SANTA CRUZ BIOTECHNOLOGY, INC.

FRP-4 (H-200): sc-30152

BACKGROUND

The frizzled gene, originally identified in *Drosophila melanogaster*, has been shown to be involved in the development of tissue polarity. The mammalian homolog of frizzled, as well as the secreted mammalian frizzled-related proteins FRP-1 (also designated SARP2), FRP-2 (also designated SARP1), FRP-3, FRP-4 and SARP3 (also designated FRP-5), have been identified. The frizzled proteins, which contain seven transmembrane domains, a cysteine-rich domain in the extracellular region and a carboxy terminal Ser/Thr-xxx-Val motif, function as receptors for Wnt. The frizzled-1 gene maps to human chromosome 7q21 and is expressed in adult heart, placenta, lung, kidney, pancreas, prostate and ovary and in fetal lung and kidney. Frizzled-2 is expressed in adult heart and fetal brain, lung and kidney. The frizzled related proteins FRP-1, FRP-2, FRP-3, FRP-4 and SARP3 are secreted proteins that contain regions of homology to the cysteine-rich ligand-binding domain of frizzled and a conserved hydrophilic carboxy terminal. The gene encoding human SARP3 maps to chromosome 4q31.3 and is expressed in retinal pigment epithelium (RPE) and pancreas, while expression of FRP-1, 2 and 4 is high in developing tissues. The FRPs/SARPs are involved in the Wnt signaling pathway by regulating the intracellular levels of β-catenin.

REFERENCES

1. Wang, Y., et al. 1996. A large family of putative transmembrane receptors homologous to the product of the *Drosophila* tissue polarity gene fizzled. 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. Finch, P.W., et al. 1997. Purification and molecular cloning of a secreted, frizzled-related antagonist of Wnt action. Proc. Natl. Acad. Sci. USA 94: 6770-6775.
5. Melkonyan, H.S., et al. 1997. SARPs: a family of secreted apoptosis-related proteins. Proc. Natl. Acad. Sci. USA 94: 13636-13641.
6. Sagara, N., et al. 1998. Molecular cloning, differential expression, and chromosomal localization of human frizzled-1, frizzled-2, and frizzled-7. Biochem. Biophys. Res. Commun. 252: 117-122.

CHROMOSOMAL LOCATION

Genetic locus: SFRP4 (human) mapping to 7p14.1; Sfrp4 (mouse) mapping to 13 A2.

SOURCE

FRP-4 (H-200) is a rabbit polyclonal antibody raised against amino acids 147-346 mapping at the C-terminus of FRP-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FRP-4 (H-200) is recommended for detection of FRP-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

FRP-4 (H-200) is also recommended for detection of FRP-4 in additional species, including canine, bovine and porcine.

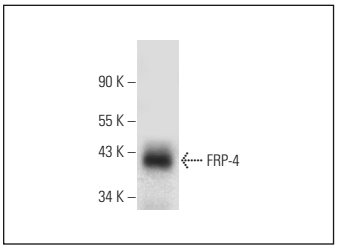
Suitable for use as control antibody for FRP-4 siRNA (h): sc-40002, FRP-4 siRNA (m): sc-40003, FRP-4 shRNA Plasmid (h): sc-40002-SH, FRP-4 shRNA Plasmid (m): sc-40003-SH, FRP-4 shRNA (h) Lentiviral Particles: sc-40002-V and FRP-4 shRNA (m) Lentiviral Particles: sc-40003-V.

Positive Controls: FRP-4 (h): 293T Lysate: sc-116599 or human breast extract: sc-363753.

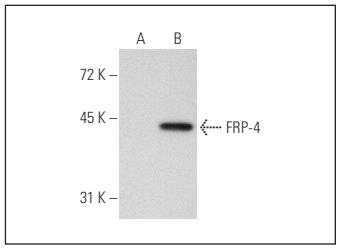
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FRP-4 (H-200): sc-30152. Western blot analysis of FRP-4 expression in human breast tissue extract.



FRP-4 (H-200): sc-30152. Western blot analysis of FRP-4 expression in non-transfected: sc-117752 (**A**) and human FRP-4 transfected: sc-116599 (**B**) 293T whole cell lysates.

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.