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WNT5A Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5682C

Product Information

Application	WB, FC, IHC-P-Leica, E
Primary Accession	P41221
Other Accession	Q9QXQ7, Q27Q52, P22725, NP_003383.2
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22340
Calculated MW	42339
Antigen Region	185-213

Additional Information

Gene ID	7474
Other Names	Protein Wnt-5a, WNT5A
Target/Specificity	This WNT5A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 185-213 amino acids from the Central region of human WNT5A.
Dilution	WB~~1:1000 FC~~1:10~50 IHC-P-Leica~~1:100 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	WNT5A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	WNT5A
Function	Ligand for members of the frizzled family of seven transmembrane receptors. Can activate or inhibit canonical Wnt signaling, depending on

receptor context. In the presence of FZD4, activates beta-catenin signaling. In the presence of ROR2, inhibits the canonical Wnt pathway by promoting beta-catenin degradation through a GSK3-independent pathway which involves down-regulation of beta- catenin-induced reporter gene expression (By similarity). Suppression of the canonical pathway allows chondrogenesis to occur and inhibits tumor formation. Stimulates cell migration. Decreases proliferation, migration, invasiveness and clonogenicity of carcinoma cells and may act as a tumor suppressor (PubMed:15735754). Mediates motility of melanoma cells (PubMed:17426020). Required during embryogenesis for extension of the primary anterior-posterior axis and for outgrowth of limbs and the genital tubercle. Inhibits type II collagen expression in chondrocytes (By similarity).

Cellular Location Secreted, extracellular space, extracellular matrix. Secreted

Tissue Location Expression is increased in differentiated thyroid carcinomas compared to normal thyroid tissue and anaplastic thyroid tumors where expression is low or undetectable. Expression is found in thyrocytes but not in stromal cells (at protein level) (PubMed:15735754). Detected in neonate heart and lung (PubMed:8288227)

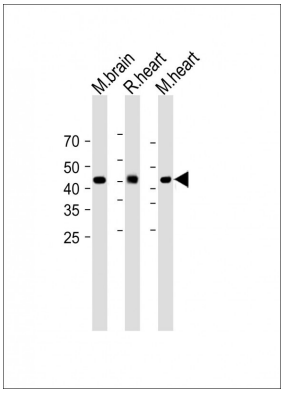
Background

The WNT gene family consists of structurally related genes which encode secreted signaling proteins. These proteins have been implicated in oncogenesis and in several developmental processes, including regulation of cell fate and patterning during embryogenesis. This gene is a member of the WNT gene family. It encodes a protein which shows 98%, 98% and 87% amino acid identity to the mouse, rat and the xenopus Wnt5A protein, respectively. The experiments performed in Xenopus laevis embryos identified that human frizzled-5 (hFz5) is the receptor for the Wnt5A ligand and the Wnt5A/hFz5 signaling mediates axis induction. [provided by RefSeq].

References

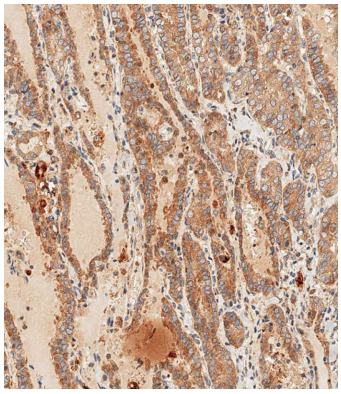
He, X., et al. Science 275(5306):1652-1654(1997)
Danielson, K.G., et al. J. Biol. Chem. 270(52):31225-31234(1995)
Smolich, B.D., et al. Mol. Biol. Cell 4(12):1267-1275(1993)
Clark, C.C., et al. Genomics 18(2):249-260(1993)

Images

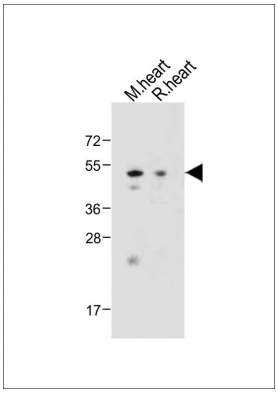


All lanes: Anti-WNT5A Antibody (Center) at 1:2000 dilution Lane 1: mouse brain lysate Lane 2: Rat heart lysate Lane 3: mouse heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) E42at 1/15000 dilution. Observed band size: 42KDa Blocking/Dilution buffer: 5% NFDM/TBST.

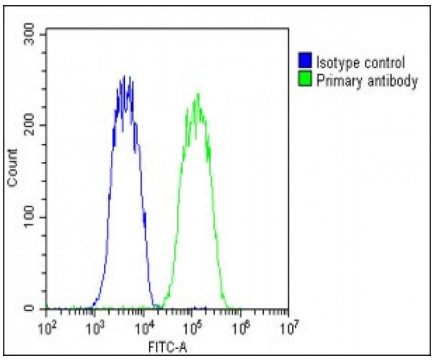
Immunohistochemical analysis of paraffin-embedded Human thyroid carcinoma tissue using AP5682c performed on the Leica® BOND RXm. Tissue was fixed



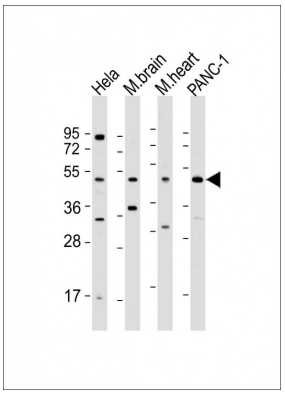
with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



All lanes : Anti-WNT5A Antibody (Center) at 1:500 dilution Lane 1: Mouse heart lysate Lane 2: Rat heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

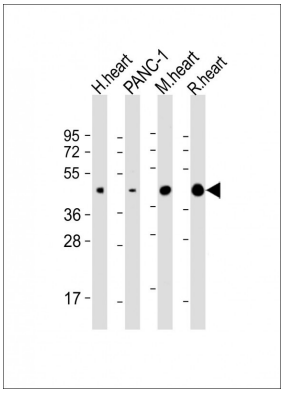


Overlay histogram showing Hela cells stained with AP5682c(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP5682c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-WNT5A Antibody (Center) at 1:500 dilution Lane 1: Hela whole cell lysate Lane 2: mouse brain lysate Lane 3: mouse heart lysate Lane 4: PANC-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-WNT5A Antibody (Center) at 1:2000 dilution Lane 1: human heart lysate Lane 2: PANC-1 whole cell lysate Lane 3: mouse heart lysate Lane 4: rat heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Citations

- Berberine retarded the growth of gastric cancer xenograft tumors by targeting hepatocyte nuclear factor 4α
- Comparative study of ROR2 and WNT5a expression in squamous/adenosquamous carcinoma and adenocarcinoma of the gallbladder.