

Datasheet for ABIN3092930

**HIF1A Protein (AA 1-826) (Strep Tag)****1** Image[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	HIF1A
Protein Characteristics:	AA 1-826
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HIF1A protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

## Product Details

Sequence:	MEGAGGANDK KKISSERTKE KSRDAARSRR SKESEVFYEL AHQLPLPHNV SSHLDKASVM RLTISYLRVR KLLDAGDLDI EDDMKAQMNC FYLKALDGFV MVLTDGDMI YISDNVNKYM GLTQFELTGH SVDFTHPCD HEEMREMLTH RNLVKKGKE QNTQRSFFLR MKCTLTSRGR TMNIKSATWK VLHCTGHIHV YDTNSNQPC GYKKPPMTCL VLICEPIPHP SNIEIPLDSK TFLSRHSLDM KFSYCDERIT ELMGYEPEEL LGRSIYEEYH ALDSHLLTKT HHDMFTKGQV TTGQYRMLAK RGGYVWVETQ ATVIYNTKNS QPQCIVCVNY VVGIIQHD L IFSLQQTECV LKPVESSDMK MTQLFTKVES EDTSSLFDKL KKEPDALTLL APAAGDTIIS LDFGSNDTET DDQQL EEVPL YNDVMLPSPN EKLQNINLAM SPLPTAETPK PLRSSADPAL NQEVALKLEP NPESLELSFT MPQIQDQTPS PSDGSTRQSS PEPNSPSEYC FYVDSMDVNE FKLELVEKLF AEDTEAKNPF STQDLDLE MLAPYIPMDD DFQLRSFDQL SPLESSASP ESASPQSTVT VFQQTQIQEP TANATTTTAT TDELKTVTKD RMEDIKILIA SPSPTIHKE TTSATSSPYR DTQSRTASPN RAGKGVIEQT EKSHPRSPNV LSVALSQRTT VP EEELNPKI LALQNAQRKR
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KMEHDGSLFQ AVGIGTLLQQ PDDHAATTSL SWKRVKGCKS SEQNGMEQKT IILIPSDLAC  
RLLGQSMDES GLPQLTSYDC EVNAPIQGSR NLLQGEELLR ALDQVN

**Sequence without tag. The proposed Strep-Tag is based on experience s 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.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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 will ensure that you receive a correctly folded protein.

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.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

## Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):  1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

## Target Details

Target:	HIF1A
Alternative Name:	HIF1A ( <a href="#">HIF1A Products</a> )
Background:	<p>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</p>

## Target Details

(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: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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## Application Details

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Restrictions: For Research Use only

## Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## Images



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process