

Wnt-4 (M-70): sc-13962

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. and Varmus, H.E. 1992. Wnt genes. *Cell* 69: 1073-1087.
2. Hinck, L., et al. 1994. β -catenin: a common target for the regulation of cell adhesion by Wnt-1 and Src in signaling pathways. *Trends Biochem. Sci.* 19: 538-542.

CHROMOSOMAL LOCATION

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

SOURCE

Wnt-4 (M-70) is a rabbit polyclonal antibody raised against amino acids 1-70 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.

APPLICATIONS

Wnt-4 (M-70) 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), immunoprecipitation [1-2 μ g per 100-500 μ 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-4 (M-70) is also recommended for detection of Wnt-4 in additional species, including 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.

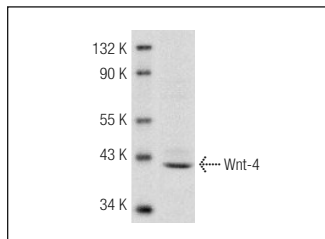
Molecular Weight of Wnt-4: 40 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

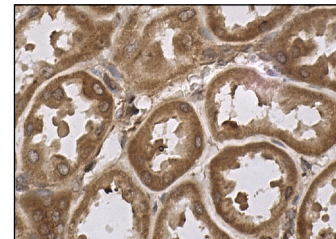
STORAGE

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

DATA



Wnt-4 (M-70): sc-13962. Western blot analysis of Wnt-4 expression in SK-BR-3 whole cell lysate.



Wnt-4 (M-70): sc-13962. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

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. Davies, J.A., et al. 2004. Development of an siRNA-based method for repressing specific genes in renal organ culture and its use to show that the WT1 tumour suppressor is required for nephron differentiation. *Hum. Mol. Genet.* 13: 235-246.
3. Nikolova, T., et al. 2007. Wnt-conditioned media differentially affect the proliferation and differentiation of cord blood-derived CD133⁺ cells *in vitro*. *Differentiation* 75: 100-111.
4. Abdel-Hakeem, A.K., et al. 2008. Mechanisms of impaired nephrogenesis with fetal growth restriction: altered renal transcription and growth factor expression. *Am. J. Obstet. Gynecol.* 199: 252.
5. Kocer, A., et al. 2008. R-spondin1 and FOXL2 act into two distinct cellular types during goat ovarian differentiation. *BMC Dev. Biol.* 8: 36.
6. Wu, G.C., et al. 2009. Wnt-4 is associated with the development of ovarian tissue in the protandrous black porgy, *Acanthopagrus schlegelii*. *Biol. Reprod.* 81: 1073-1082.
7. Kiewisz, J., et al. 2011. Gene expression of WNTs, β -catenin and E-cadherin during the periimplantation period of pregnancy in pigs—involvement of steroid hormones. *Theriogenology* 76: 687-699.

RESEARCH USE

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



Try **Wnt-4 (B-6): sc-376279**, our highly recommended monoclonal alternative to Wnt-4 (M-70).