

## Anti-HIF-1 alpha/HIF1A Antibody Picoband®

Catalog Number: A00013-1

### About HIF1A

HIF-1alpha (Hypoxia-inducible factor 1alpha, HIF1A) is a transcription factor that mediates cellular and systemic homeostatic responses to reduced O<sub>2</sub> availability in mammals, including angiogenesis, erythropoiesis and glycolysis. This gene was mapped to 14q21-q24. HIF-1alpha transactivates genes required for energy metabolism and tissue perfusion and is necessary for embryonic development and tumor explant growth. HIF-1alpha is over expressed during carcinogenesis, myocardial infarction and wound healing. It is crucial for the cellular response to hypoxia and is frequently over expressed in human cancers, resulting in the activation of genes essential for cell survival. HIF-1alpha regulates the survival and function in the inflammatory microenvironment directly. It is a transcription factor that plays a pivotal role in cellular adaptation to changes in oxygen availability.

### Overview

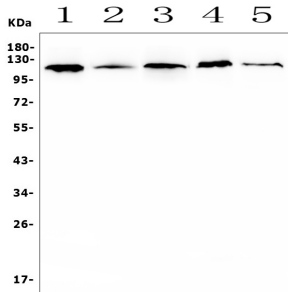
Product Name	Anti-HIF-1 alpha/HIF1A Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-HIF-1 alpha/HIF1A Antibody Picoband® catalog # A00013-1. Tested in ELISA, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q16665

### Technical Details

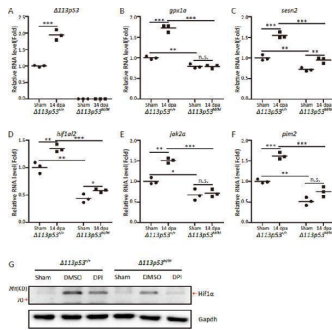
Immunogen	E.coli-derived human HIF-1 alpha/HIF1A recombinant protein (Position: H197-R718).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human ELISA, 0.1-0.5ug/ml, -

## Anti-HIF-1 alpha/HIF1A Antibody Picoband® (A00013-1) Images



Western blot analysis of HIF1A using anti-HIF1A antibody (A00013-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human U-87MG whole cell lysates, Lane 2: human U2OS whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human A549 whole cell lysates, Lane 5: human HepG2 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-HIF1A antigen affinity purified polyclonal antibody (Catalog # A00013-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for HIF1A at approximately 123KD. The expected band size for HIF1A is at 93KD.



Upregulation of antioxidant and proliferative genes during heart regeneration is impaired in the injury  $\Delta 113p53$  M/M mutant hearts. a - f Relative mRNA expression of  $\Delta 113p53$  ( a ), *gp1x1a* ( b ), *sesn2* ( c ), *hif1a2* ( d ), *jak2a* ( e ) and *pim2* ( f ) in the  $\Delta 113p53$  +/+ and  $\Delta 113p53$  M/M hearts at sham and 14 dpa. The total RNA was extracted from a pool of at least 10 hearts in each group. g Western blot was performed to analyse the induction of zebrafish Hif1alpha in different samples as indicated. The  $\Delta 113p53$  +/+ and  $\Delta 113p53$  M/M mutant zebrafish with heart resection were treated with DPI from 3 to 7 dpa. Total protein was isolated from four hearts/treatment at 7 dpa and subjected to western blot analysis. Gapdh was used as the protein loading control. The experiments were repeated independently for at least three times with similar results. Statistical analysis was performed on relevant data using Student's two-tailed t test in GraphPad Prism 5. The p values were represented by n.s. and asterisks. n.s.,  $p > 0.05$ . \*  $p$

## 11 Publications Citing This Product

1. PubMed ID: 10.1038/s41419-020-02781-7, p53 isoform  $\Delta 113p53$  promotes zebrafish heart regeneration by maintaining redox homeostasis
2. PubMed ID: 33757812, Qu KS, Luo Y, Yan XN, Kuai L, Ru Y, Yue Luo, Song JK, Ji WL, Li B, Xing M. Qinzhuiliangxue mixture alleviates psoriasis-like skin lesions via inhibiting the IL6/STAT3 axis. J Ethnopharmacol. 2021 Mar 20:114041. doi: 10.1016/j.jep.2021.114041. Epub ahead of print. PMID: 33757812.
3. PubMed ID: 32703938, Ye S,Zhao T,Zhang W,Tang Z,Gao C,Ma Z,Xiong JW,Peng J,Tan WQ,Chen J.p53 isoform  $\Delta 113p53$  promotes zebrafish heart regeneration by maintaining redox homeostasis.Cell Death Dis.2020 Jul

23;11(7):568.doi:10.1038/s41419-020-02781-7.PMID:32703938;PMCID:PMC73782

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