

# frizzled-5/8 (N-16): sc-33503

## 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-5 protein is believed to be the receptor for the Wnt-5A ligand. The cysteine-rich domain of frizzled-8 blocks endogenous Wnts and the effects of Wnt-1 and Wnt-5 on proliferation. The mouse frizzled-8 gene, which encodes a Wnt receptor, is a potent cancer-associated activator of the  $\beta$ -catenin-TCF pathway. The frizzled-8 gene contains no introns. Frizzled-8 mRNA has been detected in fetal brain and kidney, and also in adult pancreas, skeletal muscle, kidney and heart. Frizzled is highly expressed in HeLa S3 (cervical uterus cancer) cells and A549 lung cancer cells.

## 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. 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.
5. Saitoh, T., et al. 2001. Molecular cloning and characterization of human frizzled-8 gene on chromosome 10p11.2. *Int. J. Oncol.* 8: 991-996.

## CHROMOSOMAL LOCATION

Genetic locus: FZD5 (human) mapping to 2q33.3, FZD8 (human) mapping to 10p11.21; Fzd5 (mouse) mapping to 1 C2, Fzd8 (mouse) mapping to 18 A1.

## SOURCE

frizzled-5/8 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of frizzled-8 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-33503 P, (100  $\mu$ g 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-5/8 (N-16) is recommended for detection of frizzled-5 and frizzled-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

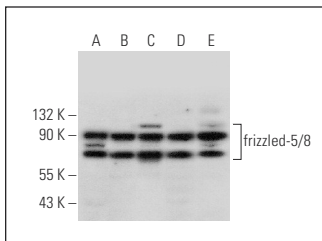
frizzled-5/8 (N-16) is also recommended for detection of frizzled-5 and frizzled-8 in additional species, including canine, bovine and porcine.

Positive Controls: A549 cell lysate: sc-2413, frizzled-5 (h): 293T Lysate: sc-372389 or HEK293 whole cell lysate: sc-45136.

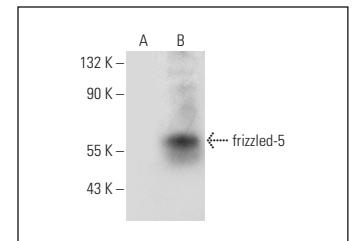
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



frizzled-5/8 (N-16): sc-33503. Western blot analysis of frizzled-5/8 expression in A549 (A), Hep G2 (B), HEK293 (C), HUV-EC-C (D) and MCF7 (E) whole cell lysates.



frizzled-5/8 (N-16): sc-33503. Western blot analysis of frizzled-5 expression in non-transfected: sc-117752 (A) and human frizzled-5 transfected: sc-372389 (B) 293T whole cell lysates.

## 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.

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Try **frizzled-5 (2D12G5): sc-517208**, our highly recommended monoclonal alternative to frizzled-5/8 (N-16).