

Mitofilin (Y-17): sc-79636

BACKGROUND

Cristae are highly folded inner mitochondrial membrane compartments that are studded with cytochromes and ATP synthase proteins and function to provide a large surface area upon which cellular respiration can occur. Mitofilin, also known as IMMT, HMP, PIG4 or P87/89, is a 758 amino acid inner mitochondrial membrane protein that is preferentially expressed in heart tissue. Existing as three alternatively spliced isoforms, Mitofilin functions to control mitochondrial cristae morphology, including the formation and organization of cristae junctions and normal tubular cristae. Due to its role in mediating cristae structure and function, Mitofilin is essential for normal mitochondrial function and is, thus, critical to overall cell survival.

REFERENCES

1. Icho, T., et al. 1994. A novel human gene that is preferentially transcribed in heart muscle. *Gene* 144: 301-306.
2. Odgren, P.R., et al. 1996. Molecular characterization of Mitofilin (HMP), a mitochondria-associated protein with predicted coiled-coil and intermembrane space targeting domains. *J. Cell Sci.* 109: 2253-2264.
3. Gieffers, C., et al. 1997. Mitofilin is a transmembrane protein of the inner mitochondrial membrane expressed as two isoforms. *Exp. Cell Res.* 232: 395-399.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600378. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. John, G.B., et al. 2005. The mitochondrial inner membrane protein Mitofilin controls *cristae* morphology. *Mol. Biol. Cell* 16: 1543-1554.
6. Xie, J., et al. 2007. The mitochondrial inner membrane protein Mitofilin exists as a complex with SAM50, metaxins 1 and 2, coiled-coil-helix coiled-coil-helix domain-containing protein 3 and 6 and DnaJC11. *FEBS Lett.* 581: 3545-3549.

CHROMOSOMAL LOCATION

Genetic locus: IMMT (human) mapping to 2p11.2; Immt (mouse) mapping to 6 C1.

SOURCE

Mitofilin (Y-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mitofilin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79636 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Mitofilin (Y-17) is recommended for detection of Mitofilin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mitofilin siRNA (h): sc-75791, Mitofilin siRNA (m): sc-75792, Mitofilin shRNA Plasmid (h): sc-75791-SH, Mitofilin shRNA Plasmid (m): sc-75792-SH, Mitofilin shRNA (h) Lentiviral Particles: sc-75791-V and Mitofilin shRNA (m) Lentiviral Particles: sc-75792-V.

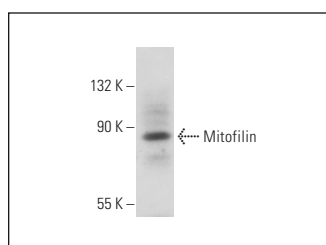
Molecular Weight of Mitofilin isoforms: 88/90 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Mitofilin (Y-17): sc-79636. Western blot analysis of Mitofilin expression in A-10 whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **Mitofilin (D-3): sc-390707** or **Mitofilin (B-10): sc-390706**, our highly recommended monoclonal alternatives to Mitofilin (Y-17).