SANTA CRUZ BIOTECHNOLOGY, INC.

frizzled-6 (D-2): sc-393113

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Frizzled-6 (FZD6, also known as frizzled homolog 6 in *Drosophila)* is a seven-transmembrane domain receptor that binds the Wnt ligand and influences macroscopic hair patterning and other tissue polarity events. Frizzled-6 protein contains a signal peptide and a cysteine-rich domain (CRD) in the N-terminal extracellular region, and does not contain a C-terminal PDZ domain-binding motif. Frizzled-3 and frizzled-6 influence neural tube closure and the planar orientation of hair bundles on a subset of auditory and vestibular sensory cells. Madin-Darby canine kidney (MDCK) cells are competent to form tubules *in vitro* and express the frizzled-6 receptor, which is known to form a complex with Wnt-4 through the CRD in this cell type. Frizzled-6 is expressed as a 4.4 kb mRNA in various human tissues, including adult heart, brain, placenta, lung, liver, skeletal muscle, kidney, pancreas, thymus, prostate, testis, ovary, small intestine and colon.

REFERENCES

1. Tokuhara, M., et al. 1998. Molecular cloning of human frizzled-6. Biochem. Biophys. Res. Commun. 243: 622-627.
2. Yanagawa, S., et al. 1998. Identification and characterization of a novel line of *Drosophila* Schneider S2 cells that respond to wingless signaling. J. Biol. Chem. 273: 32353-32359.
3. Golan, T., et al. 2004. The human frizzled 6 (HFz6) acts as a negative regulator of the canonical Wnt. β-catenin signaling cascade. J. Biol. Chem. 279: 14879-14888.
4. Guo, N., et al. 2004. Frizzled6 controls hair patterning in mice. Proc. Natl. Acad. Sci. USA 101: 9277-9281.
5. Lyons, J.P., et al. 2004. Wnt-4 activates the canonical β-catenin-mediated Wnt pathway and binds frizzled-6 CRD: functional implications of Wnt/β-catenin activity in kidney epithelial cells. Exp. Cell Res. 298: 369-387.
6. Gregorieff, A., et al. 2005. Expression pattern of Wnt signaling components in the adult intestine. Gastroenterology 129: 626-638.

CHROMOSOMAL LOCATION

Genetic locus: FZD6 (human) mapping to 8q22.3; Fzd6 (mouse) mapping to 15 B3.1.

SOURCE

Frizzled-6 (D-2) is a mouse monoclonal antibody raised against amino acids 51-150 mapping within an N-terminal extracellular domain of frizzled-6 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain 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.

APPLICATIONS

Frizzled-6 (D-2) is recommended for detection of frizzled-6 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 frizzled-6 siRNA (h): sc-39987, frizzled-6 siRNA (m): sc-39989, frizzled-6 shRNA Plasmid (h): sc-39987-SH, frizzled-6 shRNA Plasmid (m): sc-39989-SH, frizzled-6 shRNA (h) Lentiviral Particles: sc-39987-V and frizzled-6 shRNA (m) Lentiviral Particles: sc-39989-V.

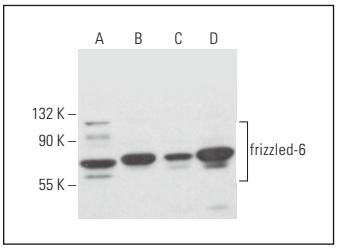
Molecular Weight of frizzled-6: 79 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, A-10 cell lysate: sc-3806 or C6 whole cell lysate: sc-364373.

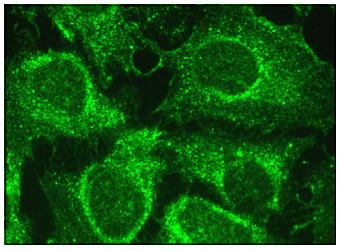
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



frizzled-6 (D-2): sc-393113. Western blot analysis of frizzled-6 expression in CCRF-CEM (**A**), EOC 20 (**B**), A-10 (**C**) and C6 (**D**) whole cell lysates.



frizzled-6 (D-2): sc-393113. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Jo, D., et al. 2023. Circular RNA Tmcc1 improves astrocytic glutamate metabolism and spatial memory via NFκB and CREB signaling in a bile duct ligation mouse model: transcriptional and cellular analyses. J. Neuroinflammation 20: 121.

RESEARCH USE

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