Datasheet for ABIN3117734

TMEM175 Protein (AA 1-504) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	TMEM175
Protein Characteristics:	AA 1-504
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TMEM175 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MSQPRTPEQA LDTPGDCPPG RRDEDAGEGI QCSQRMLSFS DALLSIIATV MILPVTHTEI SPEQQFDRSV QRLLATRIAV YLMTFLIVTV AWAAHTRLFQ VVGKTDDTLA LLNLACMMTI TFLPYTFSLM VTFPDVPLGI FLFCVCVIAI GVVQALIVGY AFHFPHLLSP QIQRSAHRAL YRRHVLGIVL QGPALCFAAA IFSLFFVPLS YLLMVTVILL PYVSKVTGWC RDRLLGHREP SAHPVEVFSF DLHEPLSKER VEAFSDGVYA IVATLLILDI CEDNVPDPKD VKERFSGSLV AALSATGPRF LAYFGSFATV GLLWFAHHSL FLHVRKATRA MGLLNTLSLA FVGGLPLAYQ QTSAFARQPR DELERVRVSC TIIFLASIFQ LAMWTTALLH QAETLQPSVW FGGREHVLMF AKLALYPCAS LLAFASTCLL SRFSVGIFHL MQIAVPCAFL LLRLLVGLAL ATLRVLRGLA RPEHPPPAPT GQDDPQSQLL PAPC **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.
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:	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 lumenal 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 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:	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.

Application Details

	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