Datasheet for ABIN3114506

KCNMA1 Protein (AA 1-1236) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	KCNMA1
Protein Characteristics:	AA 1-1236
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KCNMA1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MANGGGGGGG SSGGGGGGGG SSLRMSSNIH ANHLSLDASS SSSSSSSSSS SSSSSSSSSS VHEPKMDALI IPVTMEVPCD SRGQRMWWAF LASSMVTFFG GLFIILLWRT LKYLWTVCCH CGGKTKEAQK INNGSSQADG TLKPVDEKEE AVAAEVGWMT SVKDWAGVMI SAQTLTGRVL VVLVFALSIG ALVIYFIDSS NPIESCQNFY KDFTLQIDMA FNVFFLLYFG LRFIAANDKL WFWLEVNSVV DFFTVPPVFV SVYLNRSWLG LRFLRALRLI QFSEILQFLN ILKTSNSIKL VNLLSIFIST WLTAAGFIHL VENSGDPWEN FQNNQALTYW ECVYLLMVTM STVGYGDVYA KTTLGRLFMV FFILGGLAMF ASYVPEIIEL IGNRKKYGGS YSAVSGRKHI VVCGHITLES VSNFLKDFLH KDRDDVNVEI VFLHNISPNL ELEALFKRHF TQVEFYQGSV LNPHDLARVK IESADACLIL ANKYCADPDA EDASNIMRVI SIKNYHPKIR IITQMLQYHN KAHLLNIPSW NWKEGDDAIC LAELKLGFIA QSCLAQGLST MLANLFSMRS FIKIEEDTWQ KYYLEGVSNE MYTEYLSSAF VGLSFPTVCE LCFVKLKLLM IAIEYKSANR ESRILINPGN HLKIQEGTLG FFIASDAKEV KRAFFYCKAC HDDITDPKRI KKCGCKRPKM SIYKRMRRAC CFDCGRSERD

CSCMSGRVRG NVDTLERAFP LSSVSVNDCS TSFRAFEDEQ PSTLSPKKKQ RNGGMRNSPN TSPKLMRHDP LLIPGNDQID NMDSNVKKYD STGMFHWCAP KEIEKVILTR SEAAMTVLSG HVVVCIFGDV SSALIGLRNL VMPLRASNFH YHELKHIVFV GSIEYLKREW ETLHNFPKVS ILPGTPLSRA DLRAVNINLC DMCVILSANQ NNIDDTSLQD KECILASLNI KSMQFDDSIG VLQANSQGFT PPGMDRSSPD NSPVHGMLRQ PSITTGVNIP IITELVNDTN VQFLDQDDDD DPDTELYLTQ PFACGTAFAV SVLDSLMSAT YFNDNILTLI RTLVTGGATP ELEALIAEEN ALRGGYSTPQ TLANRDRCRV AQLALLDGPF ADLGDGGCYG DLFCKALKTY NMLCFGIYRL RDAHLSTPSQ CTKRYVITNP PYEFELVPTD LIFCLMQFDH NAGQSRASLS HSSHSSQSSS KKSSSVHSIP STANRQNRPK SRESRDKQKY VQEERL

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.

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!

Product Details

	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.
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:	KCNMA1
Alternative Name:	KCNMA1 (KCNMA1 Products)
Background:	Calcium-activated potassium channel subunit alpha-1 (BK channel) (BKCA alpha) (Calcium-activated potassium channel, subfamily M subunit alpha-1) (K(VCA)alpha) (KCa1.1) (Maxi K channel) (MaxiK) (Slo-alpha) (Slo1) (Slowpoke homolog) (Slo homolog) (hSlo),FUNCTION: Potassium channel activated by both membrane depolarization or increase in cytosolic Ca(2+) that mediates export of K(+) (PubMed:29330545, PubMed:31152168). It is also activated by the concentration of cytosolic Mg(2+). Its activation dampens the excitatory events that elevate the cytosolic Ca(2+) concentration and/or depolarize the cell membrane. It therefore contributes to repolarization of the membrane potential. Plays a key role in controlling excitability in a number of systems, such as regulation of the contraction of smooth muscle, the tuning of hair cells in the cochlea, regulation of transmitter release, and innate immunity. In smooth muscles, its activation by high level of Ca(2+), caused by ryanodine receptors in the sarcoplasmic reticulum, regulates the membrane potential. In cochlea cells, its number and kinetic properties partly determine the characteristic frequency of each hair cell and thereby helps to establish a

Target Details

	tonotopic map. Kinetics of KCNMA1 channels are determined by alternative splicing, phosphorylation status and its combination with modulating beta subunits. Highly sensitive to both iberiotoxin (IbTx) and charybdotoxin (CTX). {ECO:0000269|PubMed:29330545, ECO:0000269|PubMed:31152168}.
Molecular Weight:	137.6 kDa
UniProt:	Q12791
Pathways:	Regulation of Hormone Metabolic Process, Sensory Perception of Sound

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:	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!
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.

Handling

Expiry Date:	Unlimited (if stored properly)

Images

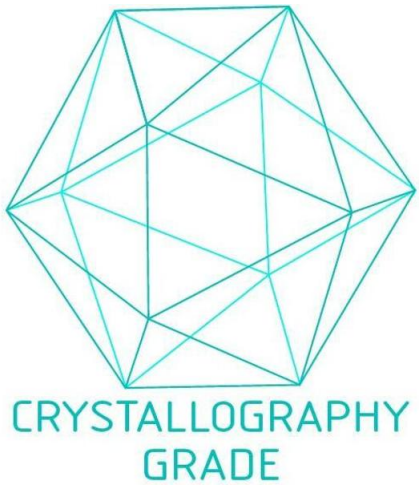

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process