

## Datasheet for ABIN7317448

### HIF1A Protein (His tag)

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#### Overview

|                               |                                              |
|-------------------------------|----------------------------------------------|
| Quantity:                     | 100 µg                                       |
| Target:                       | HIF1A                                        |
| Origin:                       | Human                                        |
| Source:                       | Escherichia coli (E. coli)                   |
| Protein Type:                 | Recombinant                                  |
| Purification tag / Conjugate: | This HIF1A protein is labelled with His tag. |

#### Product Details

|                  |                                                                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose:         | Recombinant Human HIF-1 alpha/HIF1A Protein (His Tag)                                                                                                        |
| Sequence:        | Arg 575-Asn 826                                                                                                                                              |
| Characteristics: | A DNA sequence encoding the human HIF1A isoform 1 (Q16665-1) N-terminal segment (Arg 575-Asn 826) was expressed, with a polyhistidine tag at the N-terminus. |
| Purity:          | > 95 % as determined by reducing SDS-PAGE.                                                                                                                   |

#### Target Details

|                   |                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Target:           | HIF1A                                                                                                                                                                                                                                                                                                                                                                       |
| Alternative Name: | HIF-1 alpha/HIF1A ( <a href="#">HIF1A Products</a> )                                                                                                                                                                                                                                                                                                                        |
| Background:       | Background: HIF-1 alpha, also known as HIF1A, contains 1 basic helix-loop-helix (bHLH) domain, 1 PAC (PAS-associated C-terminal) domain and 2 PAS (PER-ARNT-SIM) domains. It is one of the two subunits of Hypoxia-inducible factor-1 (HIF1). HIF1 is a transcription factor found in mammalian cells cultured under reduced oxygen tension that plays an essential role in |

## Target Details

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). HIF-1 alpha is expressed in most tissues with highest levels in kidney and heart. It is 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. HIF-1 alpha functions as a master transcriptional regulator of the adaptive response to hypoxia. Under hypoxic conditions, it activates the transcription of over 40 genes, including erythropoietin, glucose transporters, glycolytic enzymes, vascular endothelial growth factor, HILPDA, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. HIF1A plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. HIF-1 alpha 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.

Synonym: bHLHe78,HIF-1A,HIF-1alpha,HIF1,HIF1-ALPHA,MOP1,PASD8

Molecular Weight: 28.4 kDa

Pathways: [Positive Regulation of Peptide Hormone Secretion](#), [Regulation of Hormone Metabolic Process](#), [Regulation of Hormone Biosynthetic Process](#), [Cellular Response to Molecule of Bacterial Origin](#), [Carbohydrate Homeostasis](#), [Transition Metal Ion Homeostasis](#), [Tube Formation](#), [Regulation of Carbohydrate Metabolic Process](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [VEGFR1 Specific Signals](#), [Warburg Effect](#)

## Application Details

Restrictions: For Research Use only

## Handling

Format: Lyophilized

Reconstitution: Please refer to the printed manual for detailed information.

Buffer: Lyophilized from sterile PBS, pH 7.4

Storage: 4 °C,-20 °C,-80 °C

Storage Comment: Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.