

# Formin 2 (C-3): sc-376787

## 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.
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 polarising region. *Cell Tissue Res.* 296: 85-93.
4. Tanaka, K. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Formin 2 (C-3) is a mouse monoclonal antibody raised against amino acids 520-619 mapping within an internal region of Formin 2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Formin 2 (C-3) is available conjugated to agarose (sc-376787 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376787 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376787 PE), fluorescein (sc-376787 FITC), Alexa Fluor® 488 (sc-376787 AF488), Alexa Fluor® 546 (sc-376787 AF546), Alexa Fluor® 594 (sc-376787 AF594) or Alexa Fluor® 647 (sc-376787 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376787 AF680) or Alexa Fluor® 790 (sc-376787 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Formin 2 (C-3) is recommended for detection of Formin 2 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

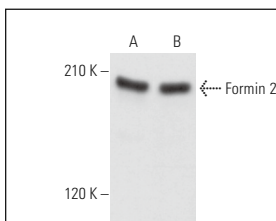
Molecular Weight of Formin 2: 195 kDa.

Positive Controls: F9 cell lysate: sc-2245, IMR-32 cell lysate: sc-2409 or U-251-MG whole cell lysates: sc-364176.

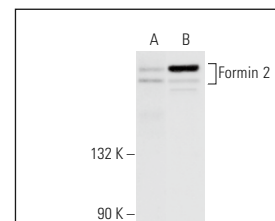
## RECOMMENDED SUPPORT REAGENTS

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-2048. 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.

## DATA



Formin 2 (C-3): sc-376787. Western blot analysis of Formin 2 expression in F9 (A) and U-251-MG (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Formin 2 (C-3): sc-376787. Western blot analysis of Formin 2 expression in IMR-32 (A) and U-251-MG (B) whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.