

Wnt-4 (R-19): sc-5215

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 somatic tissue.

REFERENCES

1. Nusse, R., et al. 1992. Wnt genes. *Cell* 69: 1073-1087.
2. Huguot, E.L., et al. 1994. Differential expression of human Wnt genes 2, 3, 4, and 7B in human breast cell lines and normal and disease states of human breast tissue. *Cancer Res.* 54: 2615-2621.
3. Wong, G.T., et al. 1994. Differential transformation of mammary epithelial cells by Wnt genes. *Mol. Cell. Biol.* 14: 6278-6286.
4. Munsterberg, A.E., et al. 1995. Combinatorial signaling by Sonic hedgehog and Wnt family members induces myogenic β HDL gene expression in the somite. *Genes Dev.* 9: 2911-2922.
5. Burrus, L.W., et al. 1995. Biochemical analysis of murine Wnt proteins reveals both shared and distinct properties. *Exp. Cell Res.* 220: 363-373.
6. Schryver, B., et al. 1996. Properties of Wnt-1 protein that enable cell surface association. *Oncogene* 13: 333-342.
7. Callahan, R. 1996. MMTV-induced mutations in mouse mammary tumors: their potential relevance to human breast cancer. *Breast Cancer Res. Treat.* 39: 33-44.

CHROMOSOMAL LOCATION

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

SOURCE

Wnt-4 (R-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Wnt-4 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5215 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Wnt-4 (R-19) is recommended for detection of Wnt-4 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-4 (R-19) is also recommended for detection of Wnt-4 in additional species, including equine, canine, porcine and avian.

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, MCF7 whole cell lysate: sc-2206 or SK-BR-3 cell lysate: sc-2218.

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) 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.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfation
Guaranteed

Try **Wnt-4 (B-6): sc-376279**, our highly recommended monoclonal alternative to Wnt-4 (R-19).