

## Wnt-5a (H-58): sc-30224

### BACKGROUND

The Wnt genes belong to a family of protooncogenes with at least 13 known members that are expressed in species ranging from *Drosophila* to man. The name Wnt denotes the relationship of this family to the *Drosophila* segment polarity gene "wingless" and to its vertebrate ortholog, Int1, a mouse protooncogene. Transcription of Wnt family genes appears to be developmentally regulated in a precise temporal and spatial manner. 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. At least five distinct Wnt-5a transcripts are observed, which are due to transcript variability 5' to the initiation methionine. *In situ* hybridization detects a complex spatial and temporal pattern of Wnt-5a in the mouse, including expression in the developing central nervous system, limbs, facial processes, and the posterior region of the fetus. Human frizzled-5 is the receptor for the Wnt-5a ligand. It is suggested that Wnt-5a augments primitive hematopoietic development *in vivo* and represents an *in vivo* regulator of hematopoietic stem cell function in the human.

### 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 (H-58) is a rabbit polyclonal antibody raised against amino acids 23-80 mapping near the N-terminus of Wnt-5a 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.

### APPLICATIONS

Wnt-5a (H-58) is recommended for detection of Wnt-5a and, to a lesser extent, Wnt-5b of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-5a (H-58) is also recommended for detection of Wnt-5a and, to a lesser extent, Wnt-5b in additional species, including canine, bovine, porcine and avian.

Molecular Weight of Wnt-5a: 39 kDa.

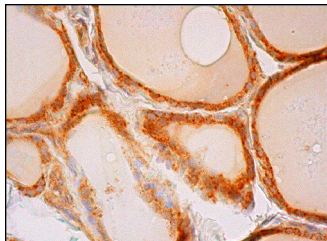
### STORAGE

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.

### DATA



Wnt-5a (H-58): sc-30224. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

### SELECT PRODUCT CITATIONS

1. Matushansky, I., et al. 2007. Derivation of sarcomas from mesenchymal stem cells via inactivation of the Wnt pathway. *J. Clin. Invest.* 117: 3248-3257.
2. 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.
3. Peng, C., et al. 2011. Wnt5a as a predictor in poor clinical outcome of patients and a mediator in chemoresistance of ovarian cancer. *Int. J. Gynecol. Cancer* 21: 280-288.
4. Ren, Y., et al. 2011. Exosomal-like vesicles with immune-modulatory features are present in human plasma and can induce CD4<sup>+</sup> T-cell apoptosis *in vitro*. *Transfusion* 51: 1002-1011.
5. Bhushan, S., et al. 2011. Uropathogenic *E. coli* induce different immune response in testicular and peritoneal macrophages: implications for testicular immune privilege. *PLoS ONE* 6: e28452.
6. Jia, H., et al. 2011. Wnt5a expression in the hindgut of fetal rats with chemically induced anorectal malformations—studies in the ETU rat model. *Int. J. Colorectal Dis.* 26: 493-499.
7. Xiong, W.J., et al. 2012. Wnt5a participates in hepatic stellate cell activation observed by gene expression profile and functional assays. *World J. Gastroenterol.* 18: 1745-1752.
8. Li, Q. and Chen, H. 2012. Silencing of Wnt5a during colon cancer metastasis involves histone modifications. *Epigenetics* 7: 551-558.

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Try **Wnt-5a (A-5): sc-365370** or **Wnt-5b (G-4): sc-376249**, our highly recommended monoclonal alternatives to Wnt-5a (H-58). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Wnt-5a (A-5): sc-365370**.