

frizzled-7 (G-13): sc-31060

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: FRP-1 (also designated SARP2), FRP-2 (also designated SARP1), FRP-3, FRP-4 and SARP3 (also designated FRP-5), have been identified. 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. frizzled-7 has a Lys-Thr-X-X-Trp motif which is involved in the activation of the Wnt/ β -catenin signaling pathway. frizzled-7 is an integral membrane protein showing a high expression in adult skeletal muscle, fetal kidney, fetal lung, adult heart, brain and placenta. It is specifically expressed in squamous cell esophageal carcinomas.

REFERENCES

1. Wang, Y., et al. 1996. A large family of putative transmembrane receptors homologous to the product of the *Drosophila* tissue polarity gene frizzled. *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: FZD7 (human) mapping to 2q33.1; Fzd7 (mouse) mapping to 1 C1.3.

SOURCE

frizzled-7 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of frizzled-7 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-31060 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

frizzled-7 (G-13) is recommended for detection of frizzled-7 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-7 (G-13) is also recommended for detection of frizzled-7 in additional species, including canine and bovine.

Suitable for use as control antibody for frizzled-7 siRNA (h): sc-39990, frizzled-7 siRNA (m): sc-39991, frizzled-7 shRNA Plasmid (h): sc-39990-SH, frizzled-7 shRNA Plasmid (m): sc-39991-SH, frizzled-7 shRNA (h) Lentiviral Particles: sc-39990-V and frizzled-7 shRNA (m) Lentiviral Particles: sc-39991-V.

Molecular Weight of frizzled-7: 92 kDa.

Positive Controls: mouse postnatal kidney (P3): sc-24848, L8 cell lysate: sc-3807 or mouse heart extract: sc-2254.

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. Parody, J.P., et al. 2010. Attenuation of the Wnt/ β -catenin/TCF pathway by *in vivo* interferon- α 2b (IFN α 2b) treatment in preneoplastic rat livers. *Growth Factors* 28: 166-177.

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.



Try **frizzled-7 (4D9): sc-293261**, our highly recommended monoclonal alternative to frizzled-7 (G-13).