

FMNL1 (2369E4a): sc-81274

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., Taniuchi, I. and Watanabe, T. 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.
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4. Harris, E.S., Li, F. and Higgs, H.N. 2004. The mouse formin, FRL α , slows Actin filament barbed end elongation, competes with capping protein, accelerates polymerization from monomers, and severs filaments. *J. Biol. Chem.* 279: 20076-20087.
5. Favaro, P.M., Traina, F., Vassallo, J., Brousset, P., Delsol, G., Costa, F.F. and Saad, S.T. 2006. High expression of FMNL1 protein in T non-Hodgkin's lymphomas. *Leuk. Res.* 30: 735-738.
6. Schwartzberg, P.L. 2007. Formin the way. *Immunity* 26: 139-141.
7. Gomez, T.S., Kumar, K., Medeiros, R.B., Shimizu, Y., Leibson, P.J. and Billadeau, D.D. 2007. Formins regulate the Actin-related protein 2/3 complex-independent polarization of the centrosome to the immunological synapse. *Immunity* 26: 177-190.

CHROMOSOMAL LOCATION

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

SOURCE

FMNL1 (2369E4a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of FMNL1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

PROTOCOLS

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

APPLICATIONS

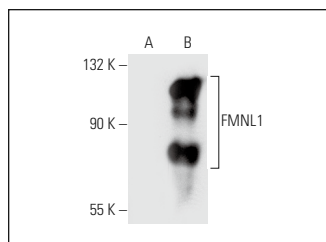
FMNL1 (2369E4a) is recommended for detection of FMNL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

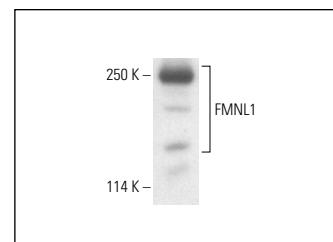
Molecular Weight of FMNL1: 160 kDa.

Positive Controls: FMNL1 (h): 293T lysate: sc-113684, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

DATA



FMNL1 (2369E4a): sc-81274. Western blot analysis of FMNL1 expression in non-transfected: sc-117752 (A) and human FMNL1 transfected: sc-113684 (B) 293T whole cell lysates.



FMNL1 (2369E4a): sc-81274. Western blot analysis of FMNL1 expression in HeLa whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Miller, M.R. and Blystone, S.D. 2015. Human macrophages utilize the podosome formin FMNL1 for adhesion and migration. *Cellbio* 4: 1-11.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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