

Datasheet for ABIN7554093

HIF1A Protein (AA 1-826) (His tag)



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3 Images

Overview

Quantity:	1 mg
Target:	HIF1A
Protein Characteristics:	AA 1-826
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This HIF1A protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant HIF1A Protein expressed in mammalian cells.
Sequence:	<p>MEGAGGANDK KKISSERTKE KSRDAARSRR SKESEVFYEL AHQLPLPHNV SSHLDKASVM</p> <p>RLTISYLRVR KLLDAGDLDI EDDMKAQMNC FYLKALDGFV MVLTDGDMI YISDNVNKYM</p> <p>GLTQFELTGH SVFDFTHPCD HEEMREMLTH RNLVKKGKE QNTQRSFFLR MKCTLTSGRR</p> <p>TMNIKSATWK VLHCTGHIHV YDTNSNQPC GYKKPPMTCL VLICEPIPHP SNIEIPLDSK</p> <p>TFLSRHSLDM KFSYCDERIT ELMGYEPEEL LGRSIYEEYH ALDSHLLTKT HHDMFTKGQV</p> <p>TTGQYRMLAK RGGYVWVETQ ATVIYNTKNS QPQCIVCVNY VVSGIIQHDL IFSLQQTECV</p> <p>LKPVESSDMK MTQLFTKVES EDTSSLFDKL KKEPDALTLL APAAGDTIIS LDFGSNDTET</p> <p>DDQQLLEEVPL YNDVMLPSPN EKLQNINLAM SPLPTAETPK PLRSSADPAL NQEVALKLEP</p> <p>NPESLELSFT MPQIQDQTPS PSDGSTRQSS PEPNSPSEYC FYVDSMDVNE FKLELVEKLF</p> <p>AEDTEAKNPF STQDLDLE MLAPYIPMDD DFQLRSFDQL SPLESSASP ESASPQSTVT</p> <p>VFQQTQIQEP TANATTTTAT TDELKTVTKD RMEDIKILIA SPSPTIHKE TTSATSSPYR</p> <p>DTQSRTASPN RAGKGVIEQT EKSHPRSPNV LSVALSQRTT VPHEELNPKE LALQNAQRKR</p>

Product Details

KMEHDGSLFQ AVGIGTLLQQ PDDHAATTSL SWKRVKGCKS SEQNGMEQKT IILIPSDLAC
RLLGQSMDES GLPQLTSYDC EVNAPIQGS R NLLQGEELLR ALDQVN **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

Specificity: If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Characteristics: Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity: > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

Grade: custom-made

Target Details

Target: HIF1A

Alternative Name: HIF1A ([HIF1A Products](#))

Background: 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),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: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). {ECO:0000250|UniProtKB:Q61221, ECO:0000269|PubMed:10202154, ECO:0000269|PubMed:10594042, ECO:0000269|PubMed:11292861, ECO:0000269|PubMed:11566883, ECO:0000269|PubMed:15465032, ECO:0000269|PubMed:16543236, ECO:0000269|PubMed:16973622, ECO:0000269|PubMed:17610843, ECO:0000269|PubMed:18658046, ECO:0000269|PubMed:19528298, ECO:0000269|PubMed:20624928, ECO:0000269|PubMed:22009797, ECO:0000269|PubMed:30125331, ECO:0000269|PubMed:9887100}., FUNCTION: (Microbial infection) Upon infection by human coronavirus SARS-CoV-2, is required for induction of glycolysis in monocytes and the consequent pro-inflammatory state (PubMed:32697943). In monocytes, induces expression of ACE2 and cytokines such as IL1B, TNF, IL6, and interferons (PubMed:32697943). Promotes human coronavirus SARS-CoV-2 replication and monocyte inflammatory response (PubMed:32697943). {ECO:0000269|PubMed:32697943}.

Molecular Weight:	92.7 kDa
UniProt:	Q16665
Pathways:	Positive Regulation of Peptide Hormone Secretion , Regulation of Hormone Metabolic Process , Regulation of Hormone Biosynthetic Process , Cellular Response to Molecule of Bacterial Origin , Carbohydrate Homeostasis , Transition Metal Ion Homeostasis , Tube Formation , Regulation of Carbohydrate Metabolic Process , Signaling Events mediated by VEGFR1 and VEGFR2 , VEGFR1 Specific Signals , Warburg Effect

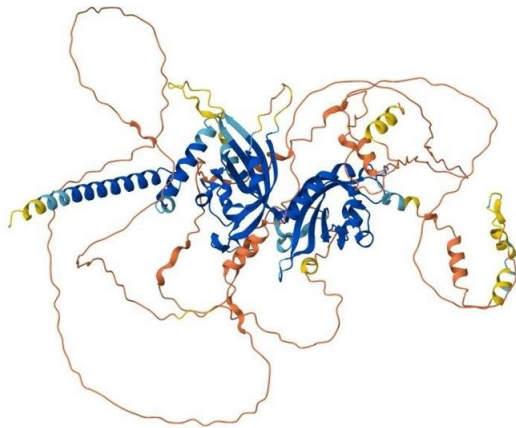
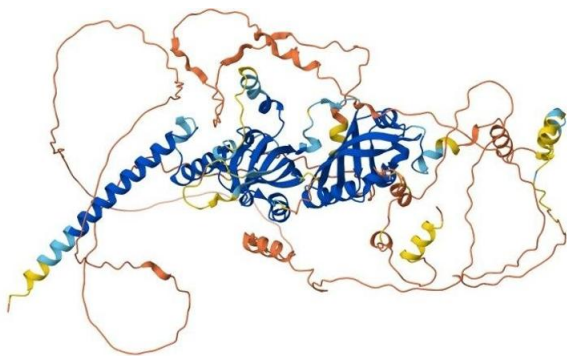
Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

Images

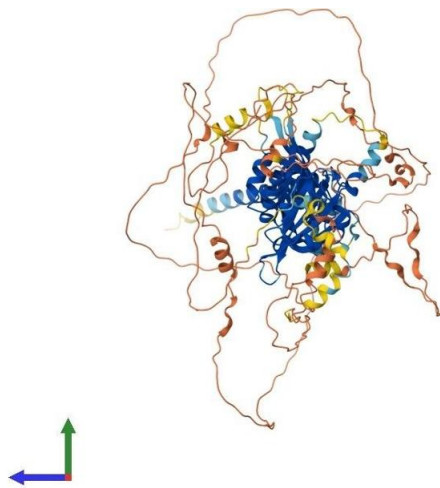


Protein Structure

Image 1. AlphaFold protein structure prediction of Human Recombinant HIF1A Protein, UniprotID Q16665

Protein Structure

Image 2. AlphaFold protein structure prediction of Human Recombinant HIF1A Protein, UniprotID Q16665



Protein Structure

Image 3. AlphaFold protein structure prediction of Human Recombinant HIF1A Protein, UniprotID Q16665