

Wnt-5a/b (H-104): sc-98738

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

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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.
5. Saitoh, T. and Katoh, M. 2002. Expression and regulation of WNT5A and WNT5B in human cancer: up-regulation of WNT5A by TNF α in MKN45 cells and up-regulation of WNT5B by β -estradiol in MCF-7 cells. *Int. J. Mol. Med.* 10: 345-349.
6. Kanazawa, A., et al. 2004. Association of the gene encoding wingless-type mammary tumor virus integration-site family member 5B (WNT5B) with type 2 diabetes. *Am. J. Hum. Genet.* 75: 832-843.
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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-5a/b (H-104) is a rabbit polyclonal antibody raised against amino acids 101-204 mapping within an internal region of Wnt-5b of human 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-5a/b (H-104) is recommended for detection of Wnt-5a and Wnt-5b 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

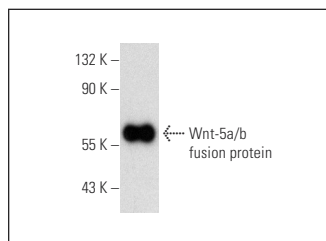
Wnt-5a/b (H-104) is also recommended for detection of Wnt-5a and Wnt-5b in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Wnt-5a/b: 39/40 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



Wnt-5a/b (H-104): sc-98738. Western blot analysis of full length human recombinant Wnt-5a/b fusion protein.

STORAGE

Store at 4 $^{\circ}$ 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.

MONOS
Satisfaction
Guaranteed

Try **Wnt-5b (G-4): sc-376249** or **Wnt-5a (A-5): sc-365370**, our highly recommended monoclonal alternatives to Wnt-5a/b (H-104). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Wnt-5b (G-4): sc-376249**.