

Rabbit MCU Polyclonal Antibody | anti-MCU antibody

MCU Polyclonal Antibody

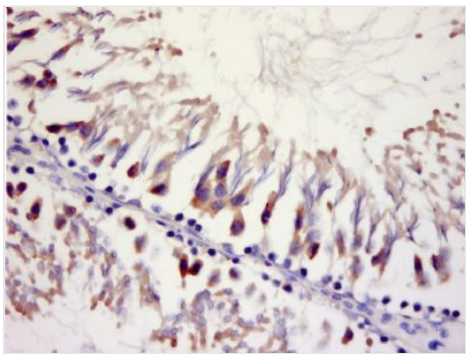
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA291889	Rabbit	Rat, Pig, Dog, Cow	Immunohistochemistry

PRODUCT SYNONYMS

MCU; Polyclonal Antibody; MCU Polyclonal Antibody; Calcium uniporter protein; mitochondrial; HsMCU; Coiled-coil domain-containing protein 109A; anti-MCU antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Rat, Pig, Dog, Cow
Clonality	Polyclonal
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce
Applicable Applications for anti-MCU antibody	IHC (Immunohistochemistry)
Function	Channel-forming and calcium-conducting subunit of the mitochondrial inner membrane calcium uniporter complex (uniplex) that mediates calcium uptake into the mitochondrial matrix (PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed: , PubMed:). MCU channel activity is regulated by MICU1 and MICU2 subunits of the uniplex. At low Ca(2+) levels MCU activity is down-regulated by MICU1 and MICU2; at higher Ca(2+) levels MICU1 increases MCU activity (PubMed: , PubMed:). 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:). 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:). 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: , PubMed:). 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).
Cellular Location	Mitochondrion inner membrane; Multi-pass membrane protein
Preparation and 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.



IHC (Immunohistochemistry)
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 degree C for 30min; Antibody incubation with (MCU) Polyclonal Antibody, Unconjugated (bs-20189R) at 1:500 overnight at 4 degree C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

NCBI AND UNIPROT INFORMATION

NCBI GI #	398303803
NCBI GeneID	90550
NCBI Accession #	NP_001257608.1
NCBI GenBank Nucleotide #	NM_001270679.1
UniProt Accession #	Q8NE86; Q96FL3; B2RDF3; B3KXV7
Molecular Weight	39867
NCBI Official Full Name	calcium uniporter protein, mitochondrial isoform 2
NCBI Official Synonym Full Names	mitochondrial calcium uniporter
NCBI Official Symbol	MCU
NCBI Official Synonym Symbols	C10orf42; CCDC109A
NCBI Protein Information	calcium uniporter protein, mitochondrial; coiled-coil domain-containing protein 109A
UniProt Protein Name	Calcium uniporter protein, mitochondrial
UniProt Gene Name	MCU
UniProt Synonym Gene Names	C10orf42; CCDC109A
UniProt Entry Name	MCU_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.