

# Formin 1 (4F4): sc-517050

## 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. Genet.* 48: 687-695.
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3. Zeller, R., et al. 1999. Formin defines a large family of morphoregulatory genes and functions in establishment of the polarising region. *Cell Tissue Res.* 296: 85-93.
4. 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.
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6. O'Rourke, D.A., et al. 2000. Hepatocyte growth factor induces MAPK-dependent Formin 4 translocation in renal epithelial cells. *J. Am. Soc. Nephrol.* 11: 2212-2221.
7. Sawin, K.E. 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: FMN1 (human) mapping to 15q13.3.

## SOURCE

Formin 1 (4F4) is a mouse monoclonal antibody raised against amino acids 1-109 representing partial length Formin 1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

Formin 1 (4F4) is recommended for detection of Formin 1 of 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 Formin 1 siRNA (h): sc-89914, Formin 1 shRNA Plasmid (h): sc-89914-SH and Formin 1 shRNA (h) Lentiviral Particles: sc-89914-V.

Molecular Weight (predicted) of Formin 1 isoforms: 158/72/54/132 kDa.

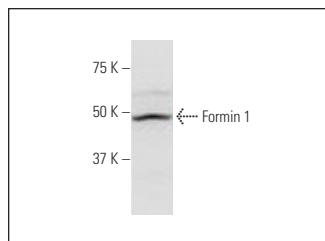
Molecular Weight (observed) of Formin 1: 169 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

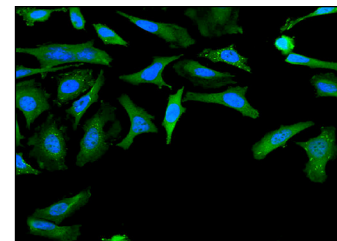
## RECOMMENDED SUPPORT REAGENTS

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, 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).

## DATA



Formin 1 (4F4); sc-517050. Western blot analysis of Formin 1 expression in Jurkat whole cell lysate.



Formin 1 (4F4); sc-517050. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.