

# Wnt-1 (G-19): sc-6280

## BACKGROUND

Products of the highly conserved Wnt gene family play key roles in regulating cellular growth and differentiation. The prototype member of the Wnt gene family, Wnt-1, is a cysteine-rich secreted glycoprotein that associates with cell membranes and likely functions as a key regulator of cellular adhesion.  $\beta$ -catenin, a cadherin-binding cellular adhesion protein which also binds the tumor suppressor gene APC, has been identified as a downstream target of a signal transduction pathway mediated by Wnt-1. Wnt-1 is essential for normal development of the embryonic nervous system and its expression is normally limited to the embryonic neural tube and adult spermatids. When improperly expressed in mammary tissue, Wnt-1 contributes to hyperplasia and tumorigenic progression. Wnt family members have been shown to interact with Sonic hedgehog (Shh) *in vivo* to induce myogenesis in somitic tissue.

## CHROMOSOMAL LOCATION

Genetic locus: WNT1 (human) mapping to 12q13.12; Wnt1 (mouse) mapping to 15 F1.

## SOURCE

Wnt-1 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Wnt-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6280 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Wnt-1 (G-19) is recommended for detection of Wnt-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-1 (G-19) is also recommended for detection of Wnt-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Wnt-1 siRNA (h): sc-36839, Wnt-1 siRNA (m): sc-36840, Wnt-1 shRNA Plasmid (h): sc-36839-SH, Wnt-1 shRNA Plasmid (m): sc-36840-SH, Wnt-1 shRNA (h) Lentiviral Particles: sc-36839-V and Wnt-1 shRNA (m) Lentiviral Particles: sc-36840-V.

Molecular Weight of Wnt-1: 40-42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, 3T3-L1 cell lysate: sc-2243 or WI-38 whole cell lysate: sc-364260.

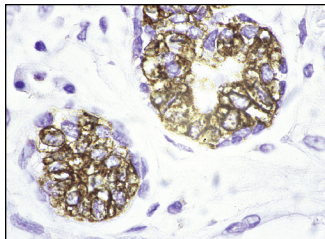
## STORAGE

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

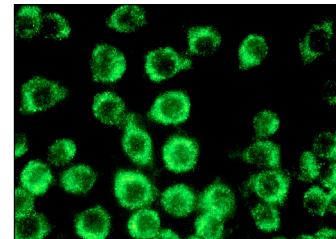
## RESEARCH USE

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

## DATA



Wnt-1 (G-19): sc-6280. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma. Note staining of cytoplasm and cell surface of ductal epithelia.



Wnt-1 (G-19): sc-6280. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Kameya, S., et al. 2002. Mfrp, a gene encoding a frizzled related protein, is mutated in the mouse retinal degeneration 6. *Hum. Mol. Genet.* 11: 1879-1886.
2. Monteiro, A., et al. 2006. Comparative insights into questions of lepidopteran wing pattern homology. *BMC Dev. Biol.* 6: 52.
3. Khor, T.O., et al. 2006. A comparative study of the expression of Wnt-1, WISP-1, survivin and cyclin D1 in colorectal carcinoma. *Int. J. Colorectal Dis.* 21: 291-300.
4. Song, J.S., et al. 2009. Differentiation and regenerative capacities of human odontoma-derived mesenchymal cells. *Differentiation* 77: 29-37.
5. Williams, J.M., et al. 2010. The role of the Wnt family of secreted proteins in rat oval "stem" cell-based liver regeneration: Wnt1 drives differentiation. *Am. J. Pathol.* 176: 2732-2742.
6. Kumar, R., et al. 2010. Metastasis-associated protein 1 short form stimulates Wnt1 pathway in mammary epithelial and cancer cells. *Cancer Res.* 70: 6598-6608.
7. Bakarakos, P., et al. 2010. Immunohistochemical study of PTEN and phosphorylated mTOR proteins in familial and sporadic invasive breast carcinomas. *Histopathology* 56: 876-882.
8. Siddavaram, N., et al. 2012. Chlorophyllin abrogates canonical Wnt/ $\beta$ -catenin signaling and angiogenesis to inhibit the development of DMBA-induced hamster cheek pouch carcinomas. *Cell. Oncol.* 35: 385-395.

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Try **Wnt-1 (E-10): sc-514531**, our highly recommended monoclonal alternative to Wnt-1 (G-19).