PRODUCT INFORMATION

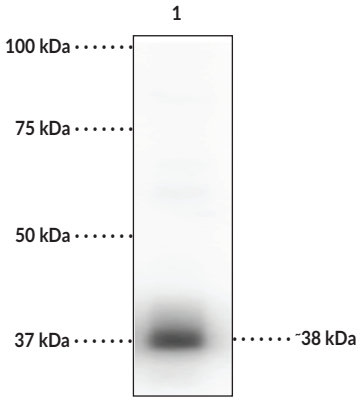
Mitochondrial Fission Factor Polyclonal Antibody

Item No. 29284

Overview and Properties

Contents:	This vial contains 100 µl of polyclonal antibody neat serum.
Synonyms:	Chromosome Open Reading Frame 33, MFF
Immunogen:	Recombinant human MFF
Molecular Weight:	~38 kDa
Species Reactivity:	(+) Human, bovine, mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.09% sodium azide
Host:	Rabbit
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:200 for IHC and 1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Whole brain lysate

WB of mouse whole brain lysate showing specific immunolabeling of the ~38 kDa MFF protein.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Mitochondrial fission factor (MFF) is a tail-anchored membrane protein with roles in mitochondrial and peroxisomal fission.[1,2] It is localized to the outer membrane of mitochondria, as well as the membrane-restricted regions of elongated peroxisomes. It is composed of a cytoplasmic N-terminus that functions as a receptor for the GTPases dynamin-related protein 1 (DRP1) and dynamin-like protein 1 (DLP1), a central coiled-coil domain, and a C-terminal transmembrane domain.[3] siRNA knockdown of *MFF* inhibits DRP1 recruitment and mitochondrial fission induced by loss of mitochondrial membrane potential and delays cytochrome *c* release from mitochondria and apoptotic progression *in vitro*.[1,3] MicroRNA knockdown of *MFF* inhibits norepinephrine-induced hypertrophy and mitochondrial fission in isolated neonatal rat ventricular cells.[3] *MFF* is overexpressed in various cancer cells and knockdown of *MFF* reduces tumor volume in a PC3 mouse xenograft model.[4] Cayman's Mitochondrial Fission Factor Polyclonal Antibody can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes MFF at approximately 38 kDa from human, bovine, and mouse samples.

References

1. Gandre-Babbe, S. and van der Bliek, A.M. The novel tail-anchored membrane protein Mff controls mitochondrial and peroxisomal fission in mammalian cells. *Mol. Biol. Cell* **19(6)**, 2402-2412 (2008).
2. Itoyama, A., Michiyuki, S., Honsho, M., *et al*. Mff functions with Pex11pβ and DLP1 in peroxisomal fission. *Biol. Open* **2(10)**, 998-1006 (2013).
3. Sun, Y.L., Li, S.H., Yang, L., *et al*. miR-376b-3p attenuates mitochondrial fission and cardiac hypertrophy by targeting mitochondrial fission factor. *Clin. Exp. Pharmacol. Physiol*. **45(8)**, 779-787 (2018).
4. Seo, J.H., Agarwal, E., Chae, Y.C., *et al*. Mitochondrial fission factor is a novel Myc-dependent regulator of mitochondrial permeability in cancer. *EBioMedicine* **48**, 353-363 (2019).

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