

Datasheet for ABIN3110954

TRPM2 Protein (AA 1-1503) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	TRPM2
Protein Characteristics:	AA 1-1503
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TRPM2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	<p>MEPSALRKAG SEQEEGFEGF PRRVTDLGMV SNLRRSNSSL FKSRLQCPF GNNDKQESLS SWIPENIKKK ECVYFVESSK LSDAGKVVCQ CGYTHEQHLE EATKPHTFQG TQWDPKKHVQ EMPTDAFGDI VFTGLSQVKV KYVRVSQDTP SSVIYHLMQ HWGLDVPNLL ISVTGGAKNF NMKPRLKSIF RRGLVKVAQT TGAWIITGGS HTGVMKQVGE AVRDFSLSSS YKEGELITIG VATWGTVHRR EGLIHPTGSF PAEYILDEDG QGNLTCLDSN HSHFILVDDG THGQYGVEIP LRTRLEKFIS EQTKERGGVA IKIPIVCVVL EGGPGTLHTI DNATTNGTPC VVVEGSGRVA DVIAQVANLP VSDITISLIQ QKLSVFFQEM FETFTESRIV EWTKKIQDIV RRRQLLTVFR EGKDGQQDVD VAILQALLKA SRSQDHFGHE NWDHQLKLAV AwnRVDIARS EIFMDEWQWK PSDLHPTMTA ALISNKPEFV KLFLENGVL KEFVTWDTLL YLYENLDPSC LFHSLQKVL VEDPERPACA PAAPRLQMHH VAQVIRELLG DFTQPLYPRP RHNDRLRLLL PVPHVKLVNQ GVSLRSLYKR SSGHVTFTMD PIRDLIIWAI VQNRRELAGI IWAQSQDCIA AALACSKILK ELSKEEEDTD SSEMLALAE EYEHRAIGVF TECYRKDEER AQKLLTRVSE AWGKTTCLQL</p>
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ALEAKDMKFV SHGGIQAFLT KVVWQGQLSVD NGLWRVTLCM LAFPLLLTGL ISFREKRLQD
VGTPAARARA FFTAPVVVFH LNILSYFAFL CLFAYVLMVD FQPVPWCEC AIYLWLFSLV
CEEMRQLFYD PDECGLMKKA ALYFSDFWNK LDVGAILLFV AGLTCRLIPA TLYPGRVILS
LDFILFCLRL MHIFTISKTL GPKIIVKRM MKDVFFFLFL LAVWVVSFGV AKQAILIHNE
RRVDWLFRGA VYHSYLTIFG QIPGYIDGVN FNPEHCSPNG TDPYKPKCPE SDATQQRPAF
PEWLTVLLLC LYLLFTNILL LNLLIAMFNY TFQQVQEHTD QIWKFQRHDL IEEYHGRPAA
PPPFILLSHL QLFIKRVVLK TPAKRHKQLK NKLEKNEEAA LLSWEIYLKE NYLQNRQFQQ
KQRPEQKIED ISNKVDAMVD LLDLDPLKRS GSMEQRLASL EEQVAQTAQA LHWIVRTLRA
SGFSSEADVP TLASQKAAEE PDAEPGGRKK TEEPGD SYHV NARHLLYPNC PVTRFPVPNE
KVPWETEFLI YDPPFYTAER KDAAAMDPMG DTLEPLSTIQ YNVVDGLRDR RSFHGPYTVQ
AGLPLNPMGR TGLRGRGSLC CFGPNHTLYP MVTRWRNRD GAICRKSICK MLEVLVVKLP
LSEHWALPGG SREPGEMLPK KLRILRQEH WPSFENLLKC GMEVYKGYMD DPRNTDNAWI
ETVAVSVHFQ DQNDVELNRL NSNLHACDSG ASIRWQVVDRIPLYANHKT LLQKAAAEFG AHY

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

Product Details

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.
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:	TRPM2
Alternative Name:	TRPM2 (TRPM2 Products)
Background:	Transient receptor potential cation channel subfamily M member 2 (Estrogen-responsive element-associated gene 1 protein) (Long transient receptor potential channel 2) (LTrpC-2) (LTrpC2) (Transient receptor potential channel 7) (TrpC7) (Transient receptor potential melastatin 2),FUNCTION: [Isoform 1]: Nonselective, voltage-independent cation channel that mediates Na(+) and Ca(2+) influx, leading to increased cytoplasmic Ca(2+) levels (PubMed:11960981, PubMed:12594222, PubMed:11385575, PubMed:11509734, PubMed:11804595, PubMed:15561722, PubMed:16601673, PubMed:19171771, PubMed:20660597, PubMed:25620041, PubMed:27383051, PubMed:27068538,

