Datasheet for ABIN3100716

TMEM97 Protein (AA 1-176) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	TMEM97
Protein Characteristics:	AA 1-176
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TMEM97 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MGAPATRRCV EWLLGLYFLS HIPITLFMDL QAVLPRELYP VEFRNLLKWY AKEFKDPLLQ EPPAWFKSFL FCELVFQLPF FPIATYAFLK GSCKWIRTPA IIYSVHTMTT LIPILSTFLF EDFSKASGFK GQRPETLHER LTLVSVYAPY LLIPFILLIF MLRSPYYKYE EKRKKK **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).

Product Details

- 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:	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 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:	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. 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