Mitofilin (D-3): sc-390707

**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, RIG4 or P87/88, 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.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Mitofilin (D-3) is a mouse monoclonal antibody raised against amino acids 364–657 mapping within an internal region of Mitofilin of human origin.

**PRODUCT**

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

Mitofilin (D-3) is available conjugated to agarose (sc-390707 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390707 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocerythrin (sc-390707 PE), fluorescein (sc-390707 FITC), Alexa Fluor® 488 (sc-390707 AF488), Alexa Fluor® 546 (sc-390707 AF546), Alexa Fluor® 594 (sc-390707 AF594) or Alexa Fluor® 647 (sc-390707 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390707 AF680) or Alexa Fluor® 790 (sc-390707 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**RESEARCH USE**

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

**APPLICATIONS**

Mitofilin (D-3) is recommended for detection of Mitofilin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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-673 cell lysate: sc-2414, 3T3-L1 cell lysate: sc-2243 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

Mitofilin (D-3): sc-390707 Western blot analysis of Mitofilin expression in HeLa (A), A-673 (B), Saos-2 (C), 3T3-L1 (D), 3T3-L1 (E) and A-10 (F) whole cell lysates.

Mitofilin (D-3): sc-390707. Immunoperoxidase staining of formalin fixed, paraffin-embedded lower stomach tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.

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