

# frizzled-4 (F-20): sc-66451

## 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  $\beta$ -catenin canonical signaling pathway, which leads to the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of  $\beta$ -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 (F-20) 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-66451 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

frizzled-4 (F-20) 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  $\mu$ 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).

frizzled-4 (F-20) 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.

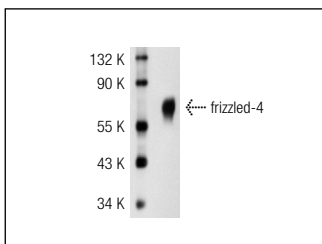
Molecular Weight of frizzled-4: 59 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, mouse heart extract: sc-2254 or Sol8 cell lysate: sc-2249.

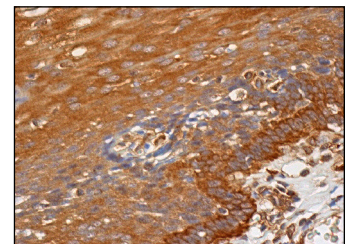
## RECOMMENDED SECONDARY REAGENTS

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

## DATA



frizzled-4 (F-20): sc-66451. Western blot analysis of frizzled-4 expression in 293T whole cell lysate.



frizzled-4 (F-20): sc-66451. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic and membrane staining of squamous epithelial cells.

## 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) or our catalog for detailed protocols and support products.

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Try **frizzled-4 (3G7): sc-293454**, our highly recommended monoclonal alternative to frizzled-4 (F-20).