

Dvl-3 (G-7): sc-271295

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.

CHROMOSOMAL LOCATION

Genetic locus: DVL3 (human) mapping to 3q27.1; Dvl3 (mouse) mapping to 16 A3.

SOURCE

Dvl-3 (G-7) is a mouse monoclonal antibody raised against amino acids 606-665 mapping near the C-terminus of Dishevelled-3 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-3 (G-7) is available conjugated to agarose (sc-271295 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271295 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271295 PE), fluorescein (sc-271295 FITC), Alexa Fluor[®] 488 (sc-271295 AF488), Alexa Fluor[®] 546 (sc-271295 AF546), Alexa Fluor[®] 594 (sc-271295 AF594) or Alexa Fluor[®] 647 (sc-271295 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271295 AF680) or Alexa Fluor[®] 790 (sc-271295 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Dvl-3 (G-7) is recommended for detection of 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), immunohistochemistry (including paraffin-embedded sections) (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-3 siRNA (h): sc-40491, Dvl-3 siRNA (m): sc-40492, Dvl-3 shRNA Plasmid (h): sc-40491-SH, Dvl-3 shRNA Plasmid (m): sc-40492-SH, Dvl-3 shRNA (h) Lentiviral Particles: sc-40491-V and Dvl-3 shRNA (m) Lentiviral Particles: sc-40492-V.

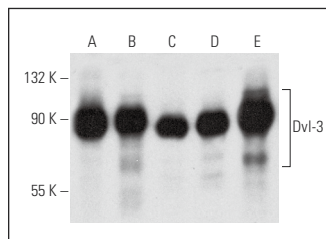
Molecular Weight of Dvl-3: 90 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, BT-20 cell lysate: sc-2223 or RAW 264.7 whole cell lysate: sc-2211.

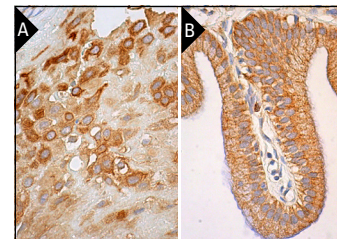
STORAGE

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

DATA



Dvl-3 (G-7): sc-271295. Western blot analysis of Dvl-3 expression in MCF7 (A), BT-20 (B), RAW 264.7 (C), LADMAC (D) and RPE-J (E) whole cell lysates.



Dvl-3 (G-7): sc-271295. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Kafka, A., et al. 2017. Expression levels and localizations of Dvl-3 and sFRP3 in glioblastoma. *Dis. Markers* 2017: 9253495.
- Karin-Kujundzic, V., et al. 2020. Dishevelled family proteins in serous ovarian carcinomas: a clinicopathologic and molecular study. *APMIS* 128: 201-210.
- Iannolo, G., et al. 2021. miRNA expression analysis in the human heart: undifferentiated progenitors vs. bioptic tissues-implications for proliferation and ageing. *J. Cell. Mol. Med.* 25: 8687-8700.
- Jin, X., et al. 2021. Protein tyrosine kinase 7-knockdown inhibits oral squamous cell carcinoma cell viability, proliferation, migration and invasion via downregulating dishevelled segment polarity protein 3 expression. *Exp. Ther. Med.* 22: 1372.
- Sremac, M., et al. 2021. Aberrant expression of SFRP1, SFRP3, Dvl-2 and Dvl-3 Wnt signaling pathway components in diffuse gastric carcinoma. *Oncol. Lett.* 22: 822.
- Sola, I.M., et al. 2021. Dishevelled family proteins (DVL1-3) expression in intrauterine growth restriction (IUGR) placentas. *Bosn. J. Basic Med. Sci.* 21: 447-453.

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.