

Datasheet for ABIN3093415
KCNAB1 Protein (AA 1-419) (Strep Tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	KCNAB1
Protein Characteristics:	AA 1-419
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNAB1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	<p>MLAARTGAAG SQISEENTKL RRQSGFSVAG KDKSPKKASE NAKDSSLSPS GESQLRARQL ALLREVEMNW YLKLCDLSSE HTTPCTTGMP HRNLGKSGLR VSCLGLGTWV TFGGQISDEV AERLMTIAYE SGVNLFDTA E VYAAGKAEVI LGSIIKKKGW RRSSLVITTK LYWGGKAETE RGLSRKHIIE GLKGSLQRLQ LEYVDVVFAN RPDSNTPMEE IVRAMTHVIN QGMAMYWGTS RWSAMEIMEA YSVARQFNMI PPVCEQAEYH LFQREKVEVQ LPELYHKIGV GAMTWSPLAC GIISGKYGNG VPESRASLK CYQWLKERIV SEEGRKQQNK LKDLSPIAER LGCTLPQLAV AWCLRNEGVS SVLLGSSTPE QLIENLGAIQ VLPKMTSHVV NEIDNILRNK PYSKKDYRS</p> <p>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.</p>
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.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (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.

Product Details

Purity:	>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:	KCNAB1
Alternative Name:	KCNAB1 (KCNAB1 Products)
Background:	<p>Voltage-gated potassium channel subunit beta-1 (EC 1.1.1.-) (K(+)) channel subunit beta-1) (Kv-beta-1),FUNCTION: 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>

Target Details

Molecular Weight: 46.6 kDa

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.

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Restrictions: For Research Use only

Handling

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)



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