

Wnt-5b (G-4): sc-376249

BACKGROUND

Belonging to a family of protooncogenes, Wnt proteins include at least 13 known members that are expressed in species ranging from *Drosophila* to man. The Wnt genes encode cysteine-rich putative glycoproteins, which have features typical of secreted growth factors. Northern blot analysis detects expression of Wnt-5a in brain, lung and heart. Human frizzled-5 is the receptor for the Wnt-5a ligand. It is suggested that Wnt-5a augments primitive hematopoietic development *in vivo* and functions as a regulator of hematopoietic stem cell function. Wnt-5b is a 359 amino acid secreted protein that localizes to the extracellular matrix. Thought to function as a signaling molecule, Wnt-5b interacts with PORCN and acts as a ligand for members of the frizzled family of transmembrane receptors, possibly affecting the development of discrete tissue regions. Wnt-5b is expressed in a variety of tissues, including fetal brain, kidney, lung, ovary and small intestine, as well as in gastric cancer and teratocarcinoma cell lines, suggesting a role for Wnt-5b in tumorigenesis.

REFERENCES

1. Gavin, B.J., et al. 1990. Expression of multiple novel Wnt-1/int-1-related genes during fetal and adult mouse development. *Genes Dev.* 4: 2319-2332.
2. Smolich, B.D., et al. 1993. Wnt family proteins are secreted and associated with the cell surface. *Mol. Biol. Cell* 4: 1267-1275.
3. Tanaka, K., et al. 2000. The evolutionarily conserved porcupine gene family is involved in the processing of the Wnt family. *Eur. J. Biochem.* 267: 4300-4311.
4. Saitoh, T. and Katoh, M. 2001. Molecular cloning and characterization of human WNT5B on chromosome 12p13.3 region. *Int. J. Oncol.* 19: 347-351.

CHROMOSOMAL LOCATION

Genetic locus: WNT5A (human) mapping to 3p14.3, WNT5B (human) mapping to 12p13.33; Wnt5a (mouse) mapping to 14 A3, Wnt5b (mouse) mapping to 6 F1.

SOURCE

Wnt-5b (G-4) is a mouse monoclonal antibody raised against amino acids 101-204 mapping within an internal region of Wnt-5b of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Wnt-5b (G-4) is available conjugated to agarose (sc-376249 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376249 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376249 PE), fluorescein (sc-376249 FITC), Alexa Fluor® 488 (sc-376249 AF488), Alexa Fluor® 546 (sc-376249 AF546), Alexa Fluor® 594 (sc-376249 AF594) or Alexa Fluor® 647 (sc-376249 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376249 AF680) or Alexa Fluor® 790 (sc-376249 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Wnt-5b (G-4) is recommended for detection of Wnt-5b of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

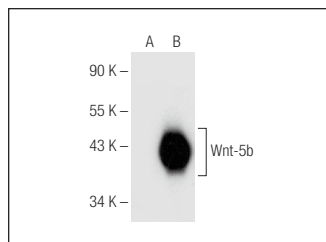
Wnt-5b (G-4) is also recommended for detection of Wnt-5b in additional species, including equine.

Suitable for use as control antibody for Wnt-5b siRNA (h): sc-95781, Wnt-5b siRNA (m): sc-155357, Wnt-5b shRNA Plasmid (h): sc-95781-SH, Wnt-5b shRNA Plasmid (m): sc-155357-SH, Wnt-5b shRNA (h) Lentiviral Particles: sc-95781-V and Wnt-5b shRNA (m) Lentiviral Particles: sc-155357-V.

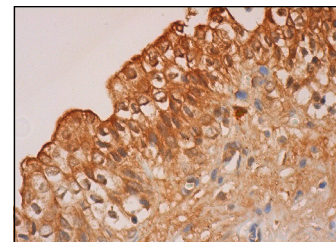
Molecular Weight of Wnt-5b: 40 kDa.

Positive Controls: Wnt-5b (m2): 293T Lysate: sc-124653.

DATA



Wnt-5b (G-4): sc-376249. Western blot analysis of Wnt-5b expression in non-transfected: sc-117752 (A) and mouse Wnt-5b transfected: sc-124653 (B) 293T whole cell lysates.



Wnt-5b (G-4): sc-376249. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and membrane staining of urothelial cells and extracellular staining of connective tissue.

SELECT PRODUCT CITATIONS

1. Das, A., et al. 2015. A novel component from citrus, ginger, and mushroom family exhibits antitumor activity on human meningioma cells through suppressing the Wnt/β-catenin signaling pathway. *Tumour Biol.* 36: 7027-7034.
2. Esmail, M.M., et al. 2021. The ameliorative effect of niclosamide on bile duct ligation induced liver fibrosis via suppression of NOTCH and Wnt pathways. *Toxicol. Lett.* 347: 23-35.
3. Wu, L., et al. 2023. Paeoniflorin shows chondroprotective effects under IL-1β stress by regulating circ-PREX1/miR-140-3p/WNT5B axis. *J. Orthop. Surg. Res.* 18: 766.

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.