

## Datasheet for ABIN3093308 KCNAB2 Protein (AA 1-367) (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	KCNAB2
Protein Characteristics:	AA 1-367
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNAB2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

#### Product Details

Sequence:	<p>             MYPESTTGSP ARLSLRQTGS PGMIYSTRYG SPKRQLQFYR NLGKSGLRVS CLGLGTWVTF              GGQITDEMAE QLMTLAYDNG INLFDTAEVY AAGKAEVVLG NIIKKKGWRR SSLVITTKIF              WGGKAETERG LSRKHIIIEGL KASLERLQLE YVDVVFANRP DPNTPMEEV RAMTHVINQG              MAMYWGTSRW SSMEIMEAYS VARQFNLTTP ICEQAEYHMF QREKVEVQLP ELFHKIGVGA              MTWSPLACGI VSGKYDSGIP PYSRASLKG YWLKDKILSE EGRRQQAQKLK ELQAIAERLG              CTLPQLAIWA CLRNEGVS SV LLGASNADQL MENIGAIQVL PKLSSSIIE IDSILGNKPY SKKDYRS           </p> <p><b>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</b></p>
Characteristics:	<ul style="list-style-type: none"> <li>Made in Germany - from design to production - by highly experienced protein experts.</li> <li>Human KCNAB2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.</li> <li>State-of-the-art algorithm used for plasmid design (Gene synthesis).</li> </ul>

## Product Details

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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: <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target:	KCNAB2
Alternative Name:	KCNAB2 ( <a href="#">KCNAB2 Products</a> )
Background:	Cytoplasmic potassium channel subunit that modulates the characteristics of the channel-

## Target Details

forming alpha-subunits (PubMed:7649300, PubMed:11825900). Contributes to the regulation of nerve signaling, and prevents neuronal hyperexcitability (By similarity). Promotes expression of the pore-forming alpha subunits at the cell membrane, and thereby increases channel activity (By similarity). Promotes potassium channel closure via a mechanism that does not involve physical obstruction of the channel pore (PubMed:7649300, PubMed:11825900). Promotes KCNA4 channel closure (PubMed:7649300, PubMed:11825900). Modulates the functional properties of KCNA5 (By similarity). Enhances KCNB2 channel activity (By similarity). Binds NADPH and has NADPH-dependent aldoketoreductase activity (By similarity). Has broad substrate specificity and can catalyze the reduction of methylglyoxal, 9,10-phenanthrenequinone, prostaglandin J2, 4-nitrobenzaldehyde, 4-nitroacetophenone and 4-oxo-trans-2-nonenal (in vitro) (By similarity). {ECO:0000250|UniProtKB:P62482, ECO:0000250|UniProtKB:P62483, ECO:0000269|PubMed:11825900, ECO:0000269|PubMed:7649300}.

Molecular Weight: 42.0 kDa Including tag.

UniProt: [Q13303](#)

## 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: 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.

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.

## Handling

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Expiry Date: Unlimited (if stored properly)

## Images

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