

FHOD1 (C-20): sc-46965

BACKGROUND

The limb deformity (ld) locus influences normal limb development and gives rise to alternative mRNAs that can translate into a family of protein products known as formins. Formins play a crucial role in cytoskeletal reorganization by influencing Actin filament assembly. The temporal genetic hierarchy influencing normal limb development can deregulate and mediate mammalian developmental syndromes. FHOD1 induces the formation of and associates with bundled Actin stress fibers in response to the activity of the Rho-ROCK cascade. It influences several cellular activities including cell migration, cytoskeletal arrangement, signal transduction and gene expression.

REFERENCES

1. Maas, R.L., Jepeal, L.I., Elfering, S.L., Holcombe, R.F., Morton, C.C., Eddy, R.L., Byers, M.G., Shows, T.B. and Leder, P. 1991. A human gene homologous to the formin gene residing at the murine limb deformity locus: chromosomal location and RFLPs. *Am. J. Hum. Gen.* 48: 687-695.
2. Wynshaw-Boris, A., Ryan, G., Deng, C.X., Chan, D.C., Jackson-Grusby, L., Larson, D., Dunmore, J.H. and Leder, P. 1997. The role of a single formin isoform in the limb and renal phenotypes of limb deformity. *Mol. Med.* 3: 372-384.
3. Leader, B. and Leder, P. 2000. Formin 2, a novel formin homology protein of the cappuccino subfamily, is highly expressed in the developing and adult central nervous system. *Mech. Dev.* 93: 221-231.
4. O'Rourke, D.A., Liu, Z.X., Sellin, L., Spokes, K., Zeller, R. and Cantley, L.G. 2000. Hepatocyte growth factor induces MAPK-dependent formin IV translocation in renal epithelial cells. *J. Am. Soc. Nephrol.* 11: 2212-2221.
5. Tanaka, K. 2000. Formin family proteins in cytoskeletal control. *Biochem. Biophys. Res. Commun.* 267: 479-481.
6. Sawin, K.E. 2002. Cell polarity: following formin function. *Curr. Biol.* 12: R6-R8.
7. Westendorf, J.J. and Koka, S. 2004. Identification of FHOD1-binding proteins and mechanisms of FHOD1-regulated Actin dynamics. *J. Cell. Biochem.* 92: 29-41.
8. Gasteier, J.E., Schroeder, S., Muranyi, W., Madrid, R., Benichou, S. and Fackler, O.T. 2005. FHOD1 coordinates Actin filament and microtubule alignment to mediate cell elongation. *Exp. Cell Res.* 306: 192-202.

CHROMOSOMAL LOCATION

Genetic locus: FHOD1 (human) mapping to 16q22; Fhod1 (mouse) mapping to 8 D3.

SOURCE

FHOD1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FHOD1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46965 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FHOD1 (C-20) is recommended for detection of FHOD1 of mouse and human origin by Western Blotting (starting dilution 1:200, 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 FHOD1 siRNA (h): sc-60635, FHOD1 siRNA (m): sc-155893, FHOD1 shRNA Plasmid (h): sc-60635-SH, FHOD1 shRNA Plasmid (m): sc-155893-SH, FHOD1 shRNA (h) Lentiviral Particles: sc-60635-V and FHOD1 shRNA (m) Lentiviral Particles: sc-155893-V.

Molecular Weight of FHOD1: 128 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Takeya, R., Taniguchi, K., Narumiya, S. and Sumimoto, H. 2008. The mammalian formin FHOD1 is activated through phosphorylation by ROCK and mediates Thrombin-induced stress fibre formation in endothelial cells. *EMBO J.* 27: 618-628.

RESEARCH USE

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

PROTOCOLS

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


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Try **FHOD1 (D-6): sc-365437** or **FHOD1 (B-6): sc-365433**, our highly recommended monoclonal alternatives to FHOD1 (C-20).