

HIF1A Blocking Peptide (C-term)
Synthetic peptide
Catalog # BP20161b**Specification****HIF1A Blocking Peptide (C-term) - Product Information**

Primary Accession [Q16665](#)
Other Accession [Q9XTA5](#),
[NP_001521.1](#)

HIF1A Blocking Peptide (C-term) - Additional Information

Gene ID 3091

Other Names

Hypoxia-inducible factor 1-alpha,
HIF-1-alpha, HIF1-alpha, ARNT-interacting
protein, Basic-helix-loop-helix-PAS protein
MOP1, Class E basic helix-loop-helix protein
78, bHLHe78, Member of PAS protein 1, PAS
domain-containing protein 8, HIF1A,
BHLHE78, MOP1, PASD8

Target/Specificity

The synthetic peptide sequence is selected
from aa 750-762 of HUMAN HIF1A

Format

Peptides are lyophilized in a solid powder
format. Peptides can be reconstituted in
solution using the appropriate buffer as
needed.

Storage

Maintain refrigerated at 2-8°C for up to 6
months. For long term storage store at
-20°C.

Precautions

This product is for research use only. Not
for use in diagnostic or therapeutic
procedures.

HIF1A Blocking Peptide (C-term) - Protein Information

Name HIF1A
{ECO:0000303|PubMed:7539918,

HIF1A Blocking Peptide (C-term) - Background

Hypoxia-inducible factor-1 (HIF1) is a
transcription
factor found in mammalian cells cultured under
reduced oxygen
tension that plays an essential role in 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). This gene encodes the alpha subunit of
HIF-1.
Overexpression of a natural antisense
transcript (aHIF) of this
gene has been shown to be associated with
nonpapillary renal
carcinomas. Two alternative transcripts
encoding different isoforms
have been identified.

HIF1A Blocking Peptide (C-term) - References

Gonsalves, C., et al. J. Immunol.
185(10):6253-6264(2010)
Hindryckx, P., et al. J. Immunol.
185(10):6306-6316(2010)
Espinosa, I., et al. Am. J. Surg. Pathol.
34(11):1708-1714(2010)
Corzo, C.A., et al. J. Exp. Med.
207(11):2439-2453(2010)
Shen, G.M., et al. FEBS Lett.
584(20):4366-4372(2010)

ECO:0000312|HGNC:HGNC:4910}

Function

Functions as a master transcriptional regulator of the adaptive response to hypoxia (PubMed:11292861, PubMed:11566883, PubMed:15465032, PubMed:16973622, PubMed:17610843, PubMed:18658046, PubMed:20624928, PubMed:22009797, PubMed:9887100, PubMed:30125331). 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 (PubMed:11292861, PubMed:11566883, PubMed:15465032, PubMed:16973622, PubMed:17610843, PubMed:18658046, PubMed:20624928, PubMed:22009797, PubMed:9887100, PubMed:30125331).

PubMed:20624928, PubMed:22009797, PubMed:9887100, PubMed:30125331). Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease (PubMed:22009797). Heterodimerizes with ARNT; heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters (By similarity). Activation requires recruitment of transcriptional coactivators such as CREBBP and EP300 (PubMed:9887100, PubMed:16543236). Activity is enhanced by interaction with NCOA1 and/or NCOA2 (PubMed:10594042). Interaction with redox regulatory protein APEX1 seems to activate CTAD and potentiates activation by NCOA1 and CREBBP (PubMed:10202154, PubMed:10594042). Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia (PubMed:19528298).

Cellular Location

Cytoplasm. Nucleus. Nucleus speckle {ECO:0000250|UniProtKB:Q61221}. Note=Colocalizes with HIF3A in the nucleus and speckles (By similarity). Cytoplasmic in normoxia, nuclear translocation in response to hypoxia (PubMed:9822602) {ECO:0000250|UniProtKB:Q61221, ECO:0000269|PubMed:9822602}

Tissue Location

Expressed in most tissues with highest levels in kidney and heart. 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. A higher level expression seen in pituitary tumors as compared to the pituitary gland.

**HIF1A Blocking Peptide (C-term) -
Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)