antibodies

Datasheet for ABIN3116679 MCU Protein (AA 51-351) (rho-1D4 tag)



Overview

Image

Quantity:	1 mg	
Target:	MCU	
Protein Characteristics:	AA 51-351	
Origin:	Human	
Source:	Insect Cells	
Protein Type:	Recombinant	
Purification tag / Conjugate:	This MCU protein is labelled with rho-1D4 tag.	
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)	
Product Details		
Sequence:	VHQRIASWQN LGAVYCSTVV PSDDVTVVYQ NGLPVISVRL PSRRERCQFT LKPISDSVGV	
	FLRQLQEEDR GIDRVAIYSP DGVRVAASTG IDLLLLDDFK LVINDLTYHV RPPKRDLLSH	
	ENAATLNDVK TLVQQLYTTL CIEQHQLNKE RELIERLEDL KEQLAPLEKV RIEISRKAEK	
	RTTLVLWGGL AYMATQFGIL ARLTWWEYSW DIMEPVTYFI TYGSAMAMYA YFVMTRQEYV	
	YPEARDRQYL LFFHKGAKKS RFDLEKYNQL KDAIAQAEMD LKRLRDPLQV HLPLRQIGEK D	
	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. Human MCU 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

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	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:
	 Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot. 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:	MCU
Alternative Name:	MCU (MCU Products)

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Target Details		
Background:	Mitochondrial inner membrane calcium uniporter that mediates calcium uptake into	
	mitochondria. Mitochondrial calcium homeostasis plays key roles in cellular physiology and	
	regulates cell bioenergetics, cytoplasmic calcium signals and activation of cell death pathways	
	(PubMed:21685888, PubMed:21685886, PubMed:23101630, PubMed:22904319,	
	PubMed:23178883, PubMed:22829870, PubMed:22822213, PubMed:24332854,	
	PubMed:26341627). Activity is regulated by MICU1 and MICU2. At low Ca(2+) levels MCU	
	activity is down-regulated by MICU2, at higher Ca(2+) levels MICU1 increases MCU activity	
	(PubMed:24560927). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by	
	regulating mitochondrial calcium uptake (PubMed:22904319, PubMed:22829870). Involved in	
	buffering the amplitude of systolic calcium rises in cardiomyocytes (PubMed:22822213).	
	{ECO:0000269 PubMed:21685886, ECO:0000269 PubMed:21685888,	
	EC0:0000269 PubMed:22822213, EC0:0000269 PubMed:22829870,	
	EC0:0000269 PubMed:22904319, EC0:0000269 PubMed:23101630,	
	ECO:0000269 PubMed:23178883, ECO:0000269 PubMed:24332854,	
	EC0:0000269 PubMed:24560927, EC0:0000269 PubMed:26341627}.	
Molecular Weight:	36.2 kDa Including tag.	
UniProt:	Q8NE86	
Pathways:	Positive Regulation of Peptide Hormone Secretion, Carbohydrate 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 gurantee though.	
Comment:	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.	

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Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

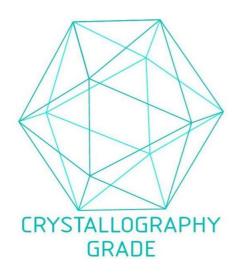


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process