

Datasheet for ABIN3116833

TRPM4 Protein (AA 1-1214) (Strep Tag)

1 Image



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Overview

Quantity:	1 mg
Target:	TRPM4
Protein Characteristics:	AA 1-1214
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TRPM4 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence:	MVVPEKEQSW IPKIFKKKTC TTFIVDSTDP GGTLCQCGRP RTAHPAVAME DAFGAAVVTV WDSDAHTTEK PTDAYGELDF TGAGRKHSNF LRLSDRTDPA AVYSLVTRTW GFRAPNLVVS VLGGSGGPVL QTWLQDLLRR GLVRAAQSTG AWIVTGGLHT GIGRHVGVAV RDHQMASTGG TKVVAMGVAP WGVVRNRDTL INPKGSFPAR YRWRGDPEDG VQFPLDYNYS AFFLVDDGTH GCLGGENRFR LRLESYISQQ KTGVGGTGID IPVLLLLIDG DEKMLTRIEN ATQAQLPCLL VAGSGGAADC LAETLEDTLA PGSGGARQGE ARDRIRRFFP KGDLEVLQAQ VERIMTRKEL LTVYSSSEDGS EEFETIVLKA LVKACGSSEA SAYLDELRLA VAWNRVDIAQ SELFRGDIQW RSFHLEASLM DALLNDRPEF VRLISHGLS LGHFLTPMRL AQLYSAAPSN SLIRNLLDQA SHSAGTKAPA LKGGAAELRP PDVGHVLRML LGKMCAPRYP SGGAWDPHPG QGFGESMYLL SDKATSPLSL DAGLGQAPWS DLLLWALLLN RAQMAMYFWE MGSNAVSSAL GACLLLRVMA RLEPDAAAAA RRKDLAFKFE GMGVDLFGEC YRSSEVRAAR LLRRRCPLWG DATCLQLAMQ ADARAFFAQD GVQSLLTQKW WGDMASTTPI WALVLAFFCP PLIYTRLITF RKSEEEPTRE
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ELEFDMDSVI NGE GPVGTAD PAEKTPLGVP RQSGRPGCCG GRCGGRRCLR RWFHFWGAPV
TIFMGNVVSY LLFLLLSRV LLVDFQPAPP GSLELLLYFW AFTLLCEELR QGLSGGGGSL
ASGGPGPGA SLSQRLRLYL ADSWNQCDLV ALTCFLLGVG CRLTPGLYHL GRTVLCIDFM
VFTVRLLHIF TVNKQLGPKI VIVSKMMKDV FFFLFFLGWV LVAYGVATEG LLRPRDSDFP
SILRRVFYRP YLQIFGQIPQ EDMDVALMEH SNCSSPEPGFW AHPPGAQAGT CVSQYANWLW
VLLLVIFFLV ANILLVNLLI AMFSYTFGKV QGNSDLYWKA QRYRLIREFH SRPALAPFPI
VISHLRLLLR QLCRRPRSPQ PSSPALEHFR VYLSKEAERK LLTWESVHKE NELLARARDK
RESDSERLKR TSQKVDLALK QLGHIREYEQ RLKVLEREVQ QCSRVLGWVA EALSRSALLP
PGGPPPPDLP GSKD

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:	TRPM4
Alternative Name:	TRPM4 (TRPM4 Products)
Background:	Transient receptor potential cation channel subfamily M member 4 (hTRPM4) (Calcium-activated non-selective cation channel 1) (Long transient receptor potential channel 4) (LTrpC-4) (LTrpC4) (Melastatin-4),FUNCTION: Calcium-activated non selective (CAN) cation channel that mediates membrane depolarization (PubMed:12015988, PubMed:29211723, PubMed:30528822). While it is activated by increase in intracellular Ca(2+), it is impermeable to it (PubMed:12015988). Mediates transport of monovalent cations (Na(+) > K(+) > Cs(+) > Li(+)), leading to depolarize the membrane. It thereby plays a central role in cardiomyocytes, neurons from entorhinal cortex, dorsal root and vomeronasal neurons, endocrine pancreas cells, kidney epithelial cells, cochlea hair cells etc. Participates in T-cell activation by modulating Ca(2+) oscillations after T lymphocyte activation, which is required for NFAT-dependent IL2 production. Involved in myogenic constriction of cerebral arteries. Controls insulin secretion in pancreatic beta-cells. May also be involved in pacemaking or could cause irregular electrical activity under conditions of Ca(2+) overload. Affects T-helper 1 (Th1) and T-helper 2 (Th2) cell

Target Details

motility and cytokine production through differential regulation of calcium signaling and NFATC1 localization. Enhances cell proliferation through up-regulation of the beta-catenin signaling pathway. Plays a role in keratinocyte differentiation (PubMed:30528822).

{ECO:0000269|PubMed:11535825, ECO:0000269|PubMed:12015988, ECO:0000269|PubMed:12799367, ECO:0000269|PubMed:14758478, ECO:0000269|PubMed:15121803, ECO:0000269|PubMed:15331675, ECO:0000269|PubMed:15472118, ECO:0000269|PubMed:15550671, ECO:0000269|PubMed:15590641, ECO:0000269|PubMed:15845551, ECO:0000269|PubMed:16186107, ECO:0000269|PubMed:16407466, ECO:0000269|PubMed:16424899, ECO:0000269|PubMed:16806463, ECO:0000269|PubMed:20625999, ECO:0000269|PubMed:20656926, ECO:0000269|PubMed:29211723, ECO:0000269|PubMed:30528822}.

Molecular Weight:	134.3 kDa
UniProt:	Q8TD43
Pathways:	Regulation of Leukocyte Mediated Immunity , Production of Molecular Mediator of Immune Response

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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