

frizzled (C-17): sc-7429

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.

REFERENCES

1. Yang-Snyder, J., et al. 1996. A frizzled homolog functions in a vertebrate Wnt signaling pathway. *Curr. Biol.* 6: 1302-1306.
2. 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.
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.

CHROMOSOMAL LOCATION

Genetic locus: FZD1 (human) mapping to 7q21.13, FZD2 (human) mapping to 17q21.31; Fzd1 (mouse) mapping to 5 A1, Fzd2 (mouse) mapping to 11 E1.

SOURCE

frizzled (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of frizzled 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-7429 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

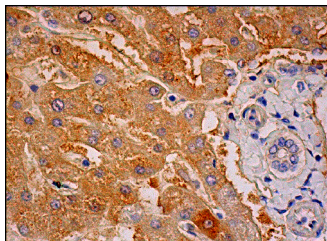
frizzled (C-17) is recommended for detection of frizzled-1 and frizzled-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (C-17) is also recommended for detection of frizzled-1 and frizzled-2 in additional species, including equine, canine, bovine, porcine and avian.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



frizzled (C-17): sc-7429. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Wiggan, O., et al. 2002. Pax-3 regulates morphogenetic cell behavior *in vitro* coincident with activation of a PCP/non-canonical Wnt-signaling cascade. *J. Cell Sci.* 115: 531-541.
2. Catherino, W.H., et al. 2003. Strategy for elucidating differentially expressed genes in leiomyomata identified by microarray technology. *Fertil. Steril.* 80: 282-290.
3. Calvisi, D.F., et al. 2005. Activation of the canonical Wnt/ β -catenin pathway confers growth advantages in c-Myc/E2F-1 transgenic mouse model of liver cancer. *J. Hepatol.* 42: 842-849.
4. Olivieri, A., et al. 2008. Frizzled-1 is down-regulated in follicular thyroid tumours and modulates growth and invasiveness. *J. Pathol.* 215: 87-96.
5. Williams, J.M., et al. 2010. The role of the Wnt family of secreted proteins in rat oval "stem" cell-based liver regeneration: Wnt1 drives differentiation. *Am. J. Pathol.* 176: 2732-2742.
6. Del Valle-Pérez, B., et al. 2011. Coordinated action of CK1 isoforms in canonical Wnt signaling. *Mol. Cell. Biol.* 31: 2877-2888.

STORAGE

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