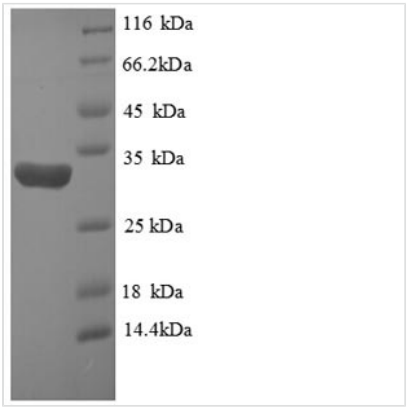
Recombinant Human Hypoxia-inducible factor 1-alpha (HIF1A), partial

Product Code	CSB-RP128074h
Relevance	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 ischic disease. Binds to core DNA sequence 5'-[AG]CGTG-3' within the hypoxia response elent (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 APEX ses to activate CTAD and potentiates activation by NCOA1 and CREBBP. Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia
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.
Uniprot No.	Q16665
Alias	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
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	QLSPLESSSASPESASPQSTVTVFQQTQIQEPTANATTTTATTDELKTVTKDR MEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKGVIEQTEKSHPR SPNVLSVALSQRTTVPEEELNPKILALQNAQRKRKMEHDGSLFQAVGIGTLLQ QPDDHAATTSLSWKRVKGCKSSEQNGMEQKTIILIPSDLACRLLGQSMDESGL PQLTSYDCEVNAPIQGSRNLLQGEELLRALDQVN
Lead Time	3-7 business days
Research Area	Transcription
Source	E.coli
Gene Names	HIF1A
Expression Region	579-826aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Tag Info	N-terminal 6xHis-tagged
Mol. Weight	31.0kDa
Protein Description	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human HIF1A protein is a prokaryotic system E.coli expressed Partial protein. To make this HIF1A recombinant protein, the HIF1A gene is synthesized and cloned into the E.coli system expression vector, and then it was transformed into protein-expressing host E Coli for expression, the other steps are testing for the identification of recombinant protein, large scale production and target protein Isolation and purification. The purity of the final HIF1A protein is 90%+ as determined by SDS-PAGE.

HIF1A (also known as BHLHE78 or MOP1) is a protein encoding gene that provides an instruction in making a protein named hypoxia-inducible factor 1-alpha (Short name is HIF1-alpha) or ARNT-interacting protein. The protein encoded by this gene is 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-1β subunit is constitutively expressed. Oxygen-dependent HIF-α subunit has three α isoforms, including HIF-1alpha, HIF-2alpha or HIF-3alpha. Among of them, HIF-1α is the one playing a major role in hypoxia signaling.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.