SANTA CRUZ BIOTECHNOLOGY, INC.

frizzled-1 (F-13): sc-30428

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 frizzled-1 gene is expressed in adult heart, placenta, lung, kidney, pancreas, prostate and ovary and in fetal lung and kidney.

REFERENCES

1. Wang, Y., et al. 1996. A large family of putative transmembrane receptors homologous to the product of the *Drosophila* tissue polarity gene fizzled. J. Biol. Chem. 271: 4468-4476.
2. Yang-Snyder, J., et al. 1996. A frizzled homolog functions in a vertebrate Wnt signaling pathway. Curr. Biol. 6: 1302-1306.
3. Rattner, A., et al. 1997. A family of secreted proteins contains homology to the cysteine-rich ligand-binding domain of frizzled receptors. Proc. Natl. Acad. Sci. USA 94: 2859-2863.
4. Finch, P.W., et al. 1997. Purification and molecular cloning of a secreted, Frizzled-related antagonist of Wnt action. Proc. Natl. Acad. Sci. USA 94: 6770-6775.
5. Melkonyan, H.S., et al. 1997. SARPs: a family of secreted apoptosis-related proteins. Proc. Natl. Acad. Sci. USA 94: 13636-13641.
6. Sagara, N., et al. 1998. Molecular cloning, differential expression, and chromosomal localization of human frizzled-1, frizzled-2, and frizzled-7. Biochem. Biophys. Res. Commun. 252: 117-122.
7. Tanaka, S., et al. 1998. A novel frizzled gene identified in human esophageal carcinoma mediates APC/β-catenin signals. Proc. Natl. Acad. Sci. USA 95: 10164-10169.

CHROMOSOMAL LOCATION

Genetic locus: FZD1 (human) mapping to 7q21.13; Fzd1 (mouse) mapping to 5 A1.

SOURCE

frizzled-1 (F-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of frizzled-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-30428 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

frizzled-1 (F-13) is recommended for detection of precursor and mature frizzled-1 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-1 (F-13) is also recommended for detection of precursor and mature frizzled-1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for frizzled-1 siRNA (h): sc-39977, frizzled-1 siRNA (m): sc-39978, frizzled-1 shRNA Plasmid (h): sc-39977-SH, frizzled-1 shRNA Plasmid (m): sc-39978-SH, frizzled-1 shRNA (h) Lentiviral Particles: sc-39977-V and frizzled-1 shRNA (m) Lentiviral Particles: sc-39978-V.

Molecular Weight of frizzled-1: 71 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.

SELECT PRODUCT CITATIONS

1. Honda, T., et al. 2010. PDZRN3 negatively regulates BMP-2-induced osteoblast differentiation through inhibition of Wnt signaling. Mol. Biol. Cell 21: 3269-3277.
2. Kasaai, B., et al. 2012. Spatial and temporal localization of WNT signaling proteins in a mouse model of distraction osteogenesis. J. Histochem. Cytochem. 60: 219-228.
3. Wang, S., et al. 2013. Role of Wnt1 and Fzd1 in the spinal cord pathogenesis of amyotrophic lateral sclerosis-transgenic mice. Biotechnol. Lett. 35: 1199-1207.

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.