

Datasheet for ABIN3084252

## COBRA1 Protein (AA 1-580) (Strep Tag)



[Go to Product page](#)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	COBRA1
Protein Characteristics:	AA 1-580
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This COBRA1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### Product Details

Sequence: MFAGLQDLGV ANGEDLKETL TNCTEPLKAI EQFQTENGLV LPSLQSALPF LDHGTTPRLE  
FHQSVFDELR DKLLERSVAI ASEGKAEERY KKLEDLLEKS FSLVKMPSLQ PVVMCVMKHL  
PKVPEKLLKL VMADKELYRA CAVEVKRQIW QDNQALFGDE VSPLLKQYIL EKESALFSTE  
LSVLHNFFSP SPKTRRQGEV VQRLTRMVGK NVKLYDMVLQ FLRTLFLRTR NVHYCTLRAE  
LLMSLHDLDV GEICTVDPCH KFTWCLDACI RERFVDSKRA RELQGFLDGV KKGQEQLGD  
LSMILCDPFA INTLALSTVR HLQELVGQET LPRDSPDLLL LLRLLALGQG AWDMIDSQVF  
KEPKMEVELI TRFLPMLMSF LVDDYTFNVD QKLPAEEKAP VSYPNLTPES FTKFLQEQRN  
ACEVGLYYVL HITKQRNKNA LLRLLPGLVE TFGDLAFGDI FLHLLTGNLA LLADEFALD  
FCSSLFDGFF LTASPRKENV HRHALRLLIH LHPRVAPSKL EALQKALEPT GQSGEAVKEL  
YSQLGEKLEQ LDHRKPSPAQ AAETPALELP LPSVPAPAPL

**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 capture material. Eluate fractions are analyzed by SDS-PAGE.

## Product Details

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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

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Target: COBRA1

Alternative Name: NELFB ([COBRA1 Products](#))

Background: Negative elongation factor B (NELF-B) (Cofactor of BRCA1),FUNCTION: Essential component of the NELF complex, a complex that negatively regulates the elongation of transcription by RNA polymerase II (PubMed:12612062). The NELF complex, which acts via an association with the DSIF complex and causes transcriptional pausing, is counteracted by the P-TEFb kinase complex (PubMed:10199401). May be able to induce chromatin unfolding (PubMed:11739404). Essential for early embryogenesis, plays an important role in maintaining the undifferentiated state of embryonic stem cells (ESCs) by preventing unscheduled expression of developmental genes (By similarity). Plays a key role in establishing the responsiveness of stem cells to developmental cues, facilitates plasticity and cell fate commitment in ESCs by establishing the appropriate expression level of signaling molecules (By similarity). Supports the transcription of genes involved in energy metabolism in cardiomyocytes, facilitates the association of transcription initiation factors with the promoters of the metabolism-related genes (By similarity). {ECO:0000250|UniProtKB:Q8C4Y3, ECO:0000269|PubMed:10199401, ECO:0000269|PubMed:11739404, ECO:0000269|PubMed:12612062}., FUNCTION: (Microbial infection) The NELF complex is involved in HIV-1 latency possibly involving recruitment of PCF11 to paused RNA polymerase II (PubMed:23884411). In vitro, binds weakly to the HIV-1 TAR RNA which is located in the long terminal repeat (LTR) of HIV-1 (PubMed:23884411). {ECO:0000269|PubMed:23884411}.

Molecular Weight: 65.7 kDa

UniProt: [Q8WX92](#)

## 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.

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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!

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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