

Datasheet for ABIN3124063

## CPEB3 Protein (AA 1-716) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	CPEB3
Protein Characteristics:	AA 1-716
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CPEB3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	AliCE®
Sequence:	<p>MQDDLMDKS KTQPQSQQQQ RQQQQQQQQL QPEPGAAEAP STPLSSEIPK PEDSSAVPAL</p> <p>SPASAPPAPN GPDKMQMESP LLPGLSFHQP PQQPPPPQEP TAPGASLSPS FGSTWSTGTT</p> <p>NAVEDSFFQG ITPVNGTMLF QNFPHHVNPFV FGGTFSPQIG LAQTQHHQQP PPPAPQPPQP</p> <p>AQPPQAQPSQ QRRSPASPSQ APYAQRSAAA YGHQPIMTSK PSSSSAVAAA AAAAAASSAS</p> <p>SSWNTHQSVN AAWSAPSNPW GGLQAGRDP RAVGVGVGVG VGVPSPLNPI SPLKKPFSSN</p> <p>VIAPPKFPRA APLTSKSWME DNAFRTDNGN NLLPFQDRSR PYDTFNLHSL ENSLMDMIRT</p> <p>DHEPLKGKHY PNSGPPMSFA DIMWRNHFAG RMGINFHHPG TDNIMALNTR SYGRRRRGRSS</p> <p>LFPFEDAFLD DSHGDQALSS GLSSPTRCQN GERVERYSRK VFVGGLPPDI DEDEITASFR</p> <p>RFGPLVVDWP HKAESKSYFP PKGYAFLLFQ EESSVQALID ACLEEDGKLY LCVSSPTIKD</p> <p>KPVQIRPWNL SDSDFVMDGS QPLDPRKTIF VGGVPRPLRA VELAMIMDRL YGGVCYAGID</p> <p>TDPELKYPKG AGRVAFSNQQ SYIAAISARF VQLQHNDIDK RVEVKPYVLD DQMCDECQGT</p>

RCGGKFAPFF CANVTCLQYY CEYCWASIHS RAGREFHKPL VKEGGDRPRH VPFRWS

**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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 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:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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## Product Details

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

## Target Details

Target: CPEB3

Alternative Name: Cpeb3 ([CPEB3 Products](#))

Background: Cytoplasmic polyadenylation element-binding protein 3 (CPE-BP3) (CPE-binding protein 3) (mCPEB-3), FUNCTION: Sequence-specific RNA-binding protein which acts as a translational repressor in the basal unstimulated state but, following neuronal stimulation, acts as a translational activator (PubMed:17024188, PubMed:26074072). In contrast to CPEB1, does not bind to the cytoplasmic polyadenylation element (CPE), a uridine-rich sequence element within the mRNA 3'-UTR, but binds to a U-rich loop within a stem-loop structure (PubMed:17024188). Required for the consolidation and maintenance of hippocampal-based long term memory (PubMed:26074003). In the basal state, binds to the mRNA 3'-UTR of the glutamate receptors GRIA1 and GRIA2 and negatively regulates their translation (PubMed:17024188, PubMed:22153079). Also represses the translation of DLG4, GRIN1 GRIN2A and GRIN2B (PubMed:24155305). When activated, acts as a translational activator of GRIA1 and GRIA2 (PubMed:22153079, PubMed:26074003). In the basal state, suppresses SUMO2 translation but activates it following neuronal stimulation (PubMed:26074071). Binds to the 3'-UTR of TRPV1 mRNA and represses TRPV1 translation which is required to maintain normal thermoception (PubMed:26915043). Binds actin mRNA, leading to actin translational repression in the basal state and to translational activation following neuronal stimulation (PubMed:26074072). Negatively regulates target mRNA levels by binding to TOB1 which recruits CNOT7/CAF1 to a ternary complex and this leads to target mRNA deadenylation and decay (By similarity). In addition to its role in translation, binds to and inhibits the transcriptional activation activity of STAT5B without affecting its dimerization or DNA-binding activity. This, in turn, represses transcription of the STAT5B target gene EGFR which has been shown to play a role in enhancing learning and memory performance (By similarity). In contrast to CPEB1, CPEB2 and CPEB4, not required for cell cycle progression (By similarity). {ECO:0000250|UniProtKB:Q8NE35, ECO:0000269|PubMed:17024188, ECO:0000269|PubMed:22153079, ECO:0000269|PubMed:22711986, ECO:0000269|PubMed:24155305, ECO:0000269|PubMed:26074003, ECO:0000269|PubMed:26074071, ECO:0000269|PubMed:26074072, ECO:0000269|PubMed:26915043}.

Molecular Weight: 78.3 kDa

## Target Details

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UniProt: [Q7TN99](#)

## 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.  
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months