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TMEM64 Protein (AA 1-381) (rho-1D4 tag)



Image



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Overview

Quantity:	1 mg
Target:	TMEM64
Protein Characteristics:	AA 1-381
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TMEM64 protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:

MRNPGGSLPH TLPRALQHAG RTGVVEQPGR WAPERTAGGD RSEDRLPRGG GASAAAAAAA AAASGALLGA YLERHGLPAA SDLPAPAGAL AGGPGSGGGV VVGVAEVRNW RCCCLGSTCW CRSLVLVCVL AALCFASLAL VRRYLQHLLL WVESLDSLLG VLLFVVGFIV VSFPCGWGYI VLNVAAGYLY GFVLGMGLMV VGVLIGTFIA HVVCKRLLTA WVAARIQNSD KLSAVIRVVE GGSGLKVVAL ARLTPIPFGL QNAVFSITDV PLPSYLMASS AGLLPTQLLN SYLGTTLRTM EDVIAEQSLS GYFVFCLQIV ISIGLMFYVV HRAQVELNAA IVACEMELKT SLVKGNQSDP SGSSFYNKRT LTFSGGGINI V

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany from design to production by highly experienced protein experts.
- Mouse Tmem64 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

• 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 will ensure that you receive a correctly folded 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

- 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
- 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
- Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

Target Details

Target:	TMEM64
Alternative Name:	Tmem64 (TMEM64 Products)
Background:	Positively regulates TNFSF11-induced osteoclast differentiation. Acts as a regulator of
	TNFSF11-mediated Ca(2+) signaling pathways via its interaction with SERCA2 which is critical
	for the TNFSF11-induced CREB1 activation and mitochondrial ROS generation necessary for
	proper osteoclast generation. Association between TMEM64 and SERCA2 in the ER leads to
	cytosolic Ca (2+) spiking for activation of NFATC1 and production of mitochondrial ROS,
	thereby triggering Ca (2+) signaling cascades that promote osteoclast differentiation and
	activation (PubMed:23395171). Negatively regulates osteoblast differentiation and positively
	regulates adipocyte differentiation via modulation of the canonical Wnt signaling pathway.
	Mediates the switch in lineage commitment to osteogenesis rather than to adipogenesis in
	mesenchymal stem cells by negatively regulating the expression, activity and nuclear
	localization of CTNNB1 (PubMed:25979161). {ECO:0000269 PubMed:23395171,
	ECO:0000269 PubMed:25979161}.
Molecular Weight:	41.0 kDa Including tag.
UniProt:	Q3U145
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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the
	recombinant protein with the default tag will be insoluble our protein lab may suggest a higher
	molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible
	options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Handling Advice: Storage:	Avoid repeated freeze-thaw cycles.

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

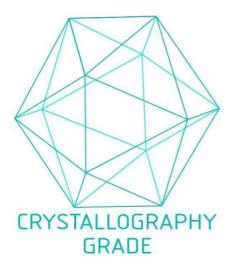


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process