

MFF (C-11): sc-398731

BACKGROUND

MFF (mitochondrial fission factor), also known as GL004, AD030 or AD033, is a 342 amino acid single-pass type IV membrane protein of the mitochondrial outer membrane that belongs to the tango11 family. Involved in mitochondrial and peroxisomal fission, MFF is abundantly expressed in stomach, heart, muscle, liver, brain and kidney. MFF exists as five alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 2q36.3. As the second largest human chromosome, chromosome 2 consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome, is due to mutations in the ALMS1 gene.

CHROMOSOMAL LOCATION

Genetic locus: MFF (human) mapping to 2q36.3; Mff (mouse) mapping to 1 C5.

SOURCE

MFF (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 91-113 within a cytoplasmic domain of MFF of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398731 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MFF (C-11) is recommended for detection of MFF 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MFF siRNA (h): sc-94736, MFF siRNA (m): sc-149404, MFF shRNA Plasmid (h): sc-94736-SH, MFF shRNA Plasmid (m): sc-149404-SH, MFF shRNA (h) Lentiviral Particles: sc-94736-V and MFF shRNA (m) Lentiviral Particles: sc-149404-V.

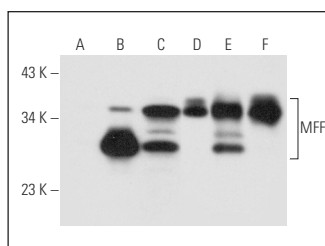
Molecular Weight of MFF isoforms: 38/33/28/25/27 kDa.

Positive Controls: MFF (m): 293T Lysate: sc-121620, HeLa whole cell lysate: sc-2200 or rat brain extract: sc-2392.

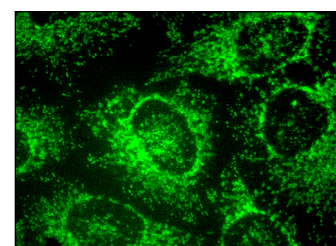
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MFF (C-11): sc-398731. Western blot analysis of MFF expression in non-transfected 293T: sc-117752 (A), mouse MFF transfected 293T: sc-121620 (B) and HeLa (C) whole cell lysates and human cortex (D), mouse brain (E) and rat brain (F) tissue extracts.



MFF (C-11): sc-398731. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

- Lee, L., et al. 2019. Parkin-mediated ubiquitination contributes to the constitutive turnover of mitochondrial fission factor (MFF). *PLoS ONE* 14: e0213116.
- Geng, J., et al. 2019. Andrographolide alleviates parkinsonism in MPTP-PD mice via targeting DRP1-mediated mitochondrial fission. *Br. J. Pharmacol.* 176: 4574-4591.
- Pereira, G.C., et al. 2020. Hexokinase II dissociation alone cannot account for changes in heart mitochondrial function, morphology and sensitivity to permeability transition pore opening following ischemia. *PLoS ONE* 15: e0234653.
- Brustovetsky, T., et al. 2021. CRMP2 is involved in regulation of mitochondrial morphology and motility in neurons. *Cells* 10: 2781.
- Brustovetsky, T., et al. 2021. Involvement of CRMP2 in regulation of mitochondrial morphology and motility in Huntington's disease. *Cells* 10: 3172.
- Brustovetsky, T., et al. 2023. CRMP2 participates in regulating mitochondrial morphology and motility in Alzheimer's disease. *Cells* 12: 1287.

RESEARCH USE

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

PROTOCOLS

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