Datasheet for ABIN3118242

TRPV4 Protein (AA 1-871) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	TRPV4
Protein Characteristics:	AA 1-871
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TRPV4 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MADSSEGPRA GPGEVAELPG DESGTPGGEA FPLSSLANLF EGEDGSLSPS PADASRPAGP GDGRPNLRMK FQGAFRKGVP NPIDLLESTL YESSVVPGPK KAPMDSLFDY GTYRHHSSDN KRWRKKIIEK QPQSPKAPAP QPPPILKVFN RPILFDIVSR GSTADLDGLL PFLLTHKKRL TDEEFREPST GKTCLPKALL NLSNGRNDTI PVLLDIAERT GNMREFINSP FRDIYYRGQT ALHIAIERRC KHYVELLVAQ GADVHAQARG RFFQPKDEGG YFYFGELPLS LAACTNQPHI VNYLTENPHK KADMRRQDSR GNTVLHALVA IADNTRENTK FVTKMYDLLL LKCARLFPDS NLEAVLNNDG LSPLMMAAKT GKIGIFQHII RREVTDEDTR HLSRKFKDWA YGPVYSSLYD LSSLDTCGEE ASVLEILVYN SKIENRHEML AVEPINELLR DKWRKFGAVS FYINVVSYLC AMVIFTLTAY YQPLEGTPPY PYRTTVDYLR LAGEVITLFT GVLFFFTNIK DLFMKKCPGV NSLFIDGSFQ LLYFIYSVLV IVSAALYLAG IEAYLAVMVF ALVLGWMNAL YFTRGLKLTG TYSIMIQKIL FKDLFRFLLV YLLFMIGYAS ALVSLLNPCA NMKVCNEDQT NCTVPTYPSC

RDSETFSTFL LDLFKLTIGM GDLEMLSSTK YPVVFIILLV TYIILTFVLL LNMLIALMGE TVGQVSKESK HIWKLQWATT ILDIERSFPV FLRKAFRSGE MVTVGKSSDG TPDRRWCFRV DEVNWSHWNQ NLGIINEDPG KNETYQYYGF SHTVGRLRRD RWSSVVPRVV ELNKNSNPDE VVVPLDSMGN PRCDGHQQGY PRKWRTDDAP L

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Product Details

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	TRPV4
Alternative Name:	TRPV4 (TRPV4 Products)
Background:	Transient receptor potential cation channel subfamily V member 4 (TrpV4) (Osm-9-like TRP channel 4) (OTRPC4) (Transient receptor potential protein 12) (TRP12) (Vanilloid receptor-like channel 2) (Vanilloid receptor-like protein 2) (VRL-2) (Vanilloid receptor-related osmotically-activated channel) (VR-OAC),FUNCTION: Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity (PubMed:16293632, PubMed:18826956, PubMed:18695040, PubMed:29899501, PubMed:22526352, PubMed:23136043). Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification (PubMed:18826956, PubMed:18695040, PubMed:29899501). Also activated by heat, low pH , citrate and phorbol esters (PubMed:16293632, PubMed:18826956, PubMed:18695040, PubMed:25256292, PubMed:20037586, PubMed:21964574). Increase of intracellular Ca(2+) potentiates currents. Channel activity seems to be regulated by a calmodulin-dependent mechanism with a negative feedback mechanism (PubMed:12724311, PubMed:18826956). Promotes cell-cell junction formation in skin keratinocytes and plays an important role in the formation and/or maintenance of functional intercellular barriers (By similarity). Acts as a regulator of intracellular Ca(2+) in synoviocytes (PubMed:19759329). Plays an obligatory role as a molecular component in the nonselective cation channel activation induced by 4-alpha-phorbol 12,13-didecanoate and hypotonic stimulation in synoviocytes and also regulates production of IL-8 (PubMed:19759329). Together with PKD2, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). Negatively regulates expression of PPARGC1A, UCP1, oxidative metabolism and respiration in adipocytes (By similarity). Regulates expression of chemokines and cytokines related to pro-inflammatory pathway in adipocytes (By similarity). Together with AQP5, controls regulatory volume decrease in salivary epithelial cells (By similarity). Required for normal development and maintenance of bone and cartilage (PubMed:26249260). In its inactive state, may sequester DDX3X at the plasma membrane. When activated, the interaction between both proteins is affected and DDX3X relocalizes to the nucleus (PubMed:29899501). In neurons of the central nervous system, could play a role in

Target Details

	triggering voluntary water intake in response to increased sodium concentration in body fluid (By similarity). {ECO:0000250|UniProtKB:Q9EPK8, ECO:0000269|PubMed:11025659, ECO:0000269|PubMed:12724311, ECO:0000269|PubMed:16293632, ECO:0000269|PubMed:18587396, ECO:0000269|PubMed:18695040, ECO:0000269|PubMed:18826956, ECO:0000269|PubMed:19759329, ECO:0000269|PubMed:20037586, ECO:0000269|PubMed:21964574, ECO:0000269|PubMed:23136043, ECO:0000269|PubMed:25256292, ECO:0000269|PubMed:26249260, ECO:0000269|PubMed:29899501}., FUNCTION: [Isoform 1]: Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity. Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification. Also activated by phorbol esters. Has the same channel activity as isoform 1, and is activated by the same stimuli. {ECO:0000269|PubMed:16293632}., FUNCTION: [Isoform 5]: Non-selective calcium permeant cation channel involved in osmotic sensitivity and mechanosensitivity. Activation by exposure to hypotonicity within the physiological range exhibits an outward rectification. Also activated by phorbol esters. Has the same channel activity as isoform 1, and is activated by the same stimuli. {ECO:0000269|PubMed:16293632}., FUNCTION: [Isoform 2]: Lacks channel activity, due to impaired oligomerization and intracellular retention. {ECO:0000269|PubMed:16293632}., FUNCTION: [Isoform 4]: Lacks channel activity, due to impaired oligomerization and intracellular retention. {ECO:0000269|PubMed:16293632}., FUNCTION: [Isoform 6]: Lacks channel activity, due to impaired oligomerization and intracellular retention. {ECO:0000269|PubMed:16293632}., FUNCTION: (Microbial infection) Facilitates hepatitis C virus (HCV) replication, possibly through its action on DDX3X. {ECO:0000269|PubMed:29899501}., FUNCTION: (Microbial infection) Facilitates Dengue virus (DENV) replication, possibly through its action on DDX3X. {ECO:0000269|PubMed:29899501}., FUNCTION: (Microbial infection) Facilitates Zika virus (ZIKV) replication, possibly through its action on DDX3X. {ECO:0000269|PubMed:29899501}.
Molecular Weight:	98.3 kDa
UniProt:	Q9HBA0
Pathways:	Hormone Transport, Cell-Cell Junction Organization

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.

Application Details

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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months