

# Wnt-16 (H-96): sc-20964

## BACKGROUND

The Wnt genes encode a family of secreted extracellular signaling glycoproteins, which function in a variety of important developmental processes such as regulation of cell growth and differentiation. Wnt proteins also play roles in carcinogenesis. Wnt-14 rather than Wnt-15 is preferentially expressed in various types of human cancer and is up-regulated by IFN $\gamma$ , but not by TNF $\alpha$  in cells derived from gastric cancer. Wnt-15 is expressed in fetal and adult kidney and is most homologous to Wnt-14. Wnt-16, another member in the Wnt family, has two mRNA isoforms, Wnt-16a and Wnt-16b. These isoforms differ in the composition of their 5'UTR and first exon, which results in differential expression. Wnt-16a is expressed only on the pancreas, whereas Wnt-16b is highly expressed in adult kidney, placenta, brain, heart and spleen, but not in bone marrow. However, Wnt-16 transcripts are present in bone marrow and cell lines derived from pre-B acute lymphoblastoid leukemias patients carrying the E2A-Pbx1 hybrid gene. Thus, Wnt-16 is a downstream target of E2A-Pbx1, and the Wnt-16-mediated autocrine growth mechanism may contribute to the development of t(1;19) pre-B acute lymphoblastoid leukemias.

## REFERENCES

1. Bergstein, I., et al. 1997. Isolation of two novel Wnt genes, Wnt-14 and Wnt15, one of which (Wnt15) is closely linked to Wnt3 on human chromosome 17q21. *Genomics* 46: 450-458.
2. McWhirter, J.R., et al. 1999. Oncogenic homeodomain transcription factor E2A-Pbx1 activates a novel Wnt gene in pre-B acute lymphoblastoid leukemia. *Proc. Natl. Acad. Sci. USA* 96: 11464-11469.
3. Fear, M.W., et al. 2000. Wnt-16a, a novel Wnt-16 isoform, which shows differential expression in adult human tissues. *Biochem. Biophys. Res. Commun.* 278: 814-820.
4. Kirikoshi, H., et al. 2001. Molecular cloning and characterization of Wnt-14b, a novel member of the Wnt gene family. *Int. J. Oncol.* 19: 947-952.
5. Kirikoshi, H., et al. 2001. Expression of Wnt-14 and Wnt-14b mRNAs in human cancer, up-regulation of Wnt-14 by IFN $\gamma$  and up-regulation of Wnt-14b by  $\beta$ -estradiol. *Int. J. Oncol.* 19: 1221-1225.

## CHROMOSOMAL LOCATION

Genetic locus: WNT16 (human) mapping to 7q31.31; Wnt16 (mouse) mapping to 6 A3.1.

## SOURCE

Wnt-16 (H-96) is a rabbit polyclonal antibody raised against amino acids 111-207 of Wnt-16 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.

## RESEARCH USE

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

## APPLICATIONS

Wnt-16 (H-96) is recommended for detection of Wnt-16 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

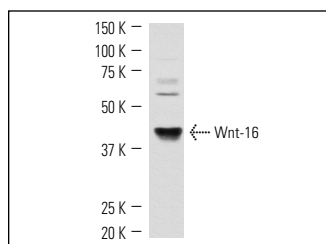
Wnt-16 (H-96) is also recommended for detection of Wnt-16 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Wnt-16 siRNA (h): sc-41128, Wnt-16 siRNA (m): sc-41129, Wnt-16 shRNA Plasmid (h): sc-41128-SH, Wnt-16 shRNA Plasmid (m): sc-41129-SH, Wnt-16 shRNA (h) Lentiviral Particles: sc-41128-V and Wnt-16 shRNA (m) Lentiviral Particles: sc-41129-V.

Molecular Weight of Wnt-16: 41 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or NAMALWA cell lysate: sc-2234.

## DATA



Wnt-16 (H-96): sc-20964. Western blot analysis of Wnt-16 expression in LNCaP whole cell lysate.



Wnt-16 (H-96): sc-20964. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells.

## STORAGE

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

## PROTOCOLS

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



Try **Wnt-16 (B-4): sc-271897**, our highly recommended monoclonal alternative to Wnt-16 (H-96).