

# Wnt-10 (C-19): sc-7432

## 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 that also binds to 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. Wnt family members have been shown to interact with Sonic hedgehog (Shh) *in vivo* to induce myogenesis in somitic tissue. Wnt-10b has been implicated along with FGF-3 in the development of mouse mammary tumor virus induced mouse mammary carcinomas.

## REFERENCES

1. Nusse, R., et al. 1992. Wnt genes. *Cell* 69: 1073-1087.
2. Wong, G.T., et al. 1994. Differential transformation of mammary epithelial cells by Wnt genes. *Mol. Cell. Biol.* 14: 6278-6286.
3. Hinck, L., et al. 1994.  $\beta$ -catenin: a common target for the regulation of cell adhesion by Wnt-1 and Src signaling pathways. *Trends Biochem. Sci.* 19: 538-542.

## CHROMOSOMAL LOCATION

Genetic locus: WNT10A (human) mapping to 2q35, WNT10B (human) mapping to 12q13.12; Wnt10a (mouse) mapping to 1 C3, Wnt10b (mouse) mapping to 15 F1.

## SOURCE

Wnt-10 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Wnt-10b 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-7432 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Wnt-10 (C-19) is recommended for detection of Wnt-10a and Wnt-10b 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Wnt-10 (C-19) is also recommended for detection of Wnt-10a and Wnt-10b in additional species, including equine, canine, bovine and porcine.

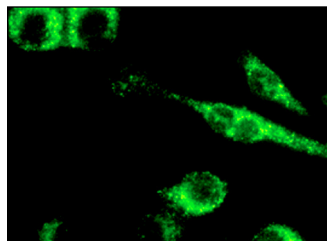
Molecular Weight of Wnt-10: 43 kDa.

Positive Controls: rat heart extract: sc-2393.

## STORAGE

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

## DATA



Wnt-10 (C-19): sc-7432. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Daudet, N., et al. 2002. Expression of members of Wnt and frizzled gene families in the postnatal rat cochlea. *Brain Res. Mol. Brain Res.* 105: 98-107.
2. 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.
3. Okuse, T., et al. 2005. Differential expression and localization of WNTs in an animal model of skin wound healing. *Wound Repair Regen.* 13: 491-497.
4. Oujji, Y., et al. 2006. Wnt-10b secreted from lymphocytes promotes differentiation of skin epithelial cells. *Biochem. Biophys. Res. Commun.* 342: 1063-1069.
5. Imai, K., et al. 2006. Differential expression of WNTs and FRPs in the synovium of rheumatoid arthritis and osteoarthritis. *Biochem. Biophys. Res. Commun.* 345: 1615-1620.
6. Ishikawa, Y., et al. 2008. Notch-dependent cell cycle arrest and apoptosis in mouse embryonic fibroblasts lacking Fbxw7. *Oncogene* 27: 6164-6174.
7. Foronjy, R., et al. 2010. The divergent roles of secreted frizzled related protein-1 (SFRP1) in lung morphogenesis and emphysema. *Am. J. Pathol.* 177: 598-607.

## RESEARCH USE

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


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Try **Wnt-10b (5A7F12/6C6A12): sc-517195**, our highly recommended monoclonal alternative to Wnt-10 (C-19).