

# Wnt-4 (B-6): sc-376279

## BACKGROUND

Products of the highly conserved Wnt gene family, including Wnt-1 through Wnt-10, play key roles in regulating cellular growth and differentiation. Wnt-1 is a cysteine-rich, secreted glycoprotein that associates with cell membranes and likely functions as a key regulator of cellular adhesion. Wnt-1, which is essential for normal development of the embryonic nervous system, contributes to hyperplasia and tumorigenic progression when improperly expressed in mammary tissue. Wnt-3 is also involved in tumorigenesis, and Wnt-2 and Wnt-4 may be associated with abnormal proliferation in human breast tissue. Wnt-1, Wnt-3 and Wnt-10b have been implicated along with FGF-3 in the development of mouse mammary tumor virus-induced mouse mammary carcinomas. Wnt family members have been shown to interact with Sonic hedgehog (Shh) *in vivo* to induce myogenesis in somitic tissue.

## CHROMOSOMAL LOCATION

Genetic locus: WNT4 (human) mapping to 1p36.12; Wnt4 (mouse) mapping to 4 D3.

## SOURCE

Wnt-4 (B-6) is a mouse monoclonal antibody raised against amino acids 1-70 of Wnt-4 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Wnt-4 (B-6) is available conjugated to agarose (sc-376279 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376279 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376279 PE), fluorescein (sc-376279 FITC), Alexa Fluor® 488 (sc-376279 AF488), Alexa Fluor® 546 (sc-376279 AF546), Alexa Fluor® 594 (sc-376279 AF594) or Alexa Fluor® 647 (sc-376279 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376279 AF680) or Alexa Fluor® 790 (sc-376279 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Wnt-4 (B-6) is recommended for detection of Wnt-4 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), 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).

Wnt-4 (B-6) is also recommended for detection of Wnt-4 in additional species, including porcine.

Suitable for use as control antibody for Wnt-4 siRNA (h): sc-41110, Wnt-4 siRNA (m): sc-41111, Wnt-4 shRNA Plasmid (h): sc-41110-SH, Wnt-4 shRNA Plasmid (m): sc-41111-SH, Wnt-4 shRNA (h) Lentiviral Particles: sc-41110-V and Wnt-4 shRNA (m) Lentiviral Particles: sc-41111-V.

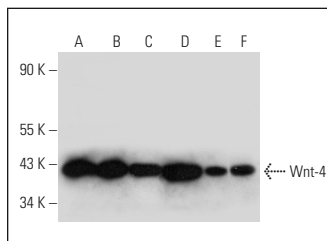
Molecular Weight of Wnt-4: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

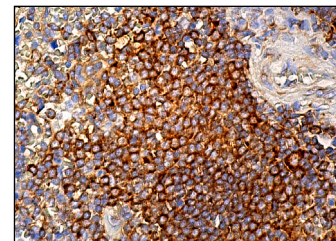
## STORAGE

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

## DATA



Wnt-4 (B-6): sc-376279. Western blot analysis of Wnt-4 expression in MCF7 (A), HeLa (B), SK-BR-3 (C) and HEK293 (D) whole cell lysates and human ovary (E) and human testis (F) tissue extracts.



Wnt-4 (B-6): sc-376279. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp.

## SELECT PRODUCT CITATIONS

- Liu, Z., et al. 2013. Fluocinolone acetonide promotes the proliferation and mineralization of dental pulp cells. *J. Endod.* 39: 217-222.
- Wang, L., et al. 2017. Mesenchymal stromal cells ameliorate oxidative stress-induced islet endothelium apoptosis and functional impairment via Wnt4-β-catenin signaling. *Stem Cell Res. Ther.* 8: 188.
- Becer, E., et al. 2018. The effect of *Colchicum pusillum* in human colon cancer cells via Wnt/β-catenin pathway. *Gene* 686: 213-219.
- Zhou, Q., et al. 2019. EHD1 impairs decidualization by regulating the Wnt4/β-catenin signaling pathway in recurrent implantation failure. *EBioMedicine* 50: 343-354.
- Zhang, W., et al. 2020. The secretome of human dental pulp stem cells protects myoblasts from hypoxia-induced injury via the Wnt/β-catenin pathway. *Int. J. Mol. Med.* 45: 1501-1513.
- Xu, T., et al. 2020. Targeting NEK2 impairs oncogenesis and radioresistance via inhibiting the Wnt1/β-catenin signaling pathway in cervical cancer. *J. Exp. Clin. Cancer Res.* 39: 183.
- Wang, N., et al. 2020. PRMT5/Wnt4 axis promotes lymph-node metastasis and proliferation of laryngeal carcinoma. *Cell Death Dis.* 11: 864.
- Pavlovic, O., et al. 2021. Immunohistochemical expression of Wnt-4 protein in clear cell renal carcinoma. *J. Clin. Med.* 10: 5795.
- Cui, L., et al. 2022. Circadian gene Rev-erbα influenced by sleep conduces to pregnancy by promoting endometrial decidualization via IL-6-PR-C/EBPβ axis. *J. Biomed. Sci.* 29: 101.
- Chen, S.T., et al. 2023. Embryo-derive TNF promotes decidualization via fibroblast activation. *Elife* 12: e82970.

## RESEARCH USE

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

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