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Datasheet for ABIN3131085

**AKAP5 Protein (AA 1-745) (Strep Tag)**

## Overview

Quantity:	1 mg
Target:	AKAP5
Protein Characteristics:	AA 1-745
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This AKAP5 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

## Product Details

Sequence:	METSVSEIQV ETKDEKGPVA ASPQKERQER KTATLCFKRR KKANKTKPKA GSRTAEETKK HTPEAGGSGQ RQPAGAWASI KGLVTHRKRSE EPAKKQKPPE AEVQPEDGAL PKKKAKSRLK FPCLRFSRGA KRSRHSKLTE DSGYVRVQGE ADDLEIKAQT QPDDQAIQAG STQGLQEGVL VRDGKKSQES HISNSVTSGE NVIAIELELE NKSSAIQMGF PELEKETKVI TEKPSVQTQR ASLLESSAAG SPRSVTSAAP PSPATTHQHS LEEPSNGIRE SAPSGKDDRR KTAEEKKSG ETALGQAEAA AVGQADKRAL SQAGEATAGH PEEATVIQAE SQAQEGKLSQ AEETTVAQAK ETVLSQAQEG ELSQAKKATV GQAEATIDH TEKVTVDQAE ETTVGQAEAA TVGQAGEAIL SQAQEAATVVG QAEATVDRA EEATVGQAEAE ATVGHTKVT VDQAEATVG QAEATVGQA EEATVDWAEK PTVGQAEAT VGQAEATVG HTEKVTVDQA EEATVGQAEAE ATVGHTKVT VDHAEATVG QAEATVGQA EKVTVDHAEAE ATVGQAEAT VGQAEKVTVD HAEATVGQA EEATVGQAEK VTVDQAEPT VDQAEAAISS HAPDLKENG I DTEKPRSEES KRMEPIAIII TDTEISEFDV KSKNVPKQF LISMENEQVG VFANDSDFEG RTSEQYETLL IETASSLVKN
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AIELSVEQLV NEMVSEDNQI NTLFQ

**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

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## Product Details

(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 Western blot.

Purity:  $\geq 80\%$  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

Target: AKAP5

Alternative Name: Akap5 ([AKAP5 Products](#))

Target Type: Viral Protein

Background: A-kinase anchor protein 5 (AKAP-5) (A-kinase anchor protein 150 kDa) (AKAP 150) (P150) (cAMP-dependent protein kinase regulatory subunit II high affinity-binding protein),FUNCTION: Multivalent scaffold protein that anchors the cAMP-dependent protein kinase/PKA to cytoskeletal and/or organelle-associated proteins, targeting the signal carried by cAMP to specific intracellular effectors. Association with the beta2-adrenergic receptor (beta2-AR) not only regulates beta2-AR signaling pathway, but also the activation by PKA by switching off the beta2-AR signaling cascade. Plays a role in long term synaptic potentiation by regulating protein trafficking from the dendritic recycling endosomes to the plasma membrane and controlling both structural and functional plasticity at excitatory synapses. {ECO:0000250|UniProtKB:P24588}.

Molecular Weight: 79.4 kDa

UniProt: [D3YVF0](#)

Pathways: [cAMP Metabolic Process](#)

## 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.

## Application Details

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Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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Restrictions:	For Research Use only
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## 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)