



Datasheet for ABIN3135968

## AHCYL1 Protein (AA 2-530) (His tag)



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### 1 Image

### Overview

Quantity:	1 mg
Target:	AHCYL1
Protein Characteristics:	AA 2-530
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This AHCYL1 protein is labelled with His tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Crystallization (Crys)

### Product Details

Sequence: SMPDAMPLPG VGEELKQAKE IEDAEKYSFM ATVTAKPKKQ IQFADDMQEF TKFPTKTGRR  
SLSRSISQSS TDSYSSAASY TDSSDDEVSP REKQQTNSKG SSNFCVKNIK QAEFGRREIE  
IAEQDMSALI SLRKRAQGEK PLAGAKIVGC THITAQTAVL IETLCALGAQ CRWSACNIYS  
TQNEVAALA EAGVAVFAWK GESEDDFWWC IDRCVNMDGW QANMILDDGG DLTHWVYKKY  
PNVFKKIRGI VEESVTGVHR LYQLSKAGKL CVPAMNVNDS VTKQKFDNL CCRESILDGL  
KRTTDVMFGG KQVVVCGYGE VGKGCCAAALK ALGAIVYITE IDPICALQAC MDGFRVVKLN  
EVIRQVDVVI TCTGNKNVVT REHLDRMKNS CIVCNMGHSN TEIDVTSLRT PELTWERVRS  
QVDHVIWPDG KRVVLLAEGR LLNLSCSTVP TFVLSTITATT QALALIELYN APEGRYKQDV  
YLLPKKMDEY VASLHLPSFD AHLTELDDQ AKYLGLNKNG PFKPNYYRY

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

## Product Details

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Ahcyl1 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.

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### 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.

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### Purity:

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

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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Protein is endotoxin free.

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### Grade:

Crystallography grade

## Target Details

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Target:	AHCYL1
Alternative Name:	Ahcyl1 ( <a href="#">AHCYL1 Products</a> )
Background:	<p>Multifaceted cellular regulator which coordinates several essential cellular functions including regulation of epithelial HCO3(-) and fluid secretion, mRNA processing and DNA replication.</p> <p>Regulates ITPR1 sensitivity to inositol 1,4,5-trisphosphate competing for the common binding site and acting as endogenous 'pseudoligand' whose inhibitory activity can be modulated by its phosphorylation status. In the pancreatic and salivary ducts, at resting state, attenuates inositol 1,4,5-trisphosphate-induced calcium release by interacting with ITPR1 (By similarity). When extracellular stimuli induce ITPR1 phosphorylation or inositol 1,4,5-trisphosphate production, dissociates of ITPR1 to interact with CFTR and SLC26A6 mediating their synergistic activation by calcium and cAMP that stimulates the epithelial secretion of electrolytes and fluid (PubMed:12525476, PubMed:23542070). Also activates basolateral SLC4A4 isoform 1 to coordinate fluid and HCO3(-) secretion (PubMed:19224921). Inhibits the effect of STK39 on SLC4A4 and CFTR by recruiting PP1 phosphatase which activates SLC4A4, SLC26A6 and CFTR through dephosphorylation (PubMed:19033647, PubMed:21317537). Mediates the induction of SLC9A3 surface expression produced by Angiotensin-2. Depending on the cell type, activates SLC9A3 in response to calcium or reverses SLC9A3R2-dependent calcium inhibition. May modulate the polyadenylation state of specific mRNAs, both by controlling the subcellular location of FIP1L1 and by inhibiting PAPOLA activity, in response to a stimulus that alters its phosphorylation state. Acts as a (dATP)-dependent inhibitor of ribonucleotide reductase large subunit RRM1, controlling the endogenous dNTP pool and ensuring normal cell cycle progression (By similarity). {ECO:0000250 UniProtKB:B5DFN2, ECO:0000250 UniProtKB:O43865, ECO:0000269 PubMed:12525476, ECO:0000269 PubMed:16769890, ECO:0000269 PubMed:19033647, ECO:0000269 PubMed:19224921, ECO:0000269 PubMed:21317537, ECO:0000269 PubMed:23542070}.</p>
Molecular Weight:	59.8 kDa Including tag.
UniProt:	<a href="#">Q80SW1</a>

## 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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## Application Details

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

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Restrictions: For Research Use only

## Handling

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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

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