

**Anti-MICU1 Antibody**  
**Mouse monoclonal antibody to MICU1**  
**Catalog # AP61592****Specification****Anti-MICU1 Antibody - Product Information**

Application	WB, IH
Primary Accession	<a href="#">Q9BPX6</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	54351

**Anti-MICU1 Antibody - Additional Information****Gene ID 10367****Other Names**

CALC; CBARA1; Calcium uptake protein 1 mitochondrial; Atopy-related autoantigen CALC; ara CALC; Calcium-binding atopy-related autoantigen 1; allergen Hom s 4

**Target/Specificity**

Recognizes endogenous levels of MICU1 protein.

**Dilution**

WB~~WB (1/1000 - 1/2000), IH (1/100 - 1/200)  
IH~~WB (1/1000 - 1/2000), IH (1/100 - 1/200)

**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-MICU1 Antibody - Protein Information****Name** MICU1**Synonyms** CALC {ECO:0000303|PubMed:16002733}, CBAR**Function**

Key regulator of mitochondrial calcium uniporter (MCU) that senses calcium level via its EF-hand domains (PubMed:<a href="http://www.uniprot.org/citations/20693986" target="\_blank">20693986</a>, PubMed:<a href="http://www.uniprot.org/citations/23101630" target="\_blank">23101630</a>, PubMed:<a href="http://www.uniprot.org/citations/23747253" target="\_blank">23747253</a>, PubMed:<a href="http://www.uniprot.org/citations/24313810" target="\_blank">24313810</a>, PubMed:<a href="http://www.uniprot.org/citations/24332854" target="\_blank">24332854</a>)

target="\_blank">>24332854</a>, PubMed:<a href="http://www.uniprot.org/citations/24503055" target="\_blank">>24503055</a>, PubMed:<a href="http://www.uniprot.org/citations/24560927" target="\_blank">>24560927</a>, PubMed:<a href="http://www.uniprot.org/citations/26341627" target="\_blank">>26341627</a>, PubMed:<a href="http://www.uniprot.org/citations/26903221" target="\_blank">>26903221</a>, PubMed:<a href="http://www.uniprot.org/citations/27099988" target="\_blank">>27099988</a>). MICU1 and MICU2 form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium. MICU1 acts both as an activator or inhibitor of mitochondrial calcium uptake (PubMed:<a href="http://www.uniprot.org/citations/26903221" target="\_blank">>26903221</a>). Acts as a gatekeeper of MCU at low concentration of calcium, preventing channel opening (PubMed:<a href="http://www.uniprot.org/citations/26903221" target="\_blank">>26903221</a>). Enhances MCU opening at high calcium concentration, allowing a rapid response of mitochondria to calcium signals generated in the cytoplasm (PubMed:<a href="http://www.uniprot.org/citations/24560927" target="\_blank">>24560927</a>, PubMed:<a href="http://www.uniprot.org/citations/26903221" target="\_blank">>26903221</a>). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (PubMed:<a href="http://www.uniprot.org/citations/22904319" target="\_blank">>22904319</a>). Induces T-helper 1-mediated autoreactivity, which is accompanied by the release of IFNG (PubMed:<a href="http://www.uniprot.org/citations/16002733" target="\_blank">>16002733</a>).

### Cellular Location

Mitochondrion inner membrane; Single-pass membrane protein. Mitochondrion intermembrane space

### Tissue Location

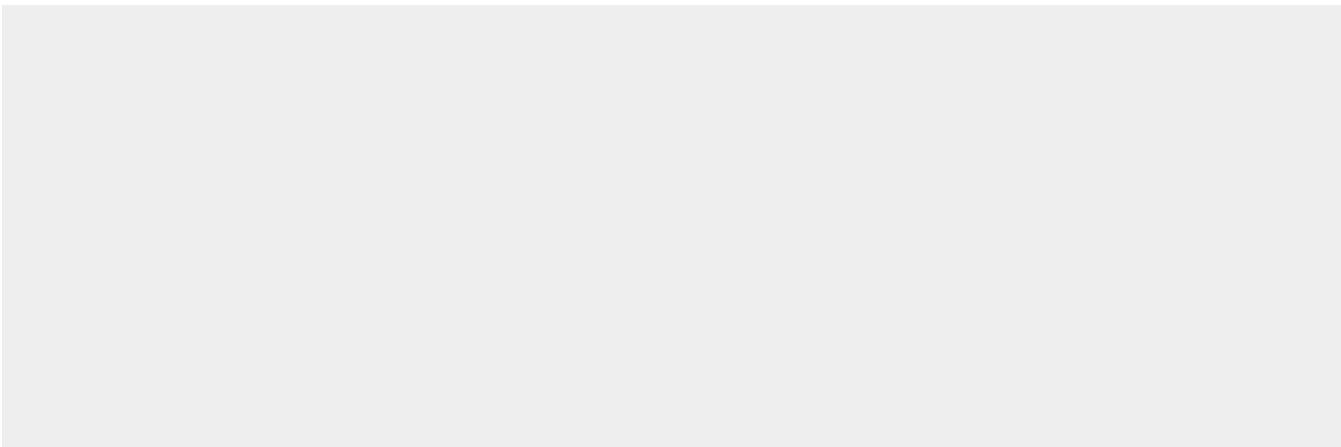
Expressed in epithelial cell lines. Strongly expressed in epidermal keratinocytes and dermal endothelial cells

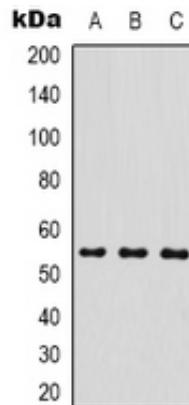
### Anti-MICU1 Antibody - Protocols

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

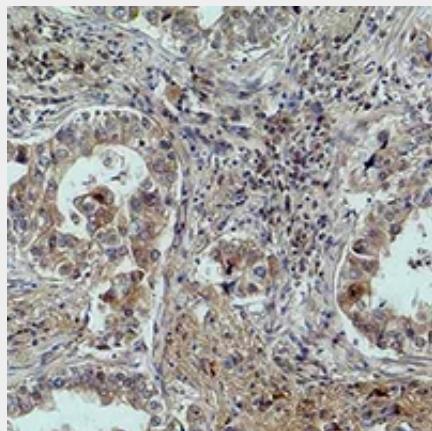
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-MICU1 Antibody - Images





Western blot analysis of MICU1 expression in MCF7 (A), mouse brain (B), rat brain (C) whole cell lysates.



Immunohistochemical analysis of MICU1 staining in human lung 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-MICU1 Antibody - Background**

Recombinant protein corresponding to human MICU1.