

# Recombinant human Hypoxia-inducible factor 1-alpha protein



Catalog No: #AP72194

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Package Size: #AP72194-1 20ug #AP72194-2 100ug #AP72194-3 1mg

## Description

Product Name	Recombinant human Hypoxia-inducible factor 1-alpha protein
Brief Description	Recombinant Protein
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:579-826aaSequence Info:Partial
Other Names	ARNT-interacting protein;Basic-helix-loop-helix-PAS protein MOP1Class E basic helix-loop-helix protein 78 ;bHLHe78Member of PAS protein 1;PAS domain-containing protein 8
Accession No.	Q16665
Uniprot	Q16665
GeneID	3091;
Calculated MW	31 kDa
Tag Info	N-terminal 6xHis-tagged
Target Sequence	QLSPLESSASPESASPQSTVTVFQQTQIQEPTANATTTTATTDELKTVTKDRMEDIKILIASPSPTHIHKETTSA TSSPYRDTQSRTASPNRAGKGVIEQTEKSHPRSPNVLSVALSQRTTVPEEELNPKILALQNAQRKRKMEHDG SLFQAVGIGITLLQQPDDHAATTSLWKRKVKGCKSSEQNGMEQKTIILIPSDLACRLLGQSMDESGLPQLTSYD CEVNAPIQGSRNLLQGEELLRALDQVN
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.  Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

## Background

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, HILPDA, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. Plays an essential role in bryonic 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 CREBPB and EP300. Activity is enhanced by interaction with both, NCOA1 or NCOA2. Interaction with redox regulatory protein APEX1 leads to activate CTAD and potentiates activation by NCOA1 and CREBBP. Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia

## References

Hypoxia-inducible factor 1 is a basic-helix-loop-helix-PAS heterodimer regulated by cellular O<sub>2</sub> tension.Wang G.L., Jiang B.-H., Rue E.A., Semenza G.L.Proc. Natl. Acad. Sci. U.S.A. 92:5510-5514(1995)Research Topic:Transcription

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Note: This product is for in vitro research use only