SANTA CRUZ BIOTECHNOLOGY, INC.

frizzled-1 (E-7): sc-398082

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The frizzled gene, originally identified in *Drosophila melanogaster,* is involved in the development of tissue polarity. The mammalian homolog of frizzled as well as several secreted mammalian frizzled-related proteins (FRPs) have been described. The frizzled proteins contain seven transmembrane domains, a cysteine-rich domain in the extracellular region and a carboxy terminal Ser/Thr-xxx-Val motif. They function as receptors for Wnt and are generally coupled to G proteins. The frizzled-1 gene is expressed in adult heart, placenta, lung, kidney, pancreas, prostate and ovary and in fetal lung and kidney.

REFERENCES

1. Wang, Y., et al. 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.
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.
4. Finch, P.W., et al. 1997. Purification and molecular cloning of a secreted, frizzled-related antagonist of Wnt action. Proc. Natl. Acad. Sci. USA 94: 6770-6775.

SOURCE

frizzled-1 (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 308-333 within an internal region of frizzled-1 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.

Blocking peptide available for competition studies, sc-398082 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

frizzled-1 (E-7) is recommended for detection of precursor and mature frizzled-1, frizzled-2 and frizzled-7 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).

frizzled-1 (E-7) is also recommended for detection of precursor and mature frizzled-1, frizzled-2 and frizzled-7 in additional species, including equine, canine, bovine and avian.

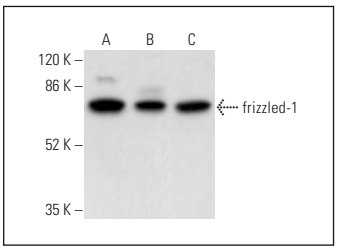
Molecular Weight of frizzled-1: 71 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

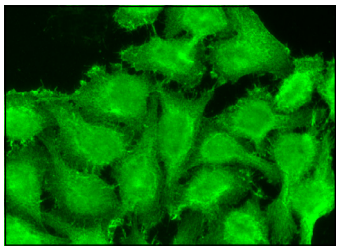
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



frizzled-1 (E-7): sc-398082. Western blot analysis of frizzled-1 expression in Jurkat (**A**), Ramos (**B**) and HeLa (**C**) whole cell lysates.



frizzled-1 (E-7): sc-398082. Immunofluorescence staining of formalin-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Han, S., et al. 2018. Substratum stiffness tunes proliferation downstream of Wnt3a in part by regulating integrin-linked kinase and frizzled-1. J. Cell Sci. 131: jcs210476.
2. Tang, J., et al. 2019. SOX2 mediates crosstalk between sonic hedgehog and the Wnt/β-catenin signaling pathway to promote proliferation of pituitary adenoma cells. Oncol. Lett. 18: 81-86.
3. Wang, Y., et al. 2019. Neuroprotection mediated by the Wnt/frizzled signaling pathway in early brain injury induced by subarachnoid hemorrhage. Neural Regen. Res. 14: 1013-1024.
4. Milosevic, V., et al. 2020. Wnt/IL-1β/IL-8 autocrine circuitries control chemoresistance in mesothelioma initiating cells by inducing ABCB5. Int. J. Cancer 146: 192-207.
5. Ohmura, H., et al. 2020. Methylation of drug resistance-related genes in chemotherapy-sensitive Epstein-Barr virus-associated gastric cancer. FEBS Open Bio 10: 147-157.
6. Ruan, W., et al. 2020. Intranasal Wnt-3a alleviates neuronal apoptosis in early brain injury post subarachnoid hemorrhage via the regulation of wnt target PPAN mediated by the moonlighting role of aldolase C. Neurochem. Int. 134: 104656.
7. Hwang, S.T., et al. 2020. Corilagin represses epithelial to mesenchymal transition orocess through modulating Wnt/β-catenin signaling cascade. Biomolecules 10: 1406.
8. Rogan, M.R., et al. 2021. *Ehrlichia chaffeensis* TRP120 is a Wnt ligand mimetic that interacts with Wnt receptors and contains a novel repetitive short linear motif that activates Wnt signaling. mSphere 6: e00216-21.

RESEARCH USE

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