

frizzled-3 (E-17): sc-68332

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 β -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.

REFERENCES

1. Kirikoshi, H., et al. 2000. Molecular cloning and genomic structure of human frizzled-3 at chromosome 8p21. *Biochem. Biophys. Res. Commun.* 271: 8-14.
2. Sala, C.F., et al. 2000. Identification, gene structure, and expression of human frizzled-3 (FZD3). *Biochem. Biophys. Res. Commun.* 273: 27-34.
3. Tan, C., et al. 2001. Kermit, a frizzled interacting protein, regulates frizzled-3 signaling in neural crest development. *Development* 128: 3665-3674.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606143. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Wang, Y., et al. 2002. Frizzled-3 is required for the development of major fiber tracts in the rostral CNS. *J. Neurosci.* 22: 8563-8573.
6. Katsu, T., et al. 2003. The human frizzled-3 (FZD3) gene on chromosome 8p21, a receptor gene for Wnt ligands, is associated with the susceptibility to schizophrenia. *Neurosci. Lett.* 353: 53-56.
7. Jeong, S.H., et al. 2006. Investigation of genetic association between human frizzled homolog 3 gene (FZD3) and schizophrenia: results in a Korean population and evidence from meta-analysis. *Psychiatry Res.* 143: 1-11.
8. Kishimoto, M., et al. 2008. The frizzled-3 gene is associated with methamphetamine psychosis in the Japanese population. *Behav. Brain Funct.* 4: 37.
9. Bengochea, A., et al. 2008. Common dysregulation of Wnt/frizzled receptor elements in human hepatocellular carcinoma. *Br. J. Cancer* 99: 143-150.

CHROMOSOMAL LOCATION

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

SOURCE

frizzled-3 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of frizzled-3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-68332 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

frizzled-3 (E-17) is recommended for detection of frizzled-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (E-17) is also recommended for detection of frizzled-3 in additional species, including equine, canine, bovine, porcine and avian.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

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Try **frizzled-3 (C-1): sc-376105**, our highly recommended monoclonal alternative to frizzled-3 (E-17).