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Datasheet for ABIN7146317

anti-MCU antibody (AA 155-233) (HRP)

Overview

Quantity:	100 µg
Target:	MCU
Binding Specificity:	AA 155-233
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MCU antibody is conjugated to HRP
Application:	ELISA

Product Details

Immunogen:	Recombinant Human Calcium uniporter protein, mitochondrial protein (155-233AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	>95%, Protein G purified

Target Details

Target:	MCU
Alternative Name:	MCU (MCU Products)
Background:	Background: Mitochondrial inner membrane calcium uniporter that mediates calcium uptake into mitochondria (PubMed:21685888, PubMed:21685886, PubMed:23101630,

Target Details

PubMed:22904319, PubMed:23178883, PubMed:22829870, PubMed:22822213, PubMed:24332854, PubMed:23755363, PubMed:26341627). Constitutes the pore-forming and calcium-conducting subunit of the uniporter complex (uniplex) (PubMed:23755363). Activity is regulated by MICU1 and MICU2. At low Ca(2+) levels MCU activity is down-regulated by MICU1 and MICU2, at higher Ca(2+) levels MICU1 increases MCU activity (PubMed:24560927, PubMed:26903221). Mitochondrial calcium homeostasis plays key roles in cellular physiology and regulates cell bioenergetics, cytoplasmic calcium signals and activation of cell death pathways. Involved in buffering the amplitude of systolic calcium rises in cardiomyocytes (PubMed:22822213). While dispensable for baseline homeostatic cardiac function, acts as a key regulator of short-term mitochondrial calcium loading underlying a 'fight-or-flight' response during acute stress: acts by mediating a rapid increase of mitochondrial calcium in pacemaker cells (PubMed:25603276). participates in mitochondrial permeability transition during ischemia-reperfusion injury (By similarity). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (PubMed:22904319, PubMed:22829870). Mitochondrial calcium uptake in skeletal muscle cells is involved in muscle size in adults (By similarity). Regulates synaptic vesicle endocytosis kinetics in central nerve terminal (By similarity). Involved in antigen processing and presentation (By similarity).

Aliases: MCU antibody, C10orf42 antibody, CCDC109ACalcium uniporter protein antibody, mitochondrial antibody, HsMCU antibody, Coiled-coil domain-containing protein 109A antibody

UniProt: [Q8NE86](#)

Pathways: [Positive Regulation of Peptide Hormone Secretion](#), [Carbohydrate Homeostasis](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: Preservative: 0.03 % Proclin 300
Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling

Storage: -20 °C, -80 °C

Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.