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MCU Antibody

Rabbit pAb
Catalog # AP93210

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	Q8NE86
Reactivity	Rat, Human, Mouse
Clonality	Polyclonal
Other Names	C10orf42; Calcium uniporter protein mitochondrial; Ccdc109a; HsMCU; Mitochondrial Calcium Uniporter;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	39867

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MCU
Description	Mitochondrial inner membrane calcium uniporter that mediates calcium uptake into mitochondria (PubMed:21685888, PubMed:21685886, PubMed:23101630, PubMed:22904319, PubMed:23178883, PubMed:22829870, PubMed:22822213, PubMed:24332854, PubMed:23755363, PubMed:26341627).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

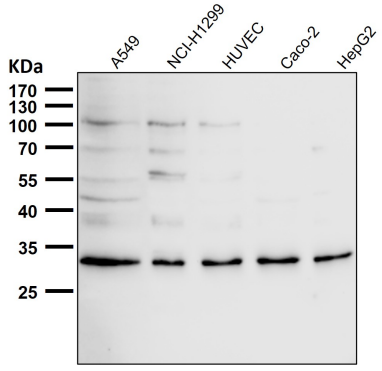
Protein Information

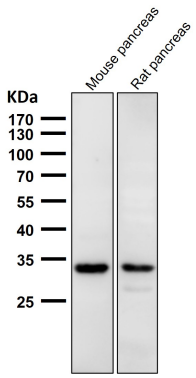
Name	MCU {ECO:0000303|PubMed:21685886, ECO:0000312|HGNC:HGNC:23526}
Function	Channel-forming and calcium-conducting subunit of the mitochondrial inner membrane calcium uniporter complex (uniplex), which mediates calcium uptake into the mitochondrial matrix (PubMed:21685886, PubMed:21685888, PubMed:22822213, PubMed:22829870, PubMed:22904319, PubMed:23101630, PubMed:23178883, PubMed:23755363, PubMed:24332854, PubMed:24560927, PubMed:26341627, PubMed:29954988, PubMed:29995857, PubMed:30454562, PubMed:30638448, PubMed:31080062, PubMed:32494073, PubMed:32762847, PubMed:33296646, PubMed:37036971, PubMed:37126688). MCU channel activity is regulated by the calcium-sensor subunits of the uniplex MICU1 and MICU2 (or MICU3) (PubMed:24560927, PubMed:26903221, PubMed:30454562, PubMed:30638448, PubMed:32494073, PubMed:32762847, PubMed:37036971,

PubMed:37126688). Mitochondrial calcium homeostasis plays key roles in cellular physiology and regulates ATP production, cytoplasmic calcium signals and activation of cell death pathways (PubMed:21685886, PubMed:21685888, PubMed:22822213, PubMed:22829870, PubMed:22904319, PubMed:23101630, PubMed:23178883, PubMed:23755363, PubMed:24332854, PubMed:24560927, PubMed:26341627, PubMed:29954988, PubMed:32494073, PubMed:32762847). 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). 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). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (PubMed:22829870, PubMed:22904319). Involved in antigen processing and presentation (By similarity).

Cellular Location Mitochondrion inner membrane; Multi-pass membrane protein

Images





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