

Datasheet for ABIN3137641  
**Elf4 Protein (AA 1-655) (Strep Tag)**



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## Overview

Quantity:	1 mg
Target:	Elf4
Protein Characteristics:	AA 1-655
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Elf4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence: MAIALQPSDL VFEFASNGMD DIHQLEDPSV FPAVIVEQVP YPELVHLCSE LDLDEVHNGI  
IRDRTLTCMTQ DQILEGSILL TDDDVSTSNV VSSTEVLFNV ATPSDVLDEK QIFSSPEVLS  
DSNSVQAINL PNFLSTPEP DDLKKTSDAG DQKEHSEEEK VSREENLRKM GKARKRNRKT  
KNNRSTSPVT DPSMPIRKKS KDGKGSTIYL WEFLLALLQD RNTCPKYIKW TQREKGIFKL  
VDSKAVSKLW GKQKNKPDMM YETMGRALRY YYQRGILAKV EGQRLVYQFK EMPKDLVVID  
DEEESPETPE DSSQASTSST PSTSTIRRAS SRVGTRASPE DKDNPPEWKP KVQHTGLQPS  
ASLELGLSVD EEVPTTSTML ASPLQSQARL TKTVSSSPAP SNIHLGVAPV GPGSTVTLQT  
IPLTTVLTNG PPASTTAPTQ LVLQSVQVS TFKDTFTLQT SFPLNTNLQE NQVATQGAPL  
ILSGLPQLLA GANPQSNPAP SQVIGAGSAG PSSQPPGTVI AAFIRTSSGT SVPVVKEGPL  
RSSSYVQGVV TGAPVEGLLV PEETLRELLR DQGHLLQPLPS QVLSRGSNHL SLVGNQTLSP  
PSHPTVGLTP VAELELSSGS GPLFVTEPSV TRSPTQAPFS PFNPTSLIKM EPQDI

**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.

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### 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
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## Product Details

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- 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.

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Purity:  $\geq 80\%$  as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target: Elf4

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Alternative Name: Elf4 ([Elf4 Products](#))

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Background: ETS-related transcription factor Elf-4 (E74-like factor 4) (Myeloid Elf-1-like factor),FUNCTION: Transcriptional activator that binds to DNA sequences containing the consensus 5'-WGGA-3'. Transactivates promoters of the hematopoietic growth factor genes CSF2, IL3, IL8, and of LYZ. Acts synergistically with RUNX1 to transactivate the IL3 promoter (By similarity). Transactivates the PRF1 promoter in natural killer (NK) cells and in CD8+ T cells (PubMed:34326534). Plays a role in the development and function of NK and NK T-cells and in innate immunity. Controls the proliferation and homing of CD8+ T-cells via the Kruppel-like factors KLF4 and KLF2. Controls cell senescence in a p53-dependent manner. Can also promote cellular transformation through inhibition of the p16 pathway. Is a transcriptional regulator of inflammation, controlling T-helper 17 (Th17) cells and macrophage inflammatory responses. Required for sustained transcription of anti-inflammatory genes, including IL1RN (PubMed:34326534, PubMed:35266071). Is a negative regulator of pro-inflammatory cytokines expression, including IL17A, IL1B, IL6, TNFA and CXCL1 (PubMed:34326534, PubMed:35266071). Down-regulates expression of TREM1, a cell surface receptor involved in the amplification of inflammatory responses (PubMed:34326534, PubMed:35266071). {ECO:0000250, ECO:0000269|PubMed:12387738, ECO:0000269|PubMed:19380490, ECO:0000269|PubMed:19412182, ECO:0000269|PubMed:34326534, ECO:0000269|PubMed:35266071}.

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Molecular Weight: 70.8 kDa

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UniProt: [Q9Z2U4](#)

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Pathways: [Positive Regulation of Endopeptidase Activity](#)

## Application Details

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**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 *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!

**Restrictions:** For Research Use only

## Handling

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**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)