

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-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.

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 μ g IgG κ 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 μ g per 100-500 μ 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.

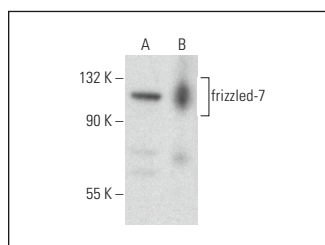
Molecular Weight of frizzled-7: 92 kDa.

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

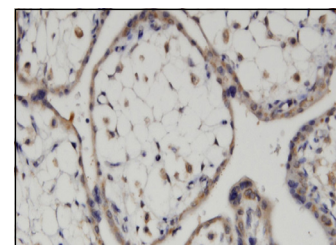
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 κ 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 for detailed protocols and support products.