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Datasheet for ABIN3081755
HSF4 Protein (AA 1-492) (Strep Tag)

Overview

Quantity:	1 mg
Target:	HSF4
Protein Characteristics:	AA 1-492
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HSF4 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MQEAPAALPT EPGPSPVPAF LGKLWALVGD PGTDHLIRWS PSGTSFLVSD QSRFAKEVLP
QYFKHSNMAS FVRQLNMYGF RKVVSIEQGG LLRPERDHVE FQHPSFVRGR EQLLERVRRK
VPALRGDDGR WRPEDLGRLL GEVQALRGVQ ESTEARLREL RQNEILWRE VVTLRQSHGQ
QHRVIGKLIQ CLFGPLQAGP SNAGGKRKLS LMLDEGSSCP TPAKFNTCPL PGALLQDPYF
IQSPLPETNL GLSPHRARGP IISDIPEDSP SPEGTRLSPS SDGRREKGLA LLKEEPASPG
GDGEAGLALA PNECDFCVTA PPPLPVAVVQ AILEGKGSFS PEGPRNAQQP EPGDPREIPD
RGPLGLES GD RSPESLLPPM LLQPPQESVE PAGPLDVLGP SLQGREWTLM DLDMELSLMQ
PLVPERGEPE LAVKGLNSPS PGKDPTLGAP LLLDVQAALG GPALGLPGAL TIYSTPESRT
ASYLGPEASP SP

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.

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.

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

Product Details

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)

Target Details

Target: HSF4

Alternative Name: HSF4 ([HSF4 Products](#))

Background: Heat shock factor protein 4 (HSF 4) (hHSF4) (Heat shock transcription factor 4) (HSTF 4),FUNCTION: Heat-shock transcription factor that specifically binds heat shock promoter elements (HSE) (PubMed:22587838, PubMed:23507146). Required for denucleation and organelle rupture and degradation that occur during eye lens terminal differentiation, when fiber cells that compose the lens degrade all membrane-bound organelles in order to provide lens with transparency to allow the passage of light (By similarity). In this process, may regulate denucleation of lens fiber cells in part by activating DNASE2B transcription (By similarity). May be involved in DNA repair through the transcriptional regulation of RAD51 (PubMed:22587838). May up-regulate p53/TP53 protein in eye lens fiber cells, possibly through protein stabilization (PubMed:28981088). In the eye lens, controls the expression of alpha-crystallin B chain/CRYAB and consequently may be involved in the regulation of lysosomal acidification (By similarity). {ECO:0000250|UniProtKB:Q5CZP2, ECO:0000250|UniProtKB:Q9R0L1, ECO:0000269|PubMed:22587838, ECO:0000269|PubMed:23507146, ECO:0000269|PubMed:28981088}, FUNCTION: [Isoform HSF4A]: Transcriptional repressor. {ECO:0000269|PubMed:10488131}, FUNCTION: [Isoform HSF4B]: Transcriptional activator. {ECO:0000269|PubMed:10488131, ECO:0000269|PubMed:16371476}.

Molecular Weight: 53.0 kDa

UniProt: [Q9ULV5](#)

Pathways: [MAPK Signaling](#)

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: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

Application Details

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.

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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)