

FRP-3 (B-5): sc-514350

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 extra-cellular 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.

CHROMOSOMAL LOCATION

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

SOURCE

FRP-3 (B-5) is a mouse monoclonal antibody raised against amino acids 156-325 of FRP-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FRP-3 (B-5) is available conjugated to agarose (sc-514350 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514350 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514350 PE), fluorescein (sc-514350 FITC), Alexa Fluor® 488 (sc-514350 AF488), Alexa Fluor® 546 (sc-514350 AF546), Alexa Fluor® 594 (sc-514350 AF594) or Alexa Fluor® 647 (sc-514350 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514350 AF680) or Alexa Fluor® 790 (sc-514350 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FRP-3 (B-5) is recommended for detection of FRP-3 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-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.

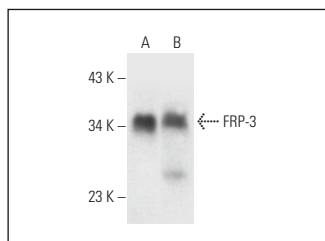
Molecular Weight of FRP-3: 36 kDa.

Positive Controls: human placenta extract: sc-363772, rat placenta extract: sc-364808 or human heart extract: sc-363763.

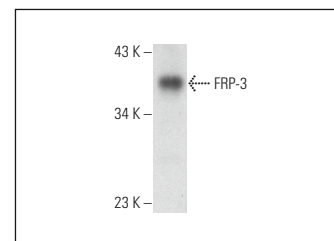
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FRP-3 (B-5): sc-514350. Western blot analysis of FRP-3 expression in human placenta (A) and human heart (B) tissue extracts.



FRP-3 (B-5): sc-514350. Western blot analysis of FRP-3 expression in rat placenta tissue extract.

SELECT PRODUCT CITATIONS

1. Kwan, T., et al. 2020. Wnt antagonist FRZB is a muscle biomarker of denervation atrophy in amyotrophic lateral sclerosis. *Sci. Rep.* 10: 16679.

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.