

Wnt-4 (C-14): sc-5214

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. Wong, G.T., et al. 1994. Differential transformation of mammary epithelial cells by Wnt genes. *Mol. Cell. Biol.* 14: 6278-6286.

CHROMOSOMAL LOCATION

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

SOURCE

Wnt-4 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Wnt-4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5214 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Wnt-4 (C-14) 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 (C-14) is also recommended for detection of Wnt-4 in additional species, including equine, canine and porcine.

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.

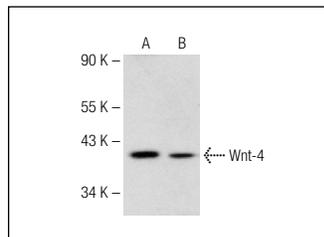
Molecular Weight of Wnt-4: 40 kDa.

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

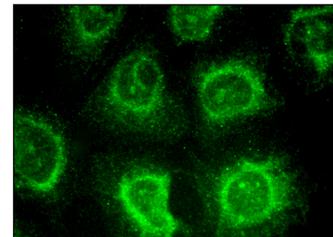
STORAGE

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

DATA



Wnt-4 (C-14): sc-5214. Western blot analysis of Wnt-4 expression in HeLa (A) and MCF7 (B) whole cell lysates.



Wnt-4 (C-14): sc-5214. Immunofluorescence staining of methanol-fixed HeLa 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. 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.
3. Xu, J., et al. 2007. Effect of Akt inhibition on scatter factor-regulated gene expression in DU 145 human prostate cancer cells. *Oncogene* 26: 2925-2938.
4. Jääskeläinen, M., et al. 2010. WNT4 is expressed in human fetal and adult ovaries and its signaling contributes to ovarian cell survival. *Mol. Cell. Endocrinol.* 317: 106-111.
5. Bernardi, H., et al. 2011. Wnt4 activates the canonical β -catenin pathway and regulates negatively myostatin: functional implication in myogenesis. *Am. J. Physiol., Cell Physiol.* 300: C1122-C1138.
6. Li, B., et al. 2011. Increased hedgehog signaling in postnatal kidney results in aberrant activation of nephron developmental programs. *Hum. Mol. Genet.* 20: 4155-4166.
7. Kasaai, B., et al. 2012. Spatial and temporal localization of WNT signaling proteins in a mouse model of distraction osteogenesis. *J. Histochem. Cytochem.* 60: 219-228.

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 (C-14).