

FRP-1 (G-25): sc-133595

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, 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 contain seven transmembrane domains, a cysteine-rich domain in the extracellular region and a carboxy terminal Ser/Thr-xxx-Val motif, and they function as receptors for Wnt. The frizzled-1 gene maps to human chromosome 7q21.13 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 10q24.2 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 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.
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.
7. Chang, J.T., et al. 1998. Cloning and characterization of a secreted frizzled-related protein that is expressed by the retinal pigment epithelium. *Hum. Mol. Genet.* 8: 575-583.
8. Leimeister, C., et al. 1998. Developmental expression patterns of mouse sFRP genes encoding members of the secreted frizzled related protein family. *Mech. Dev.* 75: 29-42.

CHROMOSOMAL LOCATION

Genetic locus: SFRP1 (human) mapping to 8p11.21.

SOURCE

FRP-1 (G-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic FRP-1 peptide of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

FRP-1 (G-25) is recommended for detection of FRP-1 of human and rat 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FRP-1 siRNA (h): sc-39998, FRP-1 shRNA Plasmid (h): sc-39998-SH and FRP-1 shRNA (h) Lentiviral Particles: sc-39998-V.

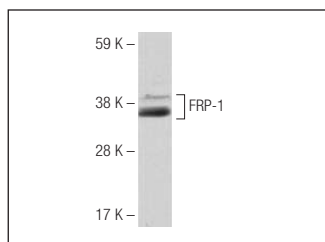
Molecular Weight of FRP-1: 36 kDa.

Positive Controls: human fetal kidney tissue extract.

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).

DATA



FRP-1 (G-25): sc-133595. Western blot analysis of FRP-1 expression in human fetal kidney tissue extract.

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 or our catalog for detailed protocols and support products.