

Anti-CCDC109A Antibody
Catalog # AP54071**Specification****Anti-CCDC109A Antibody - Product Information**

Application	WB
Primary Accession	Q8NE86
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39867

Anti-CCDC109A Antibody - Additional Information**Gene ID** 90550**Other Names**

C10orf42; CCDC109A; Calcium uniporter protein mitochondrial; Coiled-coil domain-containing protein 109A

Target/Specificity

Recognizes endogenous levels of CCDC109A protein.

Dilution

WB~~1/500 - 1/1000

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-CCDC109A 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, 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

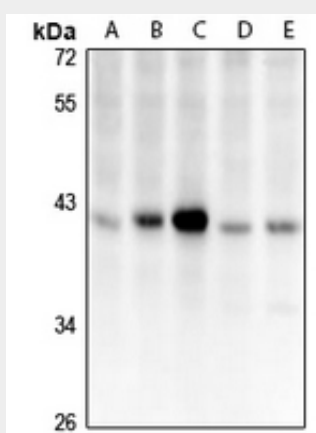
Mitochondrion inner membrane; Multi-pass membrane protein

Anti-CCDC109A Antibody - Protocols

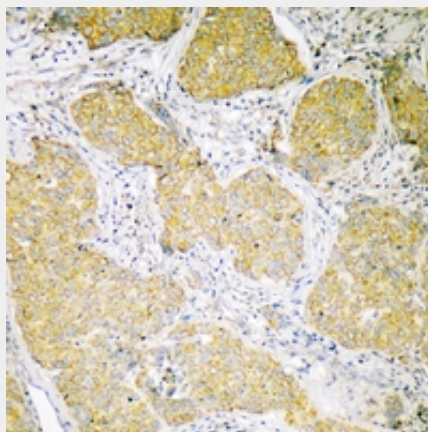
Provided below are standard protocols that you may find useful for product applications.

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

Anti-CCDC109A Antibody - Images



Western blot analysis of CCDC109A expression in BV2 (A), PC12 (B), HCT116 (C), HEK293T (D), Panc1 (E) whole cell lysates.



Immunohistochemical analysis of CCDC109A staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Anti-CCDC109A Antibody - Background

Rabbit polyclonal antibody to CCDC109A