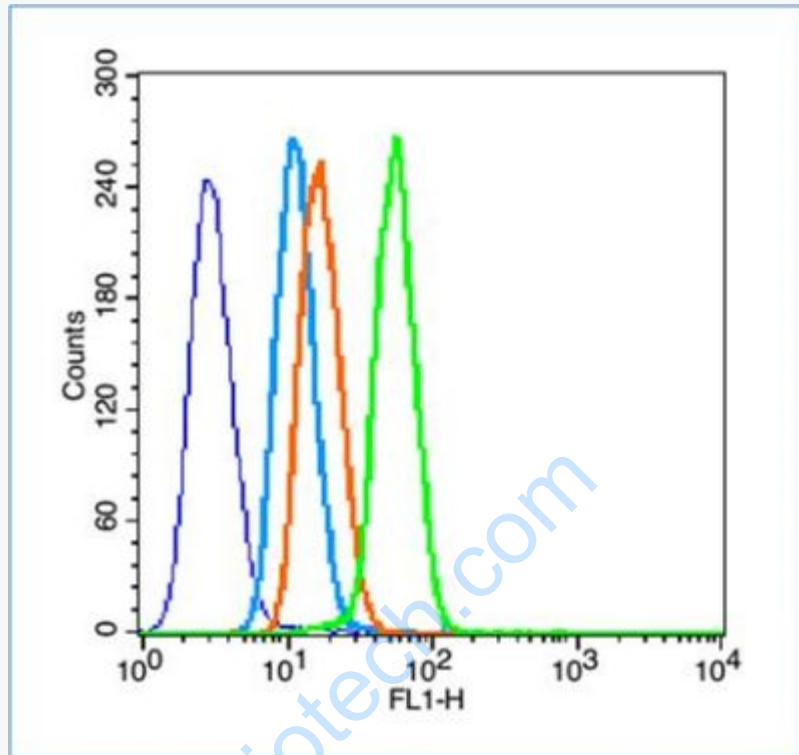
Incubation: Anti-HIF-1-Alpha Polyclonal Antibody, Unconjugated(SL0737R) 1:300, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat lung tissue(Smoking); 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-HIF-1-Alpha Polyclonal Antibody, Unconjugated(SL0737R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control (blue line): HeLa (blue).

Primary Antibody (green line): Rabbit Anti- HIF-1 Alpha antibody (SL0737R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 80% methanol (5 min at -20°C) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody

	used for 40 min at room temperature. Acquisition of 20,000 events was performed.
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