FRP-4 (h): 293T Lysate: sc-116599



The Power to Question

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 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

- Wang, Y., Macke, J.P., Abella, B.S., Andreasson K., Worley P., Gilbert D.J., Copeland, N.G., Jenkins, N.A., and Nathans, J. 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.
- Yang-Snyder, J., Miller, J.R., Brown, J.D., Lai, C.J., and Moon, R.T. 1996.
 A frizzled homolog functions in a vertebrate Wnt signaling pathway. Curr. Biol. 6: 1302-1306.
- Rattner, A., Hsieh, J.C., Smallwood, P.M., Gilbert, D.J., Copeland, N.G., Jenkins, N.A., and Nathans, J. 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.
- Finch, P.W., He, X., Kelley, M.J., Uren, A., Schaudies, R.P., Popescu, N.C., Rudikoff, S., Aaronson, S.A., Varmus, H.E., and Rubin, J.S. 1997. Purification and molecular cloning of a secreted, frizzled-related antagonist of Wnt action. Proc. Natl. Acad. Sci. USA 94: 6770-6775.
- Melkonyan, H.S., Chang, W.C., Shapiro, J.P., Mahadevappa, M., Fitzpatrick, P.A., Kiefer, M.C., Tomei, L.D., and Umansky, S.R. 1997. SARPs: a family of secreted apoptosis-related proteins. Proc. Natl. Acad. Sci. USA 94: 13636-13641.
- 6. Sagara, N., Toda, G., Hirai, M., Terada, M., and Katoh, M. 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.

RESEARCH USE

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

PRODUCT

FRP-4 (h): 293T Lysate represents a lysate of human FRP-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

FRP-4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive FRP-4 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

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