

Formin 2 (H-65): sc-50399

BACKGROUND

The temporal genetic hierarchy influencing normal limb development can deregulate and mediate mammalian developmental syndromes. In mice, the limb deformity (Id) locus influences normal limb development and gives rise to alternative mRNAs that can translate into a family of proteins known as formins. Formins play a crucial role in cytoskeletal reorganization by influencing Actin filament assembly. Formins co-localize with the actin cytoskeleton and can translocate into the cell cytosol and into the nucleus in an HGF-dependent manner. Vertebrate nuclear formins can control polarizing activity in limb buds through establishment of a Sonic hedgehog/FGF-4 feedback loop. Deficiency mutations at the mammalian Id locus lead to profound developmental defects in limb and kidney formation. The human Formin 1 and 2 genes map to chromosome 15q13.3 and 1q43, respectively.

REFERENCES

1. Maas, R.L., et al. 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., et al. 1997. The role of a single Formin isoform in the limb and renal phenotypes of limb deformity. *Mol. Med.* 3: 372-384.
3. Zeller, R., et al. 1999. Formin defines a large family of morphoregulatory genes and functions in establishment of the polarizing region. *Cell Tissue Res.* 296: 85-93.
4. Tanaka, K., et al. 2000. Formin family proteins in cytoskeletal control. *Biochem. Biophys. Res. Commun.* 267: 479-481.
5. O'Rourke, D.A., et al. 2000. Hepatocyte growth factor induces MAPK-dependent Formin IV translocation in renal epithelial cells. *J. Am. Soc. Nephrol.* 11: 2212-2221.
6. Leader, B., et al. 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.
7. Sawin, K.E., et al. 2002. Cell polarity: following Formin function. *Curr. Biol.* 12: R6-R8.
8. LocusLink Report (LocusID: 2325). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: FMN2 (human) mapping to 1q43; Fmn2 (mouse) mapping to 1 H3.

SOURCE

Formin 2 (H-65) is a rabbit polyclonal antibody raised against amino acids 159-223 mapping within an internal region of Formin 2 of human origin.

PRODUCT

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

APPLICATIONS

Formin 2 (H-65) is recommended for detection of Formin 2 of mouse, rat 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).

Formin 2 (H-65) is also recommended for detection of Formin 2 in additional species, including equine and canine.

Suitable for use as control antibody for Formin 2 siRNA (h): sc-43765, Formin 2 siRNA (m): sc-45895, Formin 2 shRNA Plasmid (h): sc-43765-SH, Formin 2 shRNA Plasmid (m): sc-45895-SH, Formin 2 shRNA (h) Lentiviral Particles: sc-43765-V and Formin 2 shRNA (m) Lentiviral Particles: sc-45895-V.

Molecular Weight of Formin 2: 195 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.

MONOS
Satisfaction
Guaranteed

Try **Formin 2 (C-3): sc-376787**, our highly recommended monoclonal alternative to Formin 2 (H-65).