

Mitofilin

Mouse Monoclonal IgG1

IP-MS Validated

Cat. # MM0271

Size 100 μ l

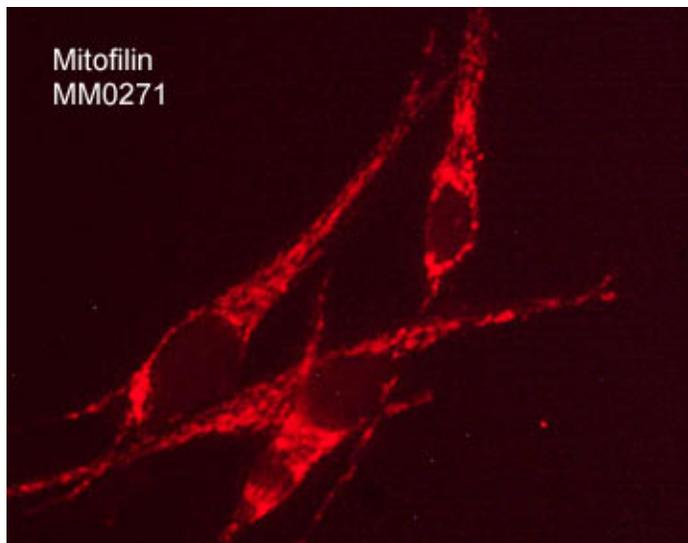
Background

Mitofilin is an important organizer of mitochondrial architecture. The mitofilin sequence encodes a polypeptide with a central alpha-helical region with predicted coiled coil domains flanked by globular amino and carboxy termini. There are four isoforms of mitofilin, and 90/91 kDa mitofilin forms have been observed in western blots. Mitofilin is located in the inner mitochondrial membrane and interacts with several protein complexes of the outer membrane, thereby generating contact sites between the two membrane systems of mitochondria. These mitofilin-containing hetero-oligomeric protein complexes form the mitochondrial inner membrane organizing system (MINOS). MINOS integrity is required for the structural maintenance of the inner mitochondrial membrane. This mitochondrial region contains cristae membranes that form large tubular invaginations that protrude into the mitochondrial matrix. These cristae membranes contain the enzyme complexes of the oxidative phosphorylation machinery. MINOS deficiency causes loss of crista junction structures and the detachment of cristae from the inner boundary membrane.

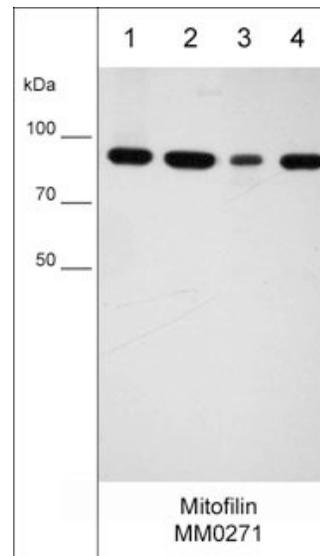
Background References

Odgren PR, et al. (1996) J Cell Sci. 109(9):2253.

Zerbes RM, et al. (2012) Biol Chem. 393(11):1247.



Immunocytochemical labeling of mitofilin in methanol-acetone (1:1) fixed human MeWo cells. The cells were labeled with mouse monoclonal anti-mitofilin (clone M027). The antibody was detected using goat anti-mouse DyLight® 594.



Western blot analysis of human cell lysates: MeWo (lane 1), MDA-MB-231 (lane 2), PC3 (lane 3), and A549 (lane 4). The blot was probed with mouse monoclonal anti-mitofilin (MM0271) at 1:1000.

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www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
info@ecmbiosciences.com

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Immunogen

Clone M027 was generated from a proprietary antigen related to human mitofilin expressed in the A431 epidermoid carcinoma cell line.

Buffer and Storage

Mouse monoclonal antibody purified with protein G chromatography is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
ICC	1:100
IP	1:100

Species Reactivity

Hu

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

Clone M027 detects a 90 kDa* band corresponding to the molecular mass of mitofilin on SDS-PAGE immunoblots of native or denatured human PC3, MDA-MB-231, A431, A549, and MeWo cell lysates, as well as human breast, skin, and brain tissues. In addition, mass spectrometry analysis of immunoprecipitates using MM0271 in human A431 cell lysates confirms this antibody only detects Mitofilin protein. The antibody can be used for multiple applications including ELISA, western blot, immunocytochemistry, and immunoprecipitation.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

CK7700 Cell Structure Labeling Immunocytochemistry Kit

SM3591 Smac/DIABLO (C-terminal region) Mouse Monoclonal

HM4381 Hsp60 (N-terminal region) Mouse Monoclonal

GM3421 GM130 (C-terminal region) Mouse Monoclonal

CK7720 Cytoskeletal Filament Labeling Immunocytochemistry Kit

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