Dvl-3 (h3): 293T Lysate: sc-176335



The Power to Question

BACKGROUND

Mammalian homologs of the *Drosophila* dishevelled (Dsh) gene have been identified, including Dvl-1, Dvl-2 and Dvl-3. The mammalian dishevelled proteins contain three homologous domains, two of which are unrelated to any other known protein. The third region is homologous to the discs-large homology domain of *Drosophila* discs-large-1, a tumor suppressor protein. Like their *Drosophila* counterpart, the dishevelled proteins are thought to be involved in embryogenesis. Overexpression of Dvl-1 has been shown to inhibit the phosphorylation of Tau by GSK-3β. This finding may prove to be important in Alzheimer's studies, which have shown that Tau is hyperphosphorylated. In *Drosophila*, Dsh is a component of the frizzled signaling pathway. Both mammalian dishevelled and frizzled proteins are components of the Wnt signaling pathway.

REFERENCES

- Sussman, D.J., Klingensmith, J., Salinas, P., Adams, P.S., Nusse, R. and Perrimon, N. 1994. Isolation and characterization of a mouse homolog of the *Drosophila* segment polarity gene dishevelled. Dev. Biol. 166: 73-86.
- 2. Krasnow, R.E., Wong, L.L. and Adler, P.N. 1995. Dishevelled is a component of the frizzled signaling pathway in *Drosophila*. Development 121: 4095-4102.
- 3. Yang-Snyder, J., Miller, J.R., Brown, J.D., Lai, C.J. and Moon, R.T. 1996. A frizzled homolog functions in a vertebrate Wnt signaling pathway. Curr. Biol. 6: 1302-1306.
- 4. Pizzuti, A., Novelli, G., Mari, A., Ratti, A., Colosimo, A., Amati, F., Penso, D., Sangiuolo, F., Calabrese, G., Palka, G., Silani, V., Gennarelli, M., Mingareli, R., Scarlato, G., Scambler, P. and Dallapiccola, B. 1996. Human homologue sequences to the *Drosophila* dishevelled segment-polarity are deleted in the DiGeorge syndrome. Am. J. Hum. Genet. 58: 722-729.
- Tsang, M., Lijam, N., Yang, Y., Beier, D.R., Wynshaw-Boris, A. and Sussman, D.J. 1996. Isolation and characterization of mouse dishevelled-3. Dev. Dyn. 207: 253-262.
- Pizzuti, A., Amati, F., Calabrese, G., Mari, A., Colosimo, A., Silani, V., Giardino, L., Ratti, A., Penso, D., Calza, L., Palka, G., Scarlato, G., Novelli, G. and Dallapiccola, B. 1996. cDNA characterization and chromosomal mapping of two human homologues of the *Drosophila* dishevelled polarity gene. Hum. Mol. Genet. 5: 953-958.
- 7. Semënov, M.V. and Snyder, M. 1997. Human dishevelled genes constitute a DHR-containing multigene family. Genomics 42: 302-310.
- Wagner, U., Brownlees, J., Irving, N.G., Lucas, F.R., Salinas, P.C. and Miller, C.C. 1997. Overexpression of the mouse dishevelled-1 protein inhibits GSK-3β-mediated phosphorylation of tau in transfected mammalian cells. FEBS Lett. 411: 369-372.

CHROMOSOMAL LOCATION

Genetic locus: DVL3 (human) mapping to 3q27.1.

RESEARCH USE

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

PRODUCT

Dvl-3 (h3): 293T Lysate represents a lysate of human Dvl-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Dvl-3 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Dvl-3 antibodies. Recommended use: $10-20~\mu$ l per lane.

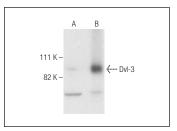
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Dvl-3 (C-3): sc-365581 is recommended as a positive control antibody for Western Blot analysis of enhanced human Dvl-3 expression in Dvl-3 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-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Dvl-3 (C-3): sc-365581. Western blot analysis of Dvl-3 expression in non-transfected: sc-117752 (**A**) and human Dvl-3 transfected: sc-176335 (**B**) 293T whole

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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