

# frizzled-3 (C-1): sc-376105

## BACKGROUND

The frizzled gene, originally identified in *Drosophila melanogaster*, is involved in the development of tissue polarity. The mammalian homolog of frizzled as well as several secreted mammalian frizzled-related proteins (FRPs) have been described. The frizzled proteins contain seven transmembrane domains, a cysteine-rich domain in the extracellular region and a carboxy terminal Ser/Thr-xxx-Val motif. They function as receptors for Wnt and are generally coupled to G proteins. The FRPs are involved in the Wnt signaling pathway by regulating the intracellular levels of  $\beta$ -catenin. Frizzled-3 (Fz-3) is a widely expressed, 666 amino acid protein, with relatively high expression in the central nervous system. Frizzled-3 has been associated with schizophrenia and has been shown to play a role in neural crest formation and hair follicle development. Two named isoforms of frizzled-3 exist as a result of alternative splicing events.

## CHROMOSOMAL LOCATION

Genetic locus: FZD3 (human) mapping to 8p21.1; Fzd3 (mouse) mapping to 14 D1.

## SOURCE

frizzled-3 (C-1) is a mouse monoclonal antibody raised against amino acids 501-666 mapping at the C-terminus of frizzled-3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

frizzled-3 (C-1) is available conjugated to agarose (sc-376105 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376105 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376105 PE), fluorescein (sc-376105 FITC), Alexa Fluor® 488 (sc-376105 AF488), Alexa Fluor® 546 (sc-376105 AF546), Alexa Fluor® 594 (sc-376105 AF594) or Alexa Fluor® 647 (sc-376105 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376105 AF680) or Alexa Fluor® 790 (sc-376105 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

frizzled-3 (C-1) is recommended for detection of frizzled-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

frizzled-3 (C-1) is also recommended for detection of frizzled-3 in additional species, including equine and bovine.

Suitable for use as control antibody for frizzled-3 siRNA (h): sc-39981, frizzled-3 siRNA (m): sc-39982, frizzled-3 shRNA Plasmid (h): sc-39981-SH, frizzled-3 shRNA Plasmid (m): sc-39982-SH, frizzled-3 shRNA (h) Lentiviral Particles: sc-39981-V and frizzled-3 shRNA (m) Lentiviral Particles: sc-39982-V.

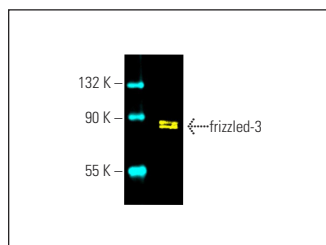
Molecular Weight of frizzled-3: 76 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

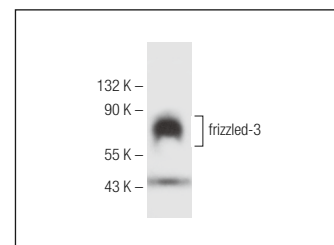
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



frizzled-3 (C-1) Alexa Fluor® 488: sc-376105 AF488. Direct fluorescent western blot analysis of frizzled-3 expression in Y79 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-516791.



frizzled-3 (C-1): sc-376105. Western blot analysis of frizzled-3 expression in Y79 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Li, L., et al. 2019. Planar cell polarity protein Dishevelled 3 (Dvl3) regulates ectoplasmic specialization (ES) dynamics in the testis through changes in cytoskeletal organization. *Cell Death Dis.* 10: 194.
- Milosevic, V., et al. 2020. Wnt/IL-1 $\beta$ /IL-8 autocrine circuitries control chemoresistance in mesothelioma initiating cells by inducing ABCB5. *Int. J. Cancer* 146: 192-207.
- Rogan, M.R., et al. 2021. *Ehrlichia chaffeensis* TRP120 is a Wnt ligand mimetic that interacts with Wnt receptors and contains a novel repetitive short linear motif that activates Wnt signaling. *mSphere* 6: e00216-21.
- Meng, Z., et al. 2023. Frizzled-3 suppression overcomes multidrug chemoresistance by Wnt/ $\beta$ -catenin signaling pathway inhibition in hepatocellular carcinoma cells. *J. Chemother.* 35: 653-661.

## 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA