

# HIF1 bata Monoclonal Antibody

Catalog Number:E-AB-22189



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

## Description

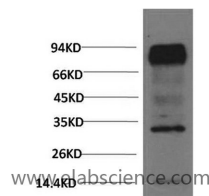
<b>Reactivity</b>	Mouse
<b>Immunogen</b>	Recombinant Protein
<b>Host</b>	Mouse
<b>Isotype</b>	IgG
<b>Purification</b>	Protein A purification
<b>Formulation</b>	PBS with 0.02% sodium azide, 0.5% protective protein and 50% glycerol, pH7.4

## Applications

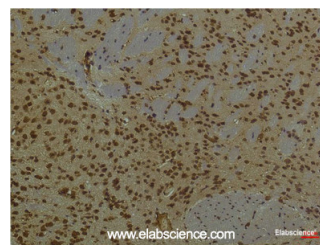
## Recommended Dilution

<b>WB</b>	1:1000-2000
<b>IHC</b>	1:100-200

## Data



Western Blot analysis of Mouse brain using HIF1 bata Monoclonal Antibody at dilution of 1:2000.  
**Observed Mw:87kDa**



Immunohistochemistry of paraffin-embedded Mouse brain tissue using HIF1 bata Monoclonal Antibody at dilution of 1:200.

## Preparation & Storage

**Storage** Store at -20°C. Avoid freeze / thaw cycles.

## Background

Hypoxia-inducible factor 1 (HIF1) is a heterodimeric transcription factor that plays a critical role in the cellular response to hypoxia (1). The HIF1 complex consists of two subunits, HIF-1 $\alpha$  and HIF-1 $\beta$ , which are basic helix-loop-helix proteins of the PAS (Per, ARNT, Sim) family (2). HIF1 regulates the transcription of a broad range of genes that facilitate responses to the hypoxic environment, including genes regulating angiogenesis, erythropoiesis, cell cycle, metabolism and apoptosis. The widely expressed HIF-1 $\alpha$  is typically degraded rapidly in normoxic cells by the ubiquitin/proteasomal pathway. Under normoxic conditions, HIF-1 $\alpha$  is proline hydroxylated leading to a conformational change that promotes binding to the von Hippel Lindau protein (VHL) E3 ligase complex; ubiquitination and proteasomal degradation follows (3,4). Both hypoxic conditions and chemical hydroxylase inhibitors (such as desferrioxamine and cobalt) inhibit HIF-1 $\alpha$  degradation and lead to its stabilization. In addition, HIF-1 $\alpha$  can be induced in an oxygen-independent manner by various cytokines through the PI3K-AKT-mTOR pathway (5-7). HIF-1 $\beta$  is also known as AhR nuclear translocator (ARNT) due to its ability to partner with the aryl hydrocarbon receptor (AhR) to form a heterodimeric transcription factor complex (8). Together with AhR, HIF-1 $\beta$  plays an important role in xenobiotics metabolism (8).

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