

FRP-3 (C-20): sc-7427

BACKGROUND

The frizzled gene, originally identified in *Drosophila melanogaster*, was shown to be 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 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 of approximately 30 kDa 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 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. Melkonyan, H.S., et al. 1997. SARPs: a family of secreted apoptosis-related proteins. *Proc. Natl. Acad. Sci. USA* 94: 13636-13641.

CHROMOSOMAL LOCATION

Genetic locus: FRZB (human) mapping to 2q32.1; Frzb (mouse) mapping to 2 C3.

SOURCE

FRP-3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of FRP-3 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-7427 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

FRP-3 (C-20) is recommended for detection of FRP-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

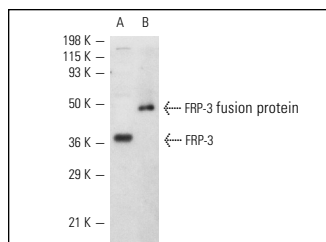
FRP-3 (C-20) is also recommended for detection of FRP-3 in additional species, including equine and canine.

Suitable for use as control antibody for FRP-3 siRNA (h): sc-35411, FRP-3 siRNA (m): sc-35412, FRP-3 shRNA Plasmid (h): sc-35411-SH, FRP-3 shRNA Plasmid (m): sc-35412-SH, FRP-3 shRNA (h) Lentiviral Particles: sc-35411-V and FRP-3 shRNA (m) Lentiviral Particles: sc-35412-V.

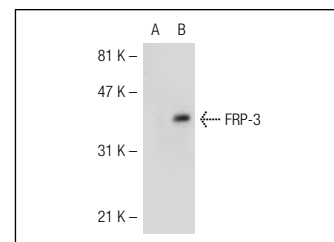
Molecular Weight of FRP-3: 36 kDa.

Positive Controls: JAR cell lysate: sc-2276, FRP-3 (156-325): sc-4479 WB or mouse brain extract: sc-2253.

DATA



FRP-3 (C-20): sc-7427. Western blot analysis of FRP-3 expression in JAR whole cell lysate (A) and human recombinant FRP-3 fusion protein (B).



FRP-3 (C-20): sc-7427. Western blot analysis of FRP-3 expression in non-transfected: sc-117752 (A) and human FRP-3 transfected: sc-114162 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jones, S.E., et al. 2000. Modulated expression of secreted frizzled-related proteins in human retinal degeneration. *Neuroreport* 11: 3963-3967.
2. Lories, R.J., et al. 2007. Articular cartilage and biomechanical properties of the long bones in Frzb-knockout mice. *Arthritis Rheum.* 56: 4095-4103.
3. Guo, Y., et al. 2008. Frzb, a secreted Wnt antagonist, decreases growth and invasiveness of fibrosarcoma cells associated with inhibition of Met signaling. *Cancer Res.* 68: 3350-3360.

RESEARCH USE

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



Try **FRP-3 (B-5): sc-514350**, our highly recommended monoclonal alternative to FRP-3 (C-20).