

# frizzled-7 (D-13): sc-31061

## 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/ $\beta$ -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/ $\beta$ -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 (D-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  $\mu$ 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  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

frizzled-7 (D-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 (D-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: A549 cell lysate: sc-2413.

## 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. Dormeyer, W., et al. 2008. Plasma membrane proteomics of human embryonic stem cells and human embryonal carcinoma cells. *J. Proteome Res.* 7: 2936-2951.

## 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) or our catalog for detailed protocols and support products.



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