Datasheet for ABIN7555840

TPCN2 Protein (AA 1-752) (His tag)

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Overview

Quantity:	1 mg
Target:	TPCN2
Protein Characteristics:	AA 1-752
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TPCN2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant TPCN2 Protein expressed in mammalian cells.
Sequence:	MAEPQAESEP LLGGARGGGG DWPAGLTTYR SIQVGPGAAA RWDLCIDQAV VFIEDAIQYR SINHRVDASS MWLYRRYYSN VCQRTLSFTI FLILFLAFIE TPSSLTSTAD VRYRAAPWEP PCGLTESVEV LCLLVFAADL SVKGYLFGWA HFQKNLWLLG YLVVLVVSLV DWTVSLSLVC HEPLRIRRLL RPFFLLQNSS MMKKTLKCIR WSLPEMASVG LLLAIHLCLF TMFGMLLFAG GKQDDGQDRE RLTYFQNLPE SLTSLLVLLT TANNPDVMIP AYSKNRAYAI FFIVFTVIGS LFLMNLLTAI IYSQFRGYLM KSLQTSLFRR RLGTRAAFEV LSSMVGEGGA FPQAVGVKPQ NLLQVLQKVQ LDSSHKQAMM EKVRSYGSVL LSAEEFQKLF NELDRSVVKE HPPRPEYQSP FLQSAQFLFG HYYFDYLGNL IALANLVSIC VFLVLDADVL PAERDDFILG ILNCVFIVYY LLEMLLKVFA LGLRGYLSYP SNVFDGLLTV VLLVLEISTL AVYRLPHPGW RPEMVGLLSL WDMTRMLNML IVFRFLRIIP SMKLMAVVAS TVLGLVQNMR AFGGILVVVY YVFAIIGINL FRGVIVALPG NSSLAPANGS APCGSFEQLE YWANNFDDFA AALVTLWNLM VVNNWQVFLD AYRRYSGPWS KIYFVLWWLV SSVIWVNLFL ALILENFLHK WDPRSHLQPL AGTPEATYQM

Product Details

	TVELLFRDIL EEPGEDELTE RLSQHPHLWL CR **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	TPCN2
Alternative Name:	TPCN2 (TPCN2 Products)
Background:	Two pore channel protein 2 (Two pore calcium channel protein 2),FUNCTION: Intracellular channel initially characterized as a non-selective Ca(2+)-permeable channel activated by NAADP (nicotinic acid adenine dinucleotide phosphate), it is also a highly-selective Na(+) channel activated directly by PI(3,5)P2 (phosphatidylinositol 3,5-bisphosphate) (PubMed:19387438, PubMed:19620632, PubMed:20880839, PubMed:30860481, PubMed:32167471, PubMed:31825310, PubMed:23063126, PubMed:24776928, PubMed:23394946, PubMed:24502975). Localizes to the lysosomal and late endosome

Target Details

	membranes where it regulates organellar membrane excitability, membrane trafficking, and pH homeostasis. Is associated with a plethora of physiological processes, including mTOR-dependent nutrient sensing, skin pigmentation and autophagy (PubMed:32167471, PubMed:23394946, PubMed:18488028). Ion selectivity is not fixed but rather agonist-dependent and under defined ionic conditions, can be readily activated by both NAADP and PI(3,5)P2 (PubMed:31825310, PubMed:32167471, PubMed:24502975). As calcium channel, it increases the pH in the lysosomal lumen, as sodium channel, it promotes lysosomal exocytosis (PubMed:31825310, PubMed:32167471). Plays a crucial role in endolysosomal trafficking in the endolysosomal degradation pathway and is potentially involved in the homeostatic control of many macromolecules and cell metabolites (By similarity) (PubMed:18488028, PubMed:19387438, PubMed:19620632, PubMed:20880839, PubMed:23063126, PubMed:23394946, PubMed:24502975, PubMed:24776928, PubMed:31825310, PubMed:32167471, PubMed:32679067). Also expressed in melanosomes of pigmented cells where mediates a Ca(2+) channel and/or PI(3,5)P2-activated melanosomal Na(+) channel to acidify pH and inhibit tyrosinase activity required for melanogenesis and pigmentation (PubMed:27140606). Unlike the voltage-dependent TPCN1, TPCN2 is voltage independent and can be activated solely by PI(3,5)P2 binding. In contrast, PI(4,5)P2, PI(3,4)P2, PI(3)P and PI(5)P have no obvious effect on channel activation (PubMed:30860481). {ECO:0000250|UniProtKB:Q8BWC0, ECO:0000269|PubMed:18488028, ECO:0000269|PubMed:19387438, ECO:0000269|PubMed:19620632, ECO:0000269|PubMed:20880839, ECO:0000269|PubMed:23063126, ECO:0000269|PubMed:23394946, ECO:0000269|PubMed:24502975, ECO:0000269|PubMed:24776928, ECO:0000269|PubMed:27140606, ECO:0000269|PubMed:30860481, ECO:0000269|PubMed:31825310, ECO:0000269|PubMed:32167471, ECO:0000269|PubMed:32679067}., FUNCTION: (Microbial infection) During Ebola virus (EBOV) infection, controls the movement of endosomes containing virus particles and is required by EBOV to escape from the endosomal network into the cell cytoplasm. {ECO:0000269|PubMed:25722412}., FUNCTION: (Microbial infection) Required for cell entry of coronaviruses SARS-CoV and SARS-CoV-2, as well as human coronavirus EMC (HCoV-EMC), by endocytosis. {ECO:0000269|PubMed:32221306}.
Molecular Weight:	85.2 kDa
UniProt:	Q8NHX9

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for

Application Details

	functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months