SANTA CRUZ BIOTECHNOLOGY, INC.

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

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

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.

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 µg IgG_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.

APPLICATIONS

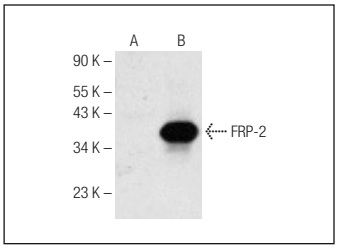
FRP-2 (C-4) is recommended for detection of FRP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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



FRP-2 (C-4): sc-365524. Western blot analysis of FRP-2 expression in non-transfected (**A**) and human FRP-2 transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.
2. Sanchez-Ferras, O., et al. 2021. A coordinated progression of progenitor cell states initiates urinary tract development. Nat. Commun. 12: 2627.
3. Guo, M., et al. 2021. SFRP2 induces a mesenchymal subtype transition by suppression of SOX2 in glioblastoma. Oncogene 40: 5066-5080.
4. 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.

STORAGE

Store at 4° C, **DO 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.