

Datasheet for ABIN3137129

**AKAP8 Protein (AA 1-687) (His tag)****1** Image[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	AKAP8
Protein Characteristics:	AA 1-687
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This AKAP8 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

## Product Details

Sequence:	MEQGYGGYGA WSAGPANTQG TYGSGMTSWQ GYENYNYNA QNTSVPAGTP YSYGPASWEA TKTNDGGLAA GSPAMHVASF APEPCTDNSD SLIAKINQRL DMLSKEGGRG GISSGGEGVQ DRDSSFRFQP YESYDARPCI PEHNPYRPGY GYDYDFDLGT DRNGSFGGTF NDCRDPAPER GSLDGFLRGR GQGRFQDRSN SSTFIRSDPF MPSPASEPLS TTWNELNYMG GRGLGGPSTS RPPPSLFSQS MAPDYSMMGM QGVGGFGGTM PYGCGRSQTR IRDWPRRRGF ERFGPDNMGR KRKQFPLYEE PDAKLARADS DGDLSSENDG AGDLRSGDEE FRGEDDLCD S RKQRGEKEDE DEDVKKRREK QRRRDRMRDR AADRIQFACS VCKFRSFEDE EIQLHLQSKF HKETLRFIST KLDPKTVEFL QEYIINRNKK IEKRRQELLE KESPKPKPDP FKGIGQEHHF KKIEAAHCLA CDMLIPAQHQ LLQRHLHSVD HNNNRRLAAE QFKKTSLVHA KSVLNNKHIV KMLEKYLKGE DPFVNETADL ETEGDENVGE EKEETPEEVA AEVLAEVITA AVKAVEGEGE PAAAHSDVLT EVEGPVDTAE ASSDPHTEKL LEEQTCEAAS ETRSIEDKTR GEAAEARNEA AMPTADAGST LPVIAIPGIM EDELEQTGAE AKDIPT
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**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Akap8 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

### Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

### Sterility:

0.22 µm filtered

### Endotoxin Level:

Protein is endotoxin free.

### Grade:

Crystallography grade

## Target Details

Target:	AKAP8
Alternative Name:	Akap8 ( <a href="#">AKAP8 Products</a> )
Background:	<p>Anchoring protein that mediates the subcellular compartmentation of cAMP-dependent protein kinase (PKA type II). Acts as an anchor for a PKA-signaling complex onto mitotic chromosomes, which is required for maintenance of chromosomes in a condensed form throughout mitosis. Recruits condensin complex subunit NCAPD2 to chromosomes required for chromatin condensation, the function appears to be independent from PKA-anchoring (By similarity). Specifically involved in recruitment of CAPD2 to, and condensation of maternal but not paternal chromosomes (PubMed:12082153). May help to deliver cyclin D/E to CDK4 to facilitate cell cycle progression (PubMed:14641107). Required for cell cycle G2/M transition and histone deacetylation during mitosis. In mitotic cells recruits HDAC3 to the vicinity of chromatin leading to deacetylation and subsequent phosphorylation at 'Ser-10' of histone H3, in this function may act redundantly with AKAP8L. Involved in nuclear retention of RPS6KA1 upon ERK activation thus inducing cell proliferation. May be involved in regulation of DNA replication by acting as scaffold for MCM2. Enhances HMT activity of the KMT2 family MLL4/WBP7 complex and is involved in transcriptional regulation. In a teratocarcinoma cell line is involved in retinoic acid-mediated induction of developmental genes implicating H3 'Lys-4' methylation. May be involved in recruitment of active CASP3 to the nucleus in apoptotic cells. May act as a carrier protein of GJA1 for its transport to the nucleus. Seems to involved in modulation of rDNA transcription. Preferentially binds GC-rich DNA in vitro and associates to GC-rich ribosomal RNA promoters (By similarity). Involved in modulation of Toll-like receptor signaling. Required for the cAMP-dependent suppression of TNF-alpha in early stages of LPS-induced macrophage activation, the function probably implicates targeting of PKA to NFkB1 (PubMed:19531803). {ECO:0000250 UniProtKB:O43823, ECO:0000250 UniProtKB:Q63014}.</p>
Molecular Weight:	77.2 kDa Including tag.
UniProt:	<a href="#">Q9DBR0</a>
Pathways:	<a href="#">SARS-CoV-2 Protein Interactome</a>

## 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:	Protein has not been tested for activity yet. In cases in which it is highly likely that the

## Application Details

recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

## Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## Images



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