

FRP-1 (C-19): sc-7425

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 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.

CHROMOSOMAL LOCATION

Genetic locus: SFRP1 (human) mapping to 8p11.21; Sfrp1 (mouse) mapping to 8 A2.

SOURCE

FRP-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of FRP-1 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-7425 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FRP-1 (C-19) is recommended for detection of FRP-1 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-1 (C-19) is also recommended for detection of FRP-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FRP-1 siRNA (h): sc-39998, FRP-1 siRNA (m): sc-39999, FRP-1 shRNA Plasmid (h): sc-39998-SH, FRP-1 shRNA Plasmid (m): sc-39999-SH, FRP-1 shRNA (h) Lentiviral Particles: sc-39998-V and FRP-1 shRNA (m) Lentiviral Particles: sc-39999-V.

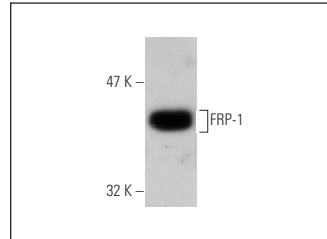
Molecular Weight of FRP-1: 36 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

STORAGE

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

DATA



FRP-1 (C-19): sc-7425. Western blot analysis of FRP-1 expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

- Jones, S.E., et al. 2000. Modulated expression of secreted frizzled-related proteins in human retinal degeneration. *Neuroreport* 11: 3963-3967.
- Dufourcq, P., et al. 2002. FrzA, a secreted frizzled related protein, induced angiogenic response. *Circulation* 106: 3097-3103.
- Fukuhara, K., et al. 2002. Secreted frizzled related protein 1 is overexpressed in uterine leiomyomas, associated with a high estrogenic environment and unrelated to proliferative activity. *J. Clin. Endocrinol. Metab.* 87: 1729-1736.
- Oshima, T., et al. 2005. Myeloma cells suppress bone formation by secreting a soluble Wnt inhibitor, sFRP-2. *Blood* 106: 3160-3165.
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- Wolf, V., et al. 2008. Purification and Wnt-inhibitory activities of secreted frizzled-related proteins. *Methods Mol. Biol.* 468: 31-44.
- Dufourcq, P., et al. 2008. Secreted frizzled-related protein-1 enhances mesenchymal stem cell function in angiogenesis and contributes to neovessel maturation. *Stem Cells* 26: 2991-3001.
- Kim, J.H., et al. 2010. Contrasting activity of Hedgehog and Wnt pathways according to gastric cancer cell differentiation: relevance of crosstalk mechanisms. *Cancer Sci.* 101: 328-335.
- Foronjy, R., et al. 2010. The divergent roles of secreted frizzled related protein-1 (SFRP1) in lung morphogenesis and emphysema. *Am. J. Pathol.* 177: 598-607.
- Kasaai, B., et al. 2012. Spatial and temporal localization of WNT signaling proteins in a mouse model of distraction osteogenesis. *J. Histochem. Cytochem.* 60: 219-228.

RESEARCH USE

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