

Datasheet for ABIN7544520
TMEM175 Protein (AA 1-504) (His tag)



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Overview

Quantity:	1 mg
Target:	TMEM175
Protein Characteristics:	AA 1-504
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TMEM175 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant TMEM175 Protein expressed in mammalian cells.
Sequence:	<p>MSQPRTPPEQA LDTPGDPPG RRDEDAGEGI QCSQRMLSFS DALLSIIATV MILPVTHTEI SPEQQFDRSV QRLLATRIAV YLMTFLIVTV AWAHTRLFQ VVGKTDDTLA LLNLACMMTI TFLPYTFSLM VTFPDVPLGI FLFCVCVIAI GVVQALIVGY AFHFPHLLSP QIQRSAHRAL YRRHVLGIVL QGPALCFAAA IFSLFFVPLS YLLMVTVILL PYVSKVTGWC RDRLLGHREP SAHPVEVFSF DLHEPLSKER VEAUSDGVYA IVATLLILDI CEDNVPDPKD VKERFSGSLV AALSATGPRF LAYFGSFATV GLLWFAHHS LFLHVRKATRA MGLLNTLSLA FVGGLPLAYQ QTSAFARQPR DELERVRVSC TIIFLASIFQ LAMWTTALLH QAETLQPSVW FGGREHVL MF AKLALYPCAS LLAFASTCLL SRFSVGIFHL MQIAVPCAFL LLRLLVGLAL ATRVLRGLA RPEHPPAPT GQDDPQSLL PAPC</p> <p>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.</p>
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different

Product Details

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:

TMEM175

Alternative Name:

TMEM175 ([TMEM175 Products](#))

Background:

Endosomal/lysosomal proton channel TMEM175 (Potassium channel TMEM175) (Transmembrane protein 175) (hTMEM175),FUNCTION: Proton-activated proton channel that catalyzes proton efflux from endosomes and lysosomes to maintain a steady-state pH (PubMed:35750034, PubMed:35333573, PubMed:37390818). Activated at low pH (under pH 4.6) by luminal side protons: selectively mediates lysosomal proton release from lysosomes, eliciting a proton leak that balances V-ATPase activity to maintain pH homeostasis (PubMed:35750034). Regulation of luminal pH stability is required for autophagosome-lysosome fusion (PubMed:26317472, PubMed:32267231). Also acts as a potassium channel at higher pH, regulating potassium conductance in endosomes and lysosomes (PubMed:26317472, PubMed:28723891, PubMed:32228865, PubMed:32267231, PubMed:33505021). Constitutes the pore-forming subunit of the lysoK(GF) complex, a complex activated by extracellular growth factors (PubMed:33505021). The lysoK(GF) complex is

Target Details

composed of TMEM175 and AKT (AKT1, AKT2 or AKT3), a major target of growth factor receptors: in the complex, TMEM175 channel is opened by conformational changes by AKT, leading to its activation (PubMed:33505021). The lysoK(GF) complex is required to protect neurons against stress-induced damage (PubMed:33505021).

{ECO:0000269|PubMed:26317472, ECO:0000269|PubMed:28723891, ECO:0000269|PubMed:32228865, ECO:0000269|PubMed:32267231, ECO:0000269|PubMed:33505021, ECO:0000269|PubMed:35333573, ECO:0000269|PubMed:35750034, ECO:0000269|PubMed:37390818}.

Molecular Weight: 55.6 kDa

UniProt: [Q9BSA9](#)

Application Details

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