SANTA CRUZ BIOTECHNOLOGY, INC.

FRP-2 (C-4): sc-365524



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 such as 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 and a cysteine-rich domain in the extra 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, as well as 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-terminus. 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., 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: SFRP2 (human) mapping to 4q31.3; Sfrp2 (mouse) mapping to 3 E3.

SOURCE

FRP-2 (C-4) is a mouse monoclonal antibody raised against amino acids 156-295 of FRP-2 of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FRP-2 (C-4) is available conjugated to agarose (sc-365524 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365524 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365524 PE), fluorescein (sc-365524 FITC), Alexa Fluor[®] 488 (sc-365524 AF488), Alexa Fluor[®] 546 (sc-365524 AF546), Alexa Fluor[®] 594 (sc-365524 AF594) or Alexa Fluor[®] 647 (sc-365524 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365524 AF680) or Alexa Fluor[®] 790 (sc-365524 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FRP-2 (C-4) is recommended for detection of FRP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for FRP-2 siRNA (h): sc-40000, FRP-2 siRNA (m): sc-40001, FRP-2 shRNA Plasmid (h): sc-40000-SH, FRP-2 shRNA Plasmid (m): sc-40001-SH, FRP-2 shRNA (h) Lentiviral Particles: sc-40000-V and FRP-2 shRNA (m) Lentiviral Particles: sc-40001-V.

Molecular Weight of FRP-2: 37 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, MCF7 whole cell lysate: sc-2206 or mouse eye extract: sc-364241.

DATA



expression in non-transfected (**A**) and human FRP-2 transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kim, H., et al. 2018. Oncogenic role of SFRP2 in p53-mutant osteosarcoma development via autocrine and paracrine mechanism. Proc. Natl. Acad. Sci. USA 115: E11128-E11137.
- Sanchez-Ferras, O., et al. 2021. A coordinated progression of progenitor cell states initiates urinary tract development. Nat. Commun. 12: 2627.
- Guo, M., et al. 2021. SFRP2 induces a mesenchymal subtype transition by suppression of SOX2 in glioblastoma. Oncogene 40: 5066-5080.
- Zhang, X.Y., et al. 2023. IL-27 deficiency inhibits proliferation and invasion of trophoblasts via the SFRP2/Wnt/β-catenin pathway in fetal growth restriction. Int. J. Med. Sci. 20: 392-405.
- Li, S., et al. 2024. Whole-transcriptome defines novel glucose metabolic subtypes in colorectal cancer. J. Cell. Mol. Med. 28: e18065.

STORAGE

Store at 4° C, **D0 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.