

frizzled-4 (C-18): sc-66450

BACKGROUND

frizzled-4 is a 537 amino acid protein encoded by the human gene FZD4. frizzled-4 acts as a receptor for Wnt proteins. Most frizzled receptors are coupled to the β -catenin canonical signaling pathway, which leads to the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of β -catenin and activation of Wnt target genes. A second signaling pathway involving PKC and calcium fluxes has been seen for some family members, but it is not yet clear if it represents a distinct pathway or if it can be integrated in the canonical pathway, as PKC seems to be required for Wnt-mediated inactivation of GSK-3 kinase. Both pathways seem to involve interactions with G proteins. Frizzled-4 may be involved in transduction and intercellular transmission of polarity information during tissue morphogenesis and/or in differentiated tissues. Frizzled-4 also plays a critical role in retinal angiogenesis. Frizzled-4 is virtually ubiquitously expressed with greatest amounts found in adult heart, skeletal muscle, ovary and fetal kidney.

CHROMOSOMAL LOCATION

Genetic locus: FZD4 (human) mapping to 11q14.2; Fzd4 (mouse) mapping to 7 E1.

SOURCE

frizzled-4 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of frizzled-4 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-66450 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

frizzled-4 (C-18) is recommended for detection of frizzled-4 of mouse, rat and 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). frizzled-4 (C-18) is also recommended for detection of frizzled-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for frizzled-4 siRNA (h): sc-39983, frizzled-4 siRNA (m): sc-39984, frizzled-4 shRNA Plasmid (h): sc-39983-SH, frizzled-4 shRNA Plasmid (m): sc-39984-SH, frizzled-4 shRNA (h) Lentiviral Particles: sc-39983-V and frizzled-4 shRNA (m) Lentiviral Particles: sc-39984-V.

Molecular Weight of frizzled-4: 59 kDa.

Positive Controls: mouse heart extract: sc-2254, rat skeletal muscle extract: sc-364810 or MIA PaCa-2 cell lysate: sc-2285.

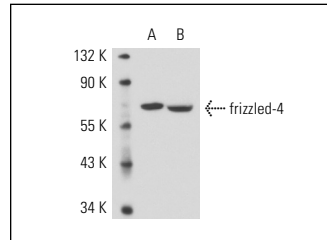
RESEARCH USE

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

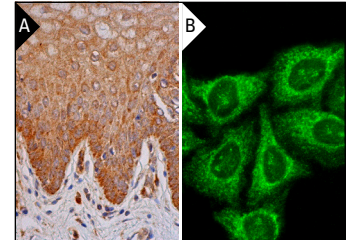
STORAGE

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

DATA



frizzled-4 (C-18): sc-66450. Western blot analysis of frizzled-4 expression in rat skeletal muscle (A) and mouse heart (B) tissue extracts.



frizzled-4 (C-18): sc-66450. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vagina tissue showing cytoplasmic staining of squamous epithelial cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Gupta, S., et al. 2010. FZD4 as a mediator of ERG oncogene-induced WNT signaling and epithelial-to-mesenchymal transition in human prostate cancer cells. *Cancer Res.* 70: 6735-6745.
- Honda, T., et al. 2010. PDZRN3 negatively regulates BMP-2-induced osteoblast differentiation through inhibition of Wnt signaling. *Mol. Biol. Cell* 21: 3269-3277.
- Abdul-Ghani, M., et al. 2011. Wnt11 promotes cardiomyocyte development by caspase-mediated suppression of canonical Wnt signals. *Mol. Cell. Biol.* 31: 163-178.
- Tu, Y., et al. 2013. MicroRNA-218 inhibits glioma invasion, migration, proliferation, and cancer stem-like cell self-renewal by targeting the polycomb group gene Bmi1. *Cancer Res.* 73: 6046-6055.

PROTOCOLS

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Try **frizzled-4 (3G7): sc-293454**, our highly recommended monoclonal alternative to frizzled-4 (C-18).