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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

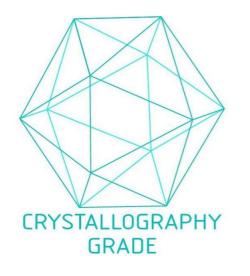


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process

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