SANTA CRUZ BIOTECHNOLOGY, INC.

Dvl-2 (D-11): sc-393374

SANTA CRUZ BIOTECHNOLOGY

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 signalling pathway.

REFERENCES

1. Sussman, D.J., et al. 1994. Isolation and characterization of a mouse homolog of the *Drosophila* segment polarity gene dishevelled. Dev. Biol. 166: 73-86.
2. Krasnow, R.E., et al. 1995. Dishevelled is a component of the frizzled signaling pathway in *Drosophila*. Development 121: 4095-4102.
3. Yang-Snyder, J., et al. 1996. A frizzled homolog functions in a vertebrate Wnt signaling pathway. Curr. Biol. 6: 1302-1306.
4. Pizzuti, A., et al. 1996. Human homologue sequences to the *Drosophila* dishevelled segment-polarity are deleted in the DiGeorge syndrome. Am. J. Hum. Genet. 58: 722-729.
5. Tsang, M., et al. 1996. Isolation and characterization of mouse dishevelled-3. Dev. Dyn. 207: 253-262.
6. Pizzuti, A., et al. 1996. cDNA characterization and chromosomal mapping of two human homologues of the *Drosophila* dishevelled polarity gene. Hum. Mol. Genet. 5: 953-958.
7. Semenov, M.V., et al. 1997. Human dishevelled genes constitute a DHR-containing multigene family. Genomics 42: 302-310.
8. Wagner, U., et al. 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: DVL2 (human) mapping to 17p13.1; Dvl2 (mouse) mapping to 11 B3.

SOURCE

Dvl-2 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-75 near the N-terminus of Dvl-2 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_1 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-393374 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Dvl-2 (D-11) is recommended for detection of Dvl-2 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 Dvl-2 siRNA (h): sc-35230, Dvl-2 siRNA (m): sc-35231, Dvl-2 shRNA Plasmid (h): sc-35230-SH, Dvl-2 shRNA Plasmid (m): sc-35231-SH, Dvl-2 shRNA (h) Lentiviral Particles: sc-35230-V and Dvl-2 shRNA (m) Lentiviral Particles: sc-35231-V.

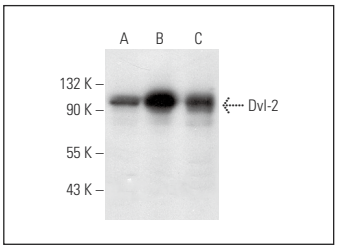
Molecular Weight of Dvl-2: 92 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

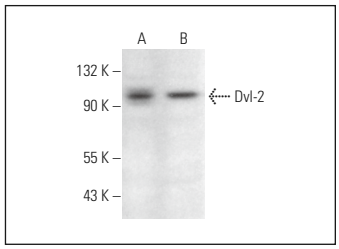
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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



Dvl-2 (D-11): sc-393374. Western blot analysis of Dvl-2 expression in BT-20 (**A**), F9 (**B**) and NIH/3T3 (**C**) whole cell lysates.



Dvl-2 (D-11): sc-393374. Western blot analysis of Dvl-2 expression in SH-SY5Y (**A**) and NTERA-2 cl.D1 (**B**) whole cell lysates.

RESEARCH USE

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