

MICU1 / CBARA1 Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS15846**Specification**

MICU1 / CBARA1 Antibody (Internal) - Product Information

Application	IHC, WB
Primary Accession	Q9BPX6
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Hamster, Monkey, Pig, Chicken, Goat, Horse, Xenopus, Bovine, Dog
Host	Goat
Clonality	Polyclonal
Calculated MW	54kDa KDa

MICU1 / CBARA1 Antibody (Internal) - Additional Information**Gene ID** 10367**Other Names**

Calcium uptake protein 1, mitochondrial, Atopy-related autoantigen CALC, ara CALC, Calcium-binding atopy-related autoantigen 1, Hom s 4, MICU1, CALC, CBARA1

Target/Specificity

Human CBARA1. This antibody is expected to recognize reported isoforms 1 and 2 (NP_006068.2; NP_001182447.1).

Reconstitution & Storage

Store at -20°C. Minimize freezing and thawing.

Precautions

MICU1 / CBARA1 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

MICU1 / CBARA1 Antibody (Internal) - 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:20693986, PubMed:23101630, PubMed:23747253, PubMed:24313810, PubMed:24332854, PubMed:24503055)

target="_blank">24503055, PubMed:24560927, PubMed:26341627, PubMed:26903221, PubMed:27099988). 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:26903221). Acts as a gatekeeper of MCU at low concentration of calcium, preventing channel opening (PubMed:26903221). Enhances MCU opening at high calcium concentration, allowing a rapid response of mitochondria to calcium signals generated in the cytoplasm (PubMed:24560927, PubMed:26903221). Regulates glucose- dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (PubMed:22904319). Induces T-helper 1- mediated autoreactivity, which is accompanied by the release of IFNG (PubMed:16002733).

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

Volume

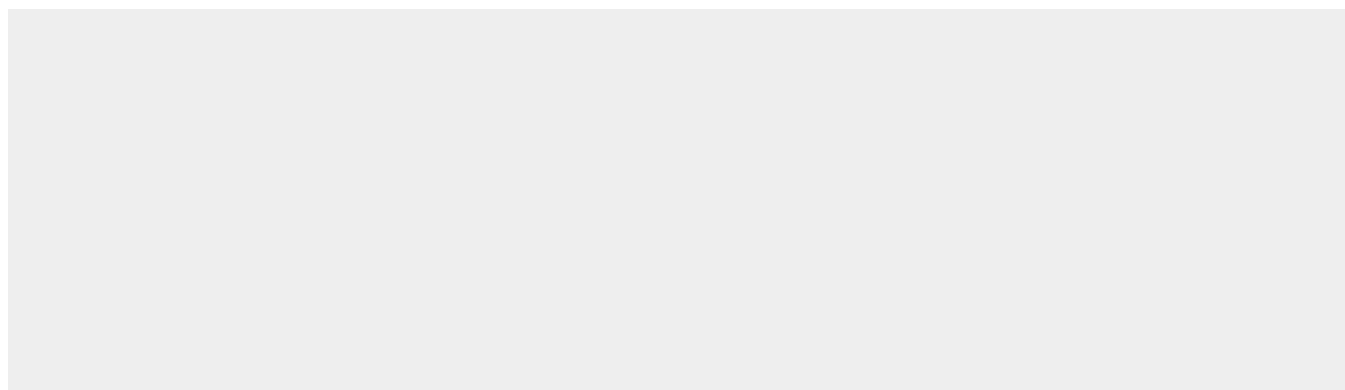
50 µl

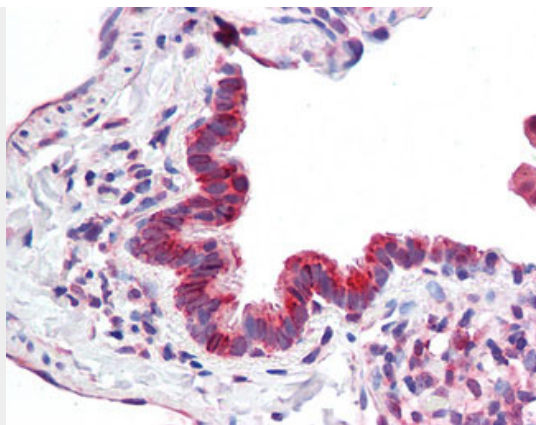
MICU1 / CBARA1 Antibody (Internal) - Protocols

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](#)

MICU1 / CBARA1 Antibody (Internal) - Images





Anti-MICU1 / CBARA1 antibody IHC staining of human lung, respiratory epithelium.



CBARA1 antibody (0.5 ug/ml) staining of K562 lysate (35 ug protein/ml in RIPA buffer).

MICU1 / CBARA1 Antibody (Internal) - Background

Key regulator of mitochondrial calcium uniporter (MCU) required to increase calcium uptake by MCU when cytoplasmic calcium is high. MICU1 and MICU2 form a disulfide-linked heterodimer that stimulate and inhibit MCU activity, respectively. MICU1 acts as a stimulator of MCU that senses calcium level via its EF-hand domains: enhances MCU opening at high Ca^{2+} concentration, allowing a rapid response of mitochondria to Ca^{2+} signals generated in the cytoplasm. Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake. Induces T-helper 1-mediated autoreactivity, which is accompanied by the release of IFNG.

MICU1 / CBARA1 Antibody (Internal) - References

- Ota T., et al. Nat. Genet. 36:40-45(2004).
- Wiemann S., et al. Genome Res. 11:422-435(2001).
- Deloukas P., et al. Nature 429:375-381(2004).
- Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
- Natter S., et al. FASEB J. 12:1559-1569(1998).