

Recombinant Human HIF1A Protein, T7-His-TEV-tagged

Cat. No. HIF1A-22H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human HIF1a cDNA (825aa) was constructed with codon optimization using gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal in E. coli as inclusion bodies.
Species	Human
Source	E.coli
Description	This gene encodes the alpha subunit of transcription factor hypoxia-inducible factor-1 (HIF-1), which is a heterodimer composed of an alpha and a beta subunit. HIF-1 functions as a master regulator of cellular and systemic homeostatic response to hypoxia by activating transcription of many genes, including those involved in energy metabolism, angiogenesis, apoptosis, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. HIF-1 thus plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene.
Form	Liquid
AA Sequence	MASMTGGQQMGRGHHHHHHENLYFQGGFGSEGAGGANDKKKISSERRKEKSR DAARSRRSKESEVFYELAHQLPLPHNVSSHLDKASVMRLTISYLRVRKLLDAGDLIE DDMKAQMNCFYLKALDGFVMVLTDGDMIIYISDNVNKYMGLTQFELTGHSVDFDTH PCDHEEMREMLTHRNLVKKGKEQNTQRSFFLRMKCTLTSRGRTMNIKSATWKVL

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HCTGHIHVYDTNSNQPCGYKKPPMTCLVLICEPIPHPSNIEIPLDSKTFLSRHSLDM
 KFSYCDERITELMGYEPEELLGRSIEYEHALSDHDLTKTHHDMFTKGQVTTGQYR
 MLAKRGGYVWVETQATVIYNTKNSQPQCIVCVNYVVSGIIQHDLIFSLQQTECVLKPV
 ESSDMKMTQLFTKVESEDTSSEDFDKLKEPDALTLLAPAAGDTIISLDFGSNDTETDD
 QQLEEVPLYNDVMLPSPNEKLQINLAMSPLPTAETPKPLRSSADPALNQEVALKLE
 PNPESELELSFTMPQIQDQTPSPSDGSTRQSSPEPNSPSEYCFYVDSDMVNEFKLEL
 VEKLFAEDTEAKNPFSTQDSDLLEMLAPYIPMDDDFQLRSFDQLSPLESSSASPES
 ASPQSTVTVFQQTQIQEPTANATTTTATTDDELKTVTKDRMEDIKILIASPSPTHIHKET
 TSATSSPYRDTQSRTASPNRAGKGVIEQTEKSHPRSPNVLSVALSQRTTVPEEELNP
 KILALQNAQRKRKMEHDGSLFQAVGIGTLLQQPDDHAATTSLSWKRVKGCKSSEQN
 GMEQKTIILIPSDLACRLLGQSMDESGLPQLTSYDCEVNAPIQGSRNLLQGEELLRAL
 DQVN

Purity > 90% by SDS-PAGE.

Applications

1. May be used for in vitro HIF1a mediated gene transcription regulation study in homeostatic response to hypoxia for various cancer cells by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker protein / therapeutic target protein for cancer prognosis and cancer treatment drug development.
5. As immunogen for specific antibody production.

Stability Product is stable at 4 centigrade for at least 30 days.

Storage Keep at -80 centigrade for long term storage.

Storage Buffer 0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary

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formulation of NaCl, KCl, EDTA, Sucrose and DTT.

GENE INFORMATION

Gene Name	HIF1A
Official Symbol	HIF1A hypoxia inducible factor 1 subunit alpha [Homo sapiens (human)]
Synonyms	HIF1A; hypoxia inducible factor 1 subunit alpha; HIF1; MOP1; PASD8; HIF-1A; bHLHe78; HIF-1alpha; HIF1-ALPHA; HIF-1-alpha; hypoxia-inducible factor 1-alpha; ARNT interacting protein; PAS domain-containing protein 8; basic-helix-loop-helix-PAS protein MOP1; class E basic helix-loop-helix protein 78; hypoxia inducible factor 1 alpha subunit; hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor); hypoxia-inducible factor 1 alpha isoform I.3; hypoxia-inducible factor1alpha; member of PAS protein 1; member of PAS superfamily 1
Gene ID	3091
mRNA Refseq	NM_001530
Protein Refseq	NP_001521
MIM	603348
UniProt ID	Q16665

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