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Datasheet for ABIN3093728 MCU Protein (AA 51-233) (His tag)

Image



Overview

Quantity:	1 mg
Target:	MCU
Protein Characteristics:	AA 51-233
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MCU protein is labelled with His 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 RTT
	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 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

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	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:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells:
	 In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
	 Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. 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
Farget Details	
arget:	MCU
Alternative Name:	MCU (MCU Products)
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,

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	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,
	EC0:0000269 PubMed:23178883, EC0:0000269 PubMed:24332854,
	EC0:0000269 PubMed:24560927, EC0:0000269 PubMed:26341627}.
Molecular Weight:	21.9 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.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.

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Handling
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Expiry Date:

Unlimited (if stored properly)

Images

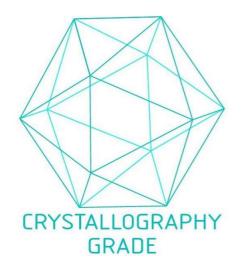


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process

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