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# Datasheet for ABIN3118344 KCNMB3 Protein (AA 1-279) (Strep Tag)





#### Overview

Quantity:	1 mg
Target:	KCNMB3
Protein Characteristics:	AA 1-279
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNMB3 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB)

### Product Details

Sequence:	MDFSPSSELG FHFVAFILLT RHRTAFPASG KKRETDYSDG DPLDVHKRLP SSAGEDRAVM
	LGFAMMGFSV LMFFLLGTTI LKPFMLSIQR EESTCTAIHT DIMDDWLDCA FTCGVHCHGQ
	GKYPCLQVFV NLSHPGQKAL LHYNEEAVQI NPKCFYTPKC HQDRNDLLNS ALDIKEFFDH
	KNGTPFSCFY SPASQSEDVI LIKKYDQMAI FHCLFWPSLT LLGGALIVGM VRLTQHLSLL
	CEKYSTVVRD EVGGKVPYIE QHQFKLCIMR RSKGRAEKS
	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
	system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Characteristics:	
Characteristics:	have a special request, please contact us.

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- 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®):
	<ol> <li>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.</li> <li>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:	>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)

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### Product Details

Grade:

Crystallography grade

## Target Details

Target:	KCNMB3
Alternative Name:	KCNMB3 (KCNMB3 Products)
Background:	Calcium-activated potassium channel subunit beta-3 (BK channel subunit beta-3) (BKbeta3) (Hbeta3) (Calcium-activated potassium channel, subfamily M subunit beta-3) (Charybdotoxin receptor subunit beta-3) (K(VCA)beta-3) (Maxi K channel subunit beta-3) (Slo-beta-3),FUNCTION: Regulatory subunit of the calcium activated potassium KCNMA1 (maxiK) channel. Modulates the calcium sensitivity and gating kinetics of KCNMA1, thereby contributing to KCNMA1 channel diversity. Alters the functional properties of the current expressed by the KCNMA1 channel. Isoform 2, isoform 3 and isoform 4 partially inactivate the current of KCNBMA. Isoform 4 induces a fast and incomplete inactivation of KCNMA1 channel that is detectable only at large depolarizations. In contrast, isoform 1 does not induce detectable inactivation of KCNMA1. Two or more subunits of KCNMB3 are required to block the KCNMA1 tetramer. {ECO:0000269 PubMed:10766764, ECO:0000269 PubMed:10864947}.
Molecular Weight:	31.6 kDa
UniProt: Application Details	Q9NPA1
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:	<ul> <li>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.</li> <li>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!</li> </ul>

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## Application Details

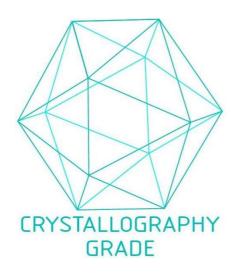
#### Restrictions:

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)

### Images



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