SANTA CRUZ BIOTECHNOLOGY, INC.

WIF-1 (h): 293T Lysate: sc-176688

BACKGROUND

The Wnt genes are a group of conserved, cysteine-rich, secreted glycoproteins that are required for numerous developmental processes including embryogenesis, asymmetric cell division and central nervous system (CNS) patterning. Wnt association with the transmembrane spanning receptor frizzled activates dishevelled, which downregulates glycogen synthase kinase (GSK) through serine phosphorylation. Reduced levels of active GSK cause accumulation of β-catenin and subsequent regulation of developmentally significant Wnt target genes. Wnt antagonists such as Dickkopf (Dkk), frizzled-related protein (sFRP) and Wnt inhibitory factor-1 (WIF-1) are necessary to ensure normal spatial and temporal patterns of Wnt activity during developmental proc-esses. Wnt inhibitory factor-1 (WIF-1) is a 379-amino acid, secreted protein that contains an N-terminal signal sequence, a 150-amino acid WIF domain, 5 epidermal growth factor-like repeats and a 45-amino acid C-terminal hydrophilic domain.

REFERENCES

1. Krasnow, R.E., et al. 1995. Dishevelled is a component of the frizzled signaling pathway in *Drosophila*. Development 121: 4095-4102.
2. Cadigan, K.M., et al. 1997. Wnt signaling: a common theme in animal development. Genes Dev. 11: 3286-3305.
3. Sakanaka, C., et al. 1998. Bridging of β-catenin and glycogen synthase kinase-3β by Axin and inhibition of β-catenin-mediated transcription. Proc. Natl. Acad. Sci. USA 95: 3020-3023.
4. Glinka, A., et al. 1998. Dickkopf-1 is a member of a new family of secreted proteins and functions in head induction. Nature 391: 357-362.
5. Hsieh, J.C., et al. 1999. A new secreted protein that binds to Wnt proteins and inhibits their activities. Nature 398: 431-436.
6. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605186. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: WIF1 (human) mapping to 12q14.3.

PRODUCT

WIF-1 (h): 293T Lysate represents a lysate of human WIF-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

WIF-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive WIF-1 antibodies. Recommended use: 10-20 µl per lane.

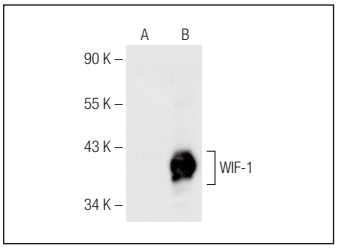
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

WIF-1 (B-10): sc-373780 is recommended as a positive control antibody for Western Blot analysis of enhanced human WIF-1 expression in WIF-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



WIF-1 (B-10): sc-373780. Western blot analysis of WIF-1 expression in non-transfected: sc-117752 (**A**) and human WIF-1 transfected: sc-176688 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.