

# frizzled-7 (4D9): sc-293261

## 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. 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.

## CHROMOSOMAL LOCATION

Genetic locus: FZD7 (human) mapping to 2q33.1.

## SOURCE

frizzled-7 (4D9) is a mouse monoclonal antibody raised against amino acids 155-253 of frizzled-7 of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> kappa light chain in .05 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

frizzled-7 (4D9) is recommended for detection of frizzled-7 of 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), 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).

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

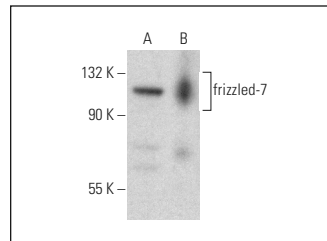
Molecular Weight of frizzled-7: 92 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human skeletal muscle extract: sc-363776.

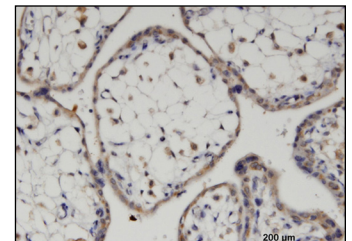
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



frizzled-7 (4D9): sc-293261. Western blot analysis of frizzled-7 expression in Hep G2 whole cell lysate (A) and human skeletal muscle tissue extract (B).



frizzled-7 (4D9): sc-293261. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining.

## SELECT PRODUCT CITATIONS

1. Qiu, X., et al. 2016. Overexpression of FZD7 promotes glioma cell proliferation by upregulating TAZ. *Oncotarget* 7: 85987-85999.
2. Yin, P., et al. 2020. Non-canonical Fzd7 signaling contributes to breast cancer mesenchymal-like stemness involving COL6A1. *Cell Commun. Signal.* 18: 143.
3. Rogan, M.R., et al. 2021. *Ehrlichia chaffeensis* TRP120 is a Wnt ligand mimetic that interacts with Wnt receptors and contains a novel repetitive short linear motif that activates Wnt signaling. *mSphere* 6: e00216-21.
4. Zhang, Z., et al. 2021. Fzd7/Wnt7b signaling contributes to stemness and chemoresistance in pancreatic cancer. *Cancer Med.* 10: 3332-3345.

## 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) for detailed protocols and support products.