

MCU Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57775

Specification

MCU Polyclonal Antibody - Product Information

Application	IHC-P
Primary Accession	Q8NE86
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39867

MCU Polyclonal Antibody - Additional Information

Gene ID 90550

Other Names

Calcium uniporter protein, mitochondrial, HsMCU, Coiled-coil domain-containing protein 109A, MCU {ECO:0000303|PubMed:21685886, ECO:0000312|HGNC:HGNC:23526}

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glycerol

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

MCU Polyclonal Antibody - 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 (uniporter), which mediates calcium uptake into the mitochondrial matrix (PubMed: [21685886](http://www.uniprot.org/citations/21685886), PubMed: [21685888](http://www.uniprot.org/citations/21685888), PubMed: [22822213](http://www.uniprot.org/citations/22822213), PubMed: [22829870](http://www.uniprot.org/citations/22829870), PubMed: [22904319](http://www.uniprot.org/citations/22904319), PubMed: [23101630](http://www.uniprot.org/citations/23101630), PubMed: [23178883](http://www.uniprot.org/citations/23178883), PubMed: [23755363](http://www.uniprot.org/citations/23755363), PubMed: [24332854](http://www.uniprot.org/citations/24332854), PubMed: [24560927](http://www.uniprot.org/citations/24560927), PubMed: [26341627](http://www.uniprot.org/citations/26341627), PubMed: [29954988](http://www.uniprot.org/citations/29954988), PubMed: [29995857](http://www.uniprot.org/citations/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

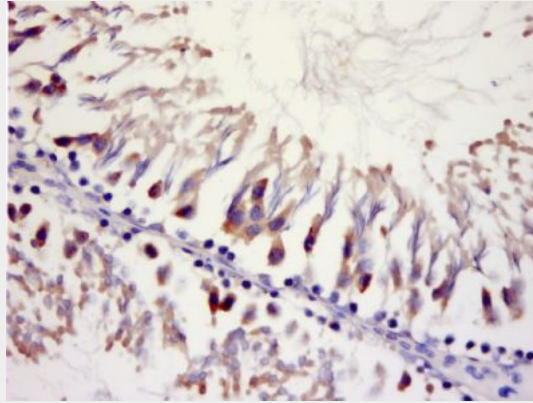
MCU Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MCU Polyclonal Antibody - Images



Paraformaldehyde-fixed, paraffin embedded (rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (MCU) Polyclonal Antibody, Unconjugated (bs-20189R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.