

# Wnt-7b (Q-13): sc-26363

## 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  $Ca^{2+}$  release and activate two kinases, CamKII and PKC, in a G protein-dependent manner. Wnt-7a guides the development of the anterior-posterior axis in the female reproductive tract, and influences uterine smooth muscle patterning and maintenance of adult uterine function.

## REFERENCES

- Ikegawa, S., Kumano, Y., Okui, K., Fujiwara, T., Takahashi, E. and Nakamura, Y. 1996. Isolation, characterization and chromosomal assignment of the human WNT7A gene. *Cytogenet. Cell Genet.* 74: 149-152.
- Johnson, R.L. and Tabin, C.J. 1997. Molecular models for vertebrate limb development. *Cell* 90: 979-990.
- Kuhl, M., Sheldahl, L.C., Park, M., Miller, J.R. and Moon, R.T. 2000. The Wnt/ $Ca^{2+}$  pathway: a new vertebrate Wnt signaling pathway takes shape. *Trends Genet.* 16: 279-283.
- Li, S., Chiang, T.C., Davis, G.R., Williams, R.M., Wilson, V.P. and McLachlan, J.A. 2001. Decreased expression of Wnt7a mRNA is inversely associated with the expression of estrogen receptor- $\alpha$  in human uterine leiomyoma. *J. Clin. Endocr. Metab.* 86: 454-457.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601570. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: WNT7B (human) mapping to 22q13.31; Wnt7b (mouse) mapping to 15 E2.

## SOURCE

Wnt-7b (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Wnt-7b 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-26363 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Wnt-7b (Q-13) is recommended for detection of precursor and mature Wnt-7b 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-7b (Q-13) is also recommended for detection of precursor and mature Wnt-7b in additional species, including equine, canine and bovine.

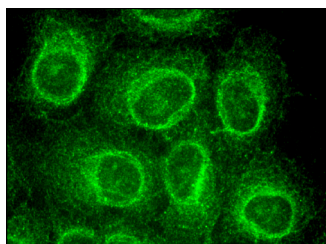
Suitable for use as control antibody for Wnt-7b siRNA (h): sc-41116, Wnt-7b siRNA (m): sc-41117, Wnt-7b shRNA Plasmid (h): sc-41116-SH, Wnt-7b shRNA Plasmid (m): sc-41117-SH, Wnt-7b shRNA (h) Lentiviral Particles: sc-41116-V and Wnt-7b shRNA (m) Lentiviral Particles: sc-41117-V.

Molecular Weight of Wnt-7b: 39 kDa.

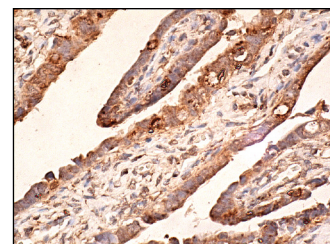
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Wnt-7b (Q-13): sc-26363. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.



Wnt-7b (Q-13): sc-26363. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Brynczka, C., et al. 2008. The p53 transcriptional target gene Wnt-7b contributes to NGF-inducible neurite outgrowth in neuronal PC12 cells. *Differentiation* 76: 795-808.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.