Datasheet for ABIN7544697

TMEM97 Protein (AA 1-176) (His tag)

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Overview

Quantity:	1 mg
Target:	TMEM97
Protein Characteristics:	AA 1-176
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TMEM97 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant TMEM97 Protein expressed in mammalian cells.
Sequence:	MGAPATRRCV EWLLGLYFLS HIPITLFMDL QAVLPRELYP VEFRNLLKWY AKEFKDPLLQ EPPAWFKSFL FCELVFQLPF FPIATYAFLK GSCKWIRTPA IIYSVHTMTT LIPILSTFLF EDFSKASGFK GQRPETLHER LTLVSVYAPY LLIPFILLIF MLRSPYYKYE EKRKKK **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

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	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:	TMEM97
Alternative Name:	TMEM97 (TMEM97 Products)
Background:	Sigma intracellular receptor 2 (S2R) (Sigma-2 receptor) (Sigma2 receptor) (Meningioma-associated protein 30) (MAC30) (Transmembrane protein 97),FUNCTION: Sigma-2 receptor which contributes to ameliorate dysfunctional cellular processes and slow degenerative progression by regulating cell functions including cholesterol biosynthesis/trafficking, membrane trafficking, autophagy, lipid membrane-bound protein trafficking, and receptor stabilization at the cell surface (PubMed:28559337, PubMed:19583955, PubMed:23922215, PubMed:25620095, PubMed:27378690, PubMed:34799735, PubMed:30443021, PubMed:34233061, PubMed:35970844) (Probable). Forms a ternary complex with PGRMC1 receptor and low density lipoprotein receptor/LDLR at the plasma membrane, which increases LDLR-mediated LDL cholesterol internalization (PubMed:30443021). Decreases lysosomal sterol transporter NPC1 availability to the cell, probably through NPC1-binding, hence controlling lipid transport, including cholesterol and LBPA, outside of late endosome/lysosome (PubMed:19583955, PubMed:27378690). Binds regio- and stereoselective ligand 20(S)-hydroxycholesterol (20(S)-OHC) which enhances TMEM97-NPC1 interaction and decreases TMEM97-PGRMC1 and TMEM97-TSPO interactions, thereby linking OHC binding to cholesterol homeostasis (PubMed:34799735, PubMed:37047353). Also able to bind cholesterol (By similarity). Binds histatin 1 (Hst 1)/HN1 salivary peptide at the ER membrane, which is critical

Target Details

	for increasing mitochondria-ER contacts and stimulating Hst1 wound healing properties (PubMed:34233061, PubMed:35970844). May alter the activity of some cytochrome P450 proteins (PubMed:22292588). Although shows homologies with sterol isomerases (EXPERA domain), not able to catalyze sterol isomerization (Probable) (PubMed:34880501). However, may act as sensors of these molecules (Probable) (PubMed:34880501). Acts as a quality control factor in the ER, promoting the proteolytic degradation of nonproductive and extramitochondrial precursor proteins in the ER membrane thus removing them from the ER surface (By similarity). {ECO:0000250|UniProtKB:Q12155, ECO:0000250|UniProtKB:Q3MHW7, ECO:0000269|PubMed:19583955, ECO:0000269|PubMed:27378690, ECO:0000269|PubMed:28559337, ECO:0000269|PubMed:30443021, ECO:0000269|PubMed:34233061, ECO:0000269|PubMed:34799735, ECO:0000269|PubMed:34880501, ECO:0000269|PubMed:35970844, ECO:0000269|PubMed:37047353, ECO:0000303|PubMed:22292588, ECO:0000303|PubMed:23922215, ECO:0000303|PubMed:25620095, ECO:0000305|PubMed:25566323}.
Molecular Weight:	20.8 kDa
UniProt:	Q5BJF2
Pathways:	SARS-CoV-2 Protein Interactome

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