

# FHOD1 (D-6): sc-365437

## 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., 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.

## CHROMOSOMAL LOCATION

Genetic locus: FHOD1 (human) mapping to 16q22.1.

## SOURCE

FHOD1 (D-6) is a mouse monoclonal antibody raised against amino acids 34-110 mapping near the N-terminus of FHOD1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FHOD1 (D-6) is available conjugated to agarose (sc-365437 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365437 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365437 PE), fluorescein (sc-365437 FITC), Alexa Fluor® 488 (sc-365437 AF488), Alexa Fluor® 546 (sc-365437 AF546), Alexa Fluor® 594 (sc-365437 AF594) or Alexa Fluor® 647 (sc-365437 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365437 AF680) or Alexa Fluor® 790 (sc-365437 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

FHOD1 (D-6) is recommended for detection of FHOD1 of 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 FHOD1 siRNA (h): sc-60635, FHOD1 shRNA Plasmid (h): sc-60635-SH and FHOD1 shRNA (h) Lentiviral Particles: sc-60635-V.

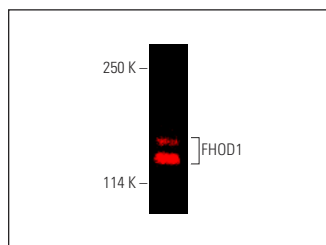
Molecular Weight of FHOD1: 128 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

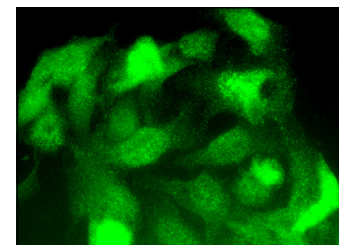
## RECOMMENDED SUPPORT REAGENTS

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



FHOD1 (D-6): sc-365437. Near-Infrared western blot analysis of FHOD1 expression in K-562 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>2b</sub> BP-CFL 790: sc-542750.



FHOD1 (D-6): sc-365437. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and nuclear localization.

## SELECT PRODUCT CITATIONS

1. Panzer, L., et al. 2016. The formins FHOD1 and INF2 regulate inter- and intra-structural contractility of podosomes. *J. Cell Sci.* 129: 298-313.
2. Zhu, R., et al. 2017. Centrifugal displacement of nuclei reveals multiple LINC complex mechanisms for homeostatic nuclear positioning. *Curr. Biol.* 27: 3097-3110.e5.
3. Shi, X., et al. 2019. Active FHOD1 promotes the formation of functional actin stress fibers. *Biochem. J.* 476: 2953-2963.
4. Ivanov, S.S., et al. 2021. *Neisseria gonorrhoeae* subverts formin-dependent Actin polymerization to colonize human macrophages. *PLoS Pathog.* 17: e1010184.
5. Shi, X., et al. 2022. Actin nucleator formins regulate the tension-buffering function of caveolin-1. *J. Mol. Cell Biol.* 13: 876-888.

## 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.