

Datasheet for ABIN7043334
anti-MICU1 antibody (Intracellular)



[Go to Product page](#)

1 Image

Overview

Quantity:	25 µL
Target:	MICU1
Binding Specificity:	AA 313-327, Intracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MICU1 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Mitochondrial Calcium Uptake Protein 1 (CBARA1)
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EFERHDPVDGRISER, corresponding to amino acid residues 313-327 of rat MICU1
Isotype:	IgG
Specificity:	Intracellular
Cross-Reactivity:	Mouse, Rat
Predicted Reactivity:	Mouse - identical, human - 14,15 amino acid residues identical
Characteristics:	Anti-MICU1 Antibody (ABIN7043334, ABIN7044111 and ABIN7044112) is a highly specific antibody directed against an epitope of the rat Mitochondrial calcium uptake protein 1

Product Details

(CBARA1). The antibody can be used in western blot analysis. It has been designed to recognize CBARA1 from rat, mouse, and human samples.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: MICU1

Alternative Name: MICU1 ([MICU1 Products](#))

Background: Mitochondrial calcium uptake protein 1, Calcium-binding atopy-related autoantigen 1 homolog, ara CALC, CBARA1, MPXPS, Mitochondrial Ca²⁺ uptake was found to be mediated by the mitochondrial Ca²⁺ uniporter (MCU). MCU is a ruthenium-red-sensitive and highly selective Ca²⁺ ion channel that uptakes massive amount of Ca²⁺ across the inner membrane¹. MICU1 is a ~54 kDa. protein with an amino-terminal mitochondrial targeting sequence, a predicted transmembrane helix, and a cytosolic C-terminus containing two classical EF-hand Ca²⁺-binding domains². Mitochondrial calcium uptake 1 (MICU1) protein was identified as an essential element of mitochondrial Ca²⁺ uptake. MCU initially takes up Ca²⁺ very rapidly, but when [Ca²⁺] inevitably increases inside the matrix, MICU1 binds Ca²⁺ through its EF-hand domains, exerting an inhibitory role on MCU-dependent Ca²⁺ entry³. RNA expression of MICU1 is strongly correlated across a variety of tissues including: stomach, kidney, small and large intestine, cerebral cortex, cerebellum, hypothalamus, spinal cord and skeletal muscles⁴. Loss-of-function mutations in MICU1 causes a brain and muscle disorder linked to primary alterations in mitochondrial Ca²⁺ signaling⁵.

Alternative names: MICU1, Mitochondrial calcium uptake protein 1, Calcium-binding atopy-related autoantigen 1 homolog, ara CALC, CBARA1, MPXPS

Gene ID: 365567

NCBI Accession: [NM_006077](#)

UniProt: [Q6P6Q9](#)

Application Details

Application Notes: Antigen preadsorption control: 1 µg peptide per 1 µg antibody
Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A
Application Dilutions Western blot wb: 1:200

Application Details

Comment: Negative Control: (ABIN7235963)
Blocking Peptide: (ABIN7235963)

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Reconstitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.

Concentration: 1 mg/mL

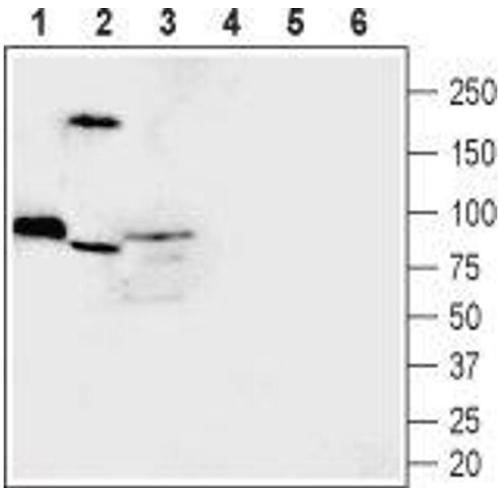
Buffer: PBS pH 7.4

Storage: 4 °C, -20 °C

Storage Comment: Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C.

Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Western Blotting

Image 1. Western blot analysis of rat skeletal muscle (lanes 1 and 4), mouse kidney (lanes 2 and 5) and rat brain (lanes 3 and 6) lysates: - 1-3. Anti-MICU1 Antibody (ABIN7043334, ABIN7044111 and ABIN7044112), (1:200). 4-6. Anti-MICU1 Antibody, preincubated with MICU1 Blocking Peptide (#BLP-CC322).