DATASHEET

MICU1 Mouse Monoclonal Antibody(C2167)

CAT. NO. AMA01779

KEY FEATURES

Target	MICU1	Source / Host	Mouse
Reactivity	Human, Mouse, Rat	Clonality	Monoclonal
Applications	WB, IHC, IF/ICC	Conjugation	Unconjugated
Form / Buffer	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.	Storage	at-20°C

BACKGROUND

Calcium sensor of the mitochondrial calcium uniporter (MCU) channel, which senses calcium level via its EF-hand domains channel, which senses calcium level via its EF-hand domains . MICU1 and MICU2 (or MICU3) form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium . At low calcium levels, MICU1 occludes the pore of the MCU channel, preventing mitochondrial calcium uptake . At higher calcium levels, calcium-binding to MICU1 and MICU2 (or MICU3) induces a conformational change that weakens MCU-MICU1 interactions and moves the MICU1-MICU2 heterodimer away from the pore, allowing calcium permeation through the MCU channel .

APPLICATION

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

WB	1:1000 - 1:2000
IHC	1:100 - 1:200
IF/ICC	1:100 - 1:200

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

Description	Mouse monoclonal antibody to MICU1
Specificity	Recognizes endogenous levels of MICU1 protein.
Antibody Type	Primary antibody
Immunogen	Recombinant protein corresponding to human MICU1.
Purification	Affinity chromatography
Molecular Weight	Predicted: 54 kD; Observed: 54 kD
Form/Buffer	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Alternative Names	CALC; CBARA1; Calcium uptake protein 1 mitochondrial; Atopy-related autoantigen CALC; ara CALC; Calcium-binding atopy-related autoantigen 1; allergen Hom s 4
Gene Symbol	MICU1
Entrez Gene	10367(Human)
SwissProt	Q9BPX6(Human)

*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact info@arexbio.com or your local distributor.

*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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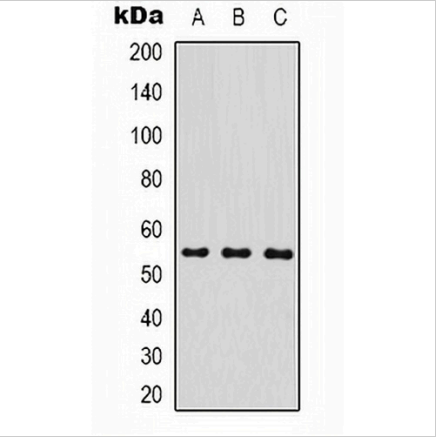
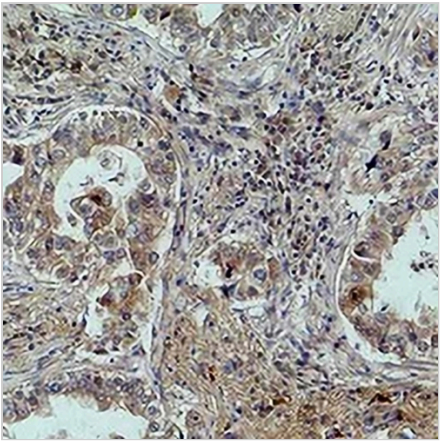
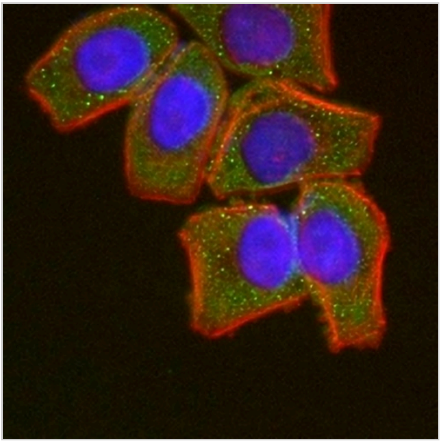
DATA



Western blot analysis of MICU1 expression in MCF7 (A), mouse brain (B), rat brain (C) whole cell lysates. (Predicted band size: 54 kD; Observed band size: 54 kD)



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.



Immunofluorescent analysis of MICU1 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AREX® Fluor 488 -conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AREX® Fluor 594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

STORAGE

Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.