

Datasheet for ABIN3093415 KCNAB1 Protein (AA 1-419) (His tag)



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Overview

Quantity:	1 mg
Target:	KCNAB1
Protein Characteristics:	AA 1-419
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNAB1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence: MLAARTGAAG SQISEENTKL RRQSGFSVAG KDKSPKKASE NAKDSSLSPS GESQLRARQL
ALLREVEMNW YLKLCDLSSE HTTPCTTGMP HRNLGKSGLR VSCLGLGTWV TFGGQISDEV
AERLMTIAYE SGVNLFDTA E VYAAGKAEVI LGSIIKKKGW RRSSLVITTK LYWGGKAETE
RGLSRKHIE GLKGS LQLRQ LEYVDVVFAN RPDSNTPMEE IVRAMTHVIN QGMAMYWGTS
RWSAMEIMEA YSVARQFNMI PPVCEQAEYH LFQREKVEVQ LPELYHKIGV GAMTWSPLAC
GIISGKYGNG VPESRASLK CYQWLKERIV SEEGRKQQNK LKDLSPIAER LGCTLPQLAV
AWCLRNEGVS SVLLGSSTPE QLIENLGAIQ VLPKMTSHVV NEIDNLRNK PYSKKDYRS

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.
 - Human KCNAB1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

Product Details

- 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:	KCNAB1
Alternative Name:	KCNAB1 (KCNAB1 Products)

Target Details

Background:	<p>Cytoplasmic potassium channel subunit that modulates the characteristics of the channel-forming alpha-subunits (PubMed:7499366, PubMed:7603988, PubMed:17156368, PubMed:17540341, PubMed:19713757). Modulates action potentials via its effect on the pore-forming alpha subunits (By similarity). Promotes expression of the pore-forming alpha subunits at the cell membrane, and thereby increases channel activity (By similarity). Mediates closure of delayed rectifier potassium channels by physically obstructing the pore via its N-terminal domain and increases the speed of channel closure for other family members (PubMed:9763623). Promotes the closure of KCNA1, KCNA2 and KCNA5 channels (PubMed:7499366, PubMed:7890032, PubMed:7603988, PubMed:7649300, PubMed:8938711, PubMed:12077175, PubMed:12130714, PubMed:15361858, PubMed:17540341, PubMed:19713757). Accelerates KCNA4 channel closure (PubMed:7890032, PubMed:7649300, PubMed:7890764, PubMed:9763623). Accelerates the closure of heteromeric channels formed by KCNA1 and KCNA4 (PubMed:17156368). Accelerates the closure of heteromeric channels formed by KCNA2, KCNA5 and KCNA6 (By similarity). Isoform KvB1.2 has no effect on KCNA1, KCNA2 or KCNB1 (PubMed:7890032, PubMed:7890764). Enhances KCNB1 and KCNB2 channel activity (By similarity). Binds NADPH, this is required for efficient down-regulation of potassium channel activity (PubMed:17540341). Has NADPH-dependent aldoketoreductase activity (By similarity). Oxidation of the bound NADPH strongly decreases N-type inactivation of potassium channel activity (By similarity). {ECO:0000250 UniProtKB:P63143, ECO:0000250 UniProtKB:P63144, ECO:0000269 PubMed:12077175, ECO:0000269 PubMed:12130714, ECO:0000269 PubMed:15361858, ECO:0000269 PubMed:17156368, ECO:0000269 PubMed:17540341, ECO:0000269 PubMed:19713757, ECO:0000269 PubMed:7499366, ECO:0000269 PubMed:7603988, ECO:0000269 PubMed:7649300, ECO:0000269 PubMed:7890032, ECO:0000269 PubMed:7890764, ECO:0000269 PubMed:8938711, ECO:0000269 PubMed:9763623, ECO:0000305}.</p>
Molecular Weight:	47.5 kDa Including tag.
UniProt:	Q14722

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

Application Details

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