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LGR5/GPR49 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM1992b

Specification

LGR5/GPR49 Antibody - Product Information

Application	**WB, FC,E**
Primary Accession	O75473
Other Accession	NP_003658.1
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**99998**
Antigen Region	**689-719**

LGR5/GPR49 Antibody - Additional Information

Gene ID 8549

Other Names
Leucine-rich repeat-containing G-protein coupled receptor 5, G-protein coupled receptor 49, G-protein coupled receptor 67, G-protein coupled receptor HG38, LGR5, GPR49, GPR67

Target/Specificity
This LGR5/GPR49 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 689-719 amino acids from human LGR5/GPR49.

Dilution
WB~~1□2000
FC~~1:25

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

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
LGR5/GPR49 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

LGR5/GPR49 Antibody - Protein Information

Name LGR5

Synonyms GPR49, GPR67

Function Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and acts as a stem cell marker of the intestinal epithelium and the hair follicle. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3 or RSPO4), associates with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. In contrast to classical G-protein coupled receptors, does not activate heterotrimeric G-proteins