PubMed:28775320, PubMed:29745897, PubMed:30467180). Functions as a ligand-gated ion channel (PubMed:19171771, PubMed:25620041, PubMed:28775320, PubMed:30467180). Binding of ADP-ribose to the cytoplasmic Nudix domain causes a conformation change, the channel is primed but still requires Ca(2+) binding to trigger channel opening (PubMed:19171771, PubMed:25620041, PubMed:28775320, PubMed:29745897, PubMed:30467180). Extracellular calcium passes through the channel and increases channel activity (PubMed:19171771). Contributes to Ca(2+) release from intracellular stores in response to ADP-ribose (PubMed:19454650). Plays a role in numerous processes that involve signaling via intracellular Ca(2+) levels (Probable). Besides, mediates the release of lysosomal Zn(2+) stores in response to reactive oxygen species, leading to increased cytosolic Zn(2+) levels (PubMed:25562606, PubMed:27068538). Activated by moderate heat (35 to 40 degrees Celsius) (PubMed:16601673). Activated by intracellular ADP-ribose, beta-NAD (NAD(+)) and similar compounds, and by oxidative stress caused by reactive oxygen or nitrogen species (PubMed:11960981, PubMed:11385575, PubMed:11509734, PubMed:11804595, PubMed:15561722, PubMed:16601673, PubMed:19171771, PubMed:25620041, PubMed:27383051, PubMed:27068538, PubMed:30467180). The precise physiological activators are under debate, the true, physiological activators may be ADP-ribose and ADP-ribose-2'-phosphate (PubMed:20650899, PubMed:25918360). Activation by ADP-ribose and beta-NAD is strongly increased by moderate heat (35 to 40 degrees Celsius) (PubMed:16601673). Likewise, reactive oxygen species lower the threshold for activation by moderate heat (37 degrees Celsius) (PubMed:22493272). Plays a role in mediating behavioral and physiological responses to moderate heat and thereby contributes to body temperature homeostasis. Plays a role in insulin secretion, a process that requires increased cytoplasmic Ca(2+) levels (By similarity). Required for normal IFNG and cytokine secretion and normal innate immune immunity in response to bacterial infection. Required for normal phagocytosis and cytokine release by macrophages exposed to zymosan (in vitro). Plays a role in dendritic cell differentiation and maturation, and in dendritic cell chemotaxis via its role in regulating cytoplasmic Ca(2+) levels (By similarity). Plays a role in the regulation of the reorganization of the actin cytoskeleton and filopodia formation in response to reactive oxygen species via its role in increasing cytoplasmic Ca(2+) and Zn(2+) levels (PubMed:27068538). Confers susceptibility to cell death following oxidative stress (PubMed:12594222, PubMed:25562606). {ECO:0000250|UniProtKB:Q91YD4, ECO:0000269|PubMed:11385575, ECO:0000269|PubMed:11509734, ECO:0000269|PubMed:11804595, ECO:0000269|PubMed:11960981, ECO:0000269|PubMed:12594222, ECO:0000269|PubMed:15561722, ECO:0000269|PubMed:16601673, ECO:0000269|PubMed:19171771, ECO:0000269|PubMed:19454650,

Target Details

ECO:0000269|PubMed:20650899, ECO:0000269|PubMed:20660597,
ECO:0000269|PubMed:22493272, ECO:0000269|PubMed:25562606,
ECO:0000269|PubMed:25620041, ECO:0000269|PubMed:25918360,
ECO:0000269|PubMed:27068538, ECO:0000269|PubMed:27383051,
ECO:0000269|PubMed:28775320, ECO:0000269|PubMed:29745897,
ECO:0000269|PubMed:30467180, ECO:0000305}, FUNCTION: [Isoform 2]: Lacks cation channel activity. Does not mediate cation transport in response to oxidative stress or ADP-ribose. {ECO:0000269|PubMed:11960981}, FUNCTION: [Isoform 3]: Lacks cation channel activity and negatively regulates the channel activity of isoform 1. Negatively regulates susceptibility to cell death in response to oxidative stress. {ECO:0000269|PubMed:12594222}.

Molecular Weight: 171.2 kDa

UniProt: [O94759](#)

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.

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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

Handling Advice:	Avoid repeated freeze-thaw cycles.
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Storage:	-80 °C
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Storage Comment:	Store at -80°C.
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Expiry Date:	Unlimited (if stored properly)
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Images



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