

FRP-3 (H-170): sc-13941

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. Frizzled-1 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. SARP3 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.

CHROMOSOMAL LOCATION

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

SOURCE

FRP-3 (H-170) is a rabbit polyclonal antibody raised against amino acids 156-325 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

FRP-3 (H-170) 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), 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).

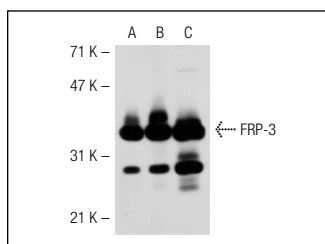
FRP-3 (H-170) is also recommended for detection of FRP-3 in additional species, including equine, bovine and porcine.

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.

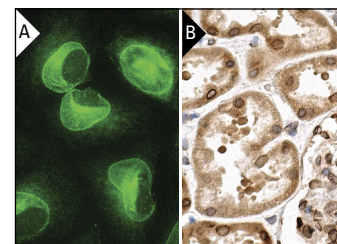
Molecular Weight of FRP-3: 36 kDa.

Positive Controls: FRP-3 (h): 293T Lysate: sc-114162, JAR cell lysate: sc-2276 or HeLa whole cell lysate: sc-2200.

DATA



FRP-3 (H-170): sc-13941. Western blot analysis of FRP-3 expression in non-transfected 293T: sc-117752 (A), human FRP-3 transfected 293T: sc-114162 (B) and HeLa (C) whole cell lysates.



FRP-3 (H-170): sc-13941. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear membrane staining of cells in glomeruli and tubules, and cytoplasmic staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Hirata, H., et al. 2010. Role of secreted frizzled-related protein 3 in human renal cell carcinoma. *Cancer Res.* 70: 1896-1905.

RESEARCH USE

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

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Try **FRP-3 (B-5): sc-514350**, our highly recommended monoclonal alternative to FRP-3 (H-170).