

Dvl (B-4): sc-166303



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-3 β . 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.

SOURCE

Dvl (B-4) is a mouse monoclonal antibody raised against amino acids 21-280 mapping near the N-terminus of Dvl-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dvl (B-4) is available conjugated to agarose (sc-166303 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166303 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166303 PE), fluorescein (sc-166303 FITC), Alexa Fluor[®] 488 (sc-166303 AF488), Alexa Fluor[®] 546 (sc-166303 AF546), Alexa Fluor[®] 594 (sc-166303 AF594) or Alexa Fluor[®] 647 (sc-166303 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166303 AF680) or Alexa Fluor[®] 790 (sc-166303 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Dvl (B-4) is recommended for detection of Dvl-1, Dvl-2 and Dvl-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Molecular Weight of Dvl: 85 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, KNRK whole cell lysate: sc-2214 or Dvl-3 (m2): 293 Lysate: sc-178541.

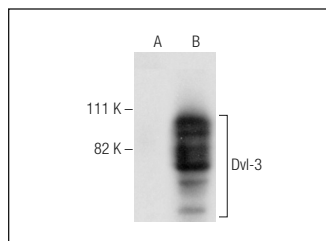
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

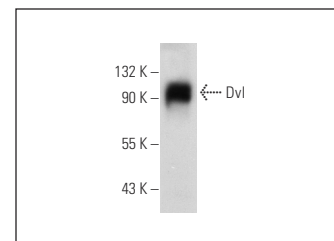
STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Dvl (B-4): sc-166303. Western blot analysis of Dvl-3 expression in non-transfected: sc-110760 (A) and mouse Dvl-3 transfected: sc-178541 (B) 293 whole cell lysates.



Dvl (B-4): sc-166303. Western blot analysis of Dvl expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Arellanes-Robledo, J., et al. 2013. Fibrogenic actions of acetaldehyde are β -catenin dependent but Wntless independent: a critical role of nucleoredoxin and reactive oxygen species in human hepatic stellate cells. *Free Radic. Biol. Med.* 65: 1487-1496.
- Zhao, H., et al. 2014. Coexpression of IQ-domain GTPase-activating protein 1 (IQGAP1) and dishevelled (Dvl) is correlated with poor prognosis in non-small cell lung cancer. *PLoS ONE* 9: e113713.
- Yeh, C.C., et al. 2015. Genistein suppresses growth of human uterine sarcoma cell lines via multiple mechanisms. *Anticancer Res.* 35: 3167-3173.
- Zhang, Q., et al. 2017. The preventive effects of taurine on neural tube defects through the Wnt/PCP-Jnk-dependent pathway. *Amino Acids* 49: 1633-1640.
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- Yang, Y., et al. 2019. Endogenous IGF signaling directs heterogeneous mesoderm differentiation in human embryonic stem cells. *Cell Rep.* 29: 3374-3384.e5.
- Ahn, K., et al. 2020. *Raphanus sativus* L. seed extracts induce apoptosis and reduce migration of oral squamous cell carcinoma KB and KB^{CD133+} cells by downregulation of β -catenin. *Nutr. Cancer* 72: 1378-1389.
- Kawarazaki, W., et al. 2020. Salt causes aging-associated hypertension via vascular Wnt5a under Klotho deficiency. *J. Clin. Invest.* 130: 4152-4166.
- Wei, L., et al. 2020. PWP1 promotes the malignant phenotypes of lung cancer cells by interacting with DVL2 and Merlin. *Onco Targets Ther.* 13: 10025-10037.

RESEARCH USE

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

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