

Datasheet for ABIN3134847 ATF4 Protein (AA 1-349) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	ATF4
Protein Characteristics:	AA 1-349
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATF4 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	<p>MTEMSFLNSE VLAGDLMSPF DQSGLGAEES LGLLDDYLEV AKHLKPHGFS SDKAGSSEWP AMDDGLASAS DTGKEDAFSG TDWMLEKMDL KEFDFDALFR MDDLETMPDE LLTTLDDTCD LFAPLVQETN KEPPQTVNPI GHLPESLIKV DQVAPFTFLQ PFPCSPGVLS STPEHSFSLE LGSEVDISEG DRKPDAAAYI TLIPPCVKEE DTPSDNDSGI CMSPESYLGS PQHSPSTSRA PPDNLPSPGG SRGSPRPKPYP DPPGVSLTAK VKTEKLDKKL KKMEQNKTAA TRYRQKKRAE QEALTGECKE LEKKNEALKE KADSLAKEIQ YLKDLEIEVR KARGKKRVP</p> <p>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</p>
Characteristics:	<ul style="list-style-type: none"> Made in Germany - from design to production - by highly experienced protein experts. Mouse Atf4 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. State-of-the-art algorithm used for plasmid design (Gene synthesis).

Product Details

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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's protparam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none">1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	ATF4
Alternative Name:	Atf4 (ATF4 Products)
Background:	Transcriptional activator. Binds the cAMP response element (CRE) (consensus: 5'-

Target Details

GTGACGT[AC][AG]-3'), a sequence present in many viral and cellular promoters. Binds to asymmetric CRE's as a heterodimer and to palindromic CRE's as a homodimer. Cooperates with FOXO1 in osteoblasts to regulate glucose homeostasis through suppression of beta-cell production and decrease in insulin production. Regulates the induction of DDIT3/CHOP and asparagine synthetase (ASNS) in response to ER stress. In concert with DDIT3/CHOP, activates the transcription of TRIB3 and promotes ER stress-induced neuronal apoptosis by regulating the transcriptional induction of BBC3/PUMA. Activates transcription of SIRT4. Regulates the circadian expression of the core clock component PER2 and the serotonin transporter SLC6A4. Binds in a circadian time-dependent manner to the cAMP response elements (CRE) in the SLC6A4 and PER2 promoters and periodically activates the transcription of these genes. {ECO:0000269|PubMed:15775988, ECO:0000269|PubMed:21159964, ECO:0000269|PubMed:21768648, ECO:0000269|PubMed:22298775, ECO:0000269|PubMed:22572884, ECO:0000269|PubMed:23663782, ECO:0000269|PubMed:8506317}.

Molecular Weight: 39.3 kDa Including tag.

UniProt: [Q06507](#)

Pathways: [Thyroid Hormone Synthesis](#), [Myometrial Relaxation and Contraction](#), [ER-Nucleus Signaling](#), [Unfolded Protein Response](#)

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.

Comment: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling

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