

# Recombinant HIF1 beta Monoclonal Antibody

Catalog Number:E-AB-81565



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

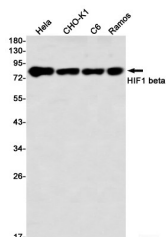
## Description

<b>Reactivity</b>	Human,Mouse,Rat,Hamster
<b>Immunogen</b>	Recombinant protein of human HIF1 beta
<b>Host</b>	Rabbit
<b>Isotype</b>	IgG
<b>Clone</b>	R05-3B2
<b>Purification</b>	Affinity Purified
<b>Conjugation</b>	Unconjugated
<b>Formulation</b>	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% protective protein

## Applications Recommended Dilution

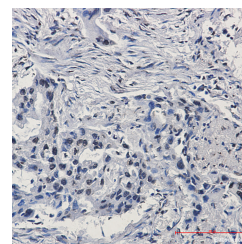
<b>WB</b>	1:500-1:1000
<b>IHC</b>	1:50-1:100

## Data



Western blot detection of HIF1 beta in HeLa,CHO-K1,C6,Ramos using HIF1 beta Rabbit mAb(1:1000 diluted)

**Observed Mw:87kDa**  
**Calculated Mw:87kDa**



Immunohistochemistry of HIF1 beta in paraffin-embedded Human lung cancer tissue using HIF1 beta Rabbit mAb at dilution 1:50

## 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

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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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