



# Wnt-3 (D-9): sc-74537

## BACKGROUND

The Wnt gene family encodes secreted signaling molecules that bind to frizzled receptors and influence oncogenesis and developmental processes, including regulation of cell fate and patterning during embryogenesis. The Wnt family has two functional classes according to their biological activities; Wnts that signal through a Wnt-1/wingless pathway by stabilizing cytoplasmic  $\beta$ -catenin, and Wnts that stimulate intracellular  $\text{Ca}^{2+}$  release and activate two kinases, CamKII and PKC, in a G protein-dependent manner. Wnt-3 is present during development of the cerebellum and is restricted to the Purkinje cell layer in the adult. In motoneurons, Wnt-3 is a retrograde signal that controls terminal branching of muscle afferents. Human Wnt-3 is 98% homologous to mouse Wnt-3 protein and 84% homologous to human Wnt-3a protein. The human Wnt-3 gene clusters with the Wnt-15 gene at chromosome 17q21.31.

## CHROMOSOMAL LOCATION

Genetic locus: WNT3 (human) mapping to 17q21.31, WNT3A (human) mapping to 1q42.13; Wnt3 (mouse) mapping to 11 E1, Wnt3a (mouse) mapping to 11 B1.3.

## SOURCE

Wnt-3 (D-9) is a mouse monoclonal antibody raised against amino acids 241-310 mapping near the C-terminus of Wnt-3a of human origin.

## PRODUCT

Each vial contains 200  $\mu\text{g}$  IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Wnt-3 (D-9) is available conjugated to agarose (sc-74537 AC), 500  $\mu\text{g}$ /0.25 ml agarose in 1 ml, for IP; to HRP (sc-74537 HRP), 200  $\mu\text{g}$ /ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74537 PE), fluorescein (sc-74537 FITC), Alexa Fluor® 488 (sc-74537 AF488), Alexa Fluor® 546 (sc-74537 AF546), Alexa Fluor® 594 (sc-74537 AF594) or Alexa Fluor® 647 (sc-74537 AF647), 200  $\mu\text{g}$ /ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74537 AF680) or Alexa Fluor® 790 (sc-74537 AF790), 200  $\mu\text{g}$ /ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Wnt-3 (D-9) is recommended for detection of precursor and mature Wnt-3 and Wnt-3a of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu\text{g}$  per 100-500  $\mu\text{g}$  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).

Wnt-3 (D-9) is also recommended for detection of precursor and mature Wnt-3 and Wnt-3a in additional species, including bovine and porcine.

Molecular Weight (predicted) of Wnt-3: 39 kDa.

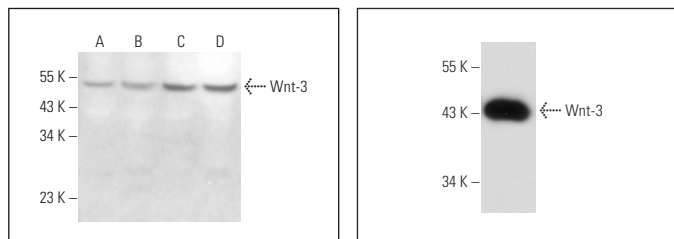
Molecular Weight (observed) of Wnt-3: 65 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, WEHI-231 whole cell lysate: sc-2213 or MDA-MB-231 cell lysate: sc-2232.

## STORAGE

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

## DATA



Wnt-3 (D-9): sc-74537. Western blot analysis of Wnt-3 expression in MCF7 (A), SK-BR-3 (B), MDA-MB-231 (C) and WEHI-231 (D) whole cell lysates.

Wnt-3 (D-9): sc-74537. Western blot analysis of mouse recombinant Wnt-3.

## SELECT PRODUCT CITATIONS

- Berendsen, A.D., et al. 2011. Modulation of canonical Wnt signaling by the extracellular matrix component Biglycan. *Proc. Natl. Acad. Sci. USA* 108: 17022-17027.
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- Potocnjak, I., et al. 2020. Antitumor activity of luteolin in human colon cancer SW620 cells is mediated by the ERK/FOXO3a signaling pathway. *Toxicol. In Vitro* 66: 104852.
- Habib, M.Z., et al. 2020. Effects of lithium on cytokine neuro-inflammatory mediators, Wnt/ $\beta$ -catenin signaling and microglial activation in the hippocampus of chronic mild stress-exposed rats. *Toxicol. Appl. Pharmacol.* 399: 115073.
- Ghorbani, M., et al. 2020. Impacts of epidural electrical stimulation on Wnt signaling, FAAH, and BDNF following thoracic spinal cord injury in rat. *J. Cell. Physiol.* 235: 9795-9805.
- Haiaty, S., et al. 2021. Thymoquinone inhibited vasculogenic capacity and promoted mesenchymal-epithelial transition of human breast cancer stem cells. *BMC Complement. Med. Ther.* 21: 83.

## RESEARCH USE

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

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