

FMNL1 (C-5): sc-390023

BACKGROUND

Formin-like protein 1 (FMNL1, formin-related protein, Frl) is a 1,094 amino acid protein encoded by the mouse gene *Fmnl1*. FMNL1 belongs to the formin homology family and has one DAD (diaphanous autoregulatory domain), one FH2 (formin homology 2) domain, and one GBD/FH3 (Rho GTPase-binding/formin homology 3) domain. Formins are a conserved class of proteins expressed in all eukaryotes, with known roles in generating cellular Actin-based structures. FMNL1 is believed to play a role in the control of cell motility and survival of macrophages. FMNL1 has been found to interact with Rac 1, PFN1 and PFN2 and can block apoptotic cell death and inhibit cell adhesion and migration. FMNL1 is located in the cytoplasm and is highly expressed in the spleen, lymph nodes and bone marrow cells.

REFERENCES

1. Yayoshi-Yamamoto, S., et al. 2000. FRL, a novel formin-related protein, binds to Rac and regulates cell motility and survival of macrophages. *Mol. Cell Biol.* 20: 6872-6881.
2. Katoh, M. and Katoh, M. 2003. Identification and characterization of human FMNL1, FMNL2 and FMNL3 genes in silico. *Int. J. Oncol.* 22: 1161-1168.
3. Katoh, M. and Katoh, M. 2004. Identification and characterization of the human FMN1 gene in silico. *Int. J. Mol. Med.* 14: 121-126.

CHROMOSOMAL LOCATION

Genetic locus: FMNL1 (human) mapping to 17q21.31.

SOURCE

FMNL1 (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 605-641 within an internal region of FMNL1 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.

FMNL1 (C-5) is available conjugated to agarose (sc-390023 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390023 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390023 PE), fluorescein (sc-390023 FITC), Alexa Fluor® 488 (sc-390023 AF488), Alexa Fluor® 546 (sc-390023 AF546), Alexa Fluor® 594 (sc-390023 AF594) or Alexa Fluor® 647 (sc-390023 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390023 AF680) or Alexa Fluor® 790 (sc-390023 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390023 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

FMNL1 (C-5) is recommended for detection of FMNL1 of 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 FMNL1 siRNA (h): sc-62325, FMNL1 shRNA Plasmid (h): sc-62325-SH and FMNL1 shRNA (h) Lentiviral Particles: sc-62325-V.

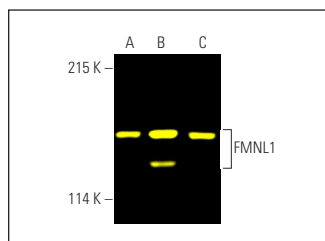
Molecular Weight of FMNL1: 160 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, MOLT-4 cell lysate: sc-2233 or Jurkat whole cell lysate: sc-2204.

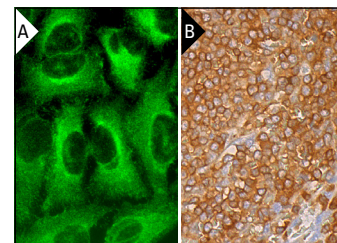
RECOMMENDED SUPPORT REAGENTS

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-2003 (0.5 ml agarose/2.0 ml). 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



FMNL1 (C-5) Alexa Fluor® 488: sc-390023 AF488. Direct fluorescent western blot analysis of FMNL1 expression in MOLT-4 (A), HuT 78 (B) and Jurkat (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



FMNL1 (C-5): sc-390023. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of cells in white pulp and cells in red pulp (B).

SELECT PRODUCT CITATIONS

1. Bello-Gamboa, A., et al. 2020. Actin reorganization at the centrosomal area and the immune synapse regulates polarized secretory traffic of multivesicular bodies in T lymphocytes. *J. Extracell. Vesicles* 9: 1759926.

RESEARCH USE

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