Datasheet for ABIN3117981

MCOLN1 Protein (AA 1-580) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	MCOLN1
Protein Characteristics:	AA 1-580
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MCOLN1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MTAPAGPRGS ETERLLTPNP GYGTQAGPSP APPTPPEEED LRRRLKYFFM SPCDKFRAKG RKPCKLMLQV VKILVVTVQL ILFGLSNQLA VTFREENTIA FRHLFLLGYS DGADDTFAAY TREQLYQAIF HAVDQYLALP DVSLGRYAYV RGGGDPWTNG SGLALCQRYY HRGHVDPAND TFDIDPMVVT DCIQVDPPER PPPPPSDDLT LLESSSSYKN LTLKFHKLVN VTIHFRLKTI NLQSLINNEI PDCYTFSVLI TFDNKAHSGR IPISLETQAH IQECKHPSVF QHGDNSFRLL FDVVVILTCS LSFLLCARSL LRGFLLQNEF VGFMWRQRGR VISLWERLEF VNGWYILLVT SDVLTISGTI MKIGIEAKNL ASYDVCSILL GTSTLLVWVG VIRYLTFFHN YNILIATLRV ALPSVMRFCC CVAVIYLGYC FCGWIVLGPY HVKFRSLSMV SECLFSLING DDMFVTFAAM QAQQGRSSLV WLFSQLYLYS FISLFIYMVL SLFIALITGA YDTIKHPGGA GAEESELQAY IAQCQDSPTS GKFRRGSGSA CSLLCCCGRD PSEEHSLLVN **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:	MCOLN1
Alternative Name:	MCOLN1 (MCOLN1 Products)
Background:	Mucolipin-1 (ML1) (MG-2) (Mucolipidin) (Transient receptor potential channel mucolipin 1) (TRPML1),FUNCTION: Nonselective cation channel probably playing a role in the regulation of membrane trafficking events and of metal homeostasis (PubMed:11013137, PubMed:12459486, PubMed:15336987, PubMed:14749347, PubMed:29019983, PubMed:27623384). Proposed to play a major role in Ca(2+) release from late endosome and lysosome vesicles to the cytoplasm, which is important for many lysosome-dependent cellular events, including the fusion and trafficking of these organelles, exocytosis and autophagy (PubMed:11013137, PubMed:12459486, PubMed:15336987, PubMed:14749347, PubMed:25720963, PubMed:29019983, PubMed:27623384). Required for efficient uptake of large particles in macrophages in which Ca(2+) release from the lysosomes triggers lysosomal exocytosis. May also play a role in phagosome-lysosome fusion (By similarity). Involved in lactosylceramide trafficking indicative for a role in the regulation of late endocytic membrane fusion/fission events (PubMed:16978393). By mediating lysosomal Ca(2+) release is involved in regulation of mTORC1 signaling and in mTOR/TFEB-dependent lysosomal adaptation to environmental cues such as nutrient levels (PubMed:25720963, PubMed:25733853, PubMed:27787197). Seems to act as lysosomal active oxygen species (ROS) sensor involved in ROS-induced TFEB activation and autophagy (PubMed:27357649). Functions as a Fe(2+) permeable channel in late endosomes and lysosomes (PubMed:18794901). Proposed to play a role in zinc homeostasis probably implicating its association with TMEM163 (PubMed:25130899) In adaptive immunity, TRPML2 and TRPML1 may play redundant roles in the function of the specialized lysosomes of B cells (By similarity). {ECO:0000250|UniProtKB:Q99J21, ECO:0000269|PubMed:12459486, ECO:0000269|PubMed:14749347, ECO:0000269|PubMed:15336987, ECO:0000269|PubMed:16978393, ECO:0000269|PubMed:18794901, ECO:0000269|PubMed:25130899, ECO:0000269|PubMed:25720963, ECO:0000269|PubMed:25733853, ECO:0000269|PubMed:27357649, ECO:0000269|PubMed:27623384, ECO:0000269|PubMed:27787197, ECO:0000269|PubMed:29019983, ECO:0000305|PubMed:11013137}., FUNCTION: May contribute to cellular lipase activity within the late endosomal pathway or at the cell surface which may be involved in processes of membrane reshaping and vesiculation, especially the growth of tubular structures. However, it is not known, whether it conveys the enzymatic activity directly, or merely facilitates the activity of an associated phospholipase. {ECO:0000305|PubMed:21256127}.

Target Details

Molecular Weight:	65.0 kDa
UniProt:	Q9GZU1
Pathways:	Transition Metal Ion Homeostasis

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