

Recombinant Human HIF1A, His-tagged

Cat. No. HIF1A-8501H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human HIF1A, fused with His tag, was expressed in E. coli.
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Species	Human
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Source	E.coli
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Description

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. HIF-1 alpha contains two transactivation domains located between amino acids 531 and 826. 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. Specific disruption of the HIF-1 pathway is important for exploring its role in tumor biology and developing more efficient weapons to treat cancer . HIF-1alpha is a master regulator of the hypoxic response, and its proangiogenic activities include, but are not limited to, regulation of vascular endothelial growth factor (VEGF). HIF-1alpha protein expression is often seen in invasive breast cancer . Recent data demonstrates that HIF-1alpha knockdown reduces tumorigenicity of MCF-7 cells and suggests a promising combination of both anti-HIF-1 strategy and traditional chemotherapy to improve cancer treatment.

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Form	20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA
AA Sequence	MAHHHHHHAS SDLACRLLGQ SMDESGLPQL TSYDCEVNAP IQGSRNLLQG EELLRALDQV N
Purity	>95% as determined by SDS-PAGE
Storage	-80 °C
Concentration	700 µg/ml
Shipping	Dry Ice

GENE INFORMATION

Gene Name	HIF1A hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor) [Homo sapiens]
Official Symbol	HIF1A
Synonyms	HIF1A; hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor); hypoxia-inducible factor 1-alpha; bHLHe78; HIF 1alpha; HIF1; MOP1; PASD8; HIF-1-alpha; member of PAS protein 1; ARNT interacting protein; ARNT-interacting protein; member of PAS superfamily 1; 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 isoform I.3; hypoxia-inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor); HIF-1alpha; HIF1-ALPHA;
Gene ID	3091
mRNA Refseq	NM_001530

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Protein Refseq	NP_001521
MIM	603348
UniProt ID	Q16665
Chromosome Location	14q23.2
Pathway	Adipogenesis, organism-specific biosystem; Angiogenesis, organism-specific biosystem; Circadian Clock, organism-specific biosystem; HIF-1-alpha transcription factor network, organism-specific biosystem; Hypoxic and oxygen homeostasis regulation of HIF-1-alpha, organism-specific biosystem; NOTCH1 Intracellular Domain Regulates Transcription, organism-specific biosystem; Notch-mediated HES/HEY network, organism-specific biosystem;
Function	Hsp90 protein binding; histone acetyltransferase binding; histone deacetylase binding; protein binding; protein heterodimerization activity; protein heterodimerization activity; protein kinase binding; contributes_to sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; sequence-specific DNA binding transcription factor activity; sequence-specific distal enhancer binding RNA polymerase II transcription factor activity; contributes_to sequence-specific distal enhancer binding RNA polymerase II transcription factor activity; signal transducer activity; transcription factor binding; transcription regulatory region DNA binding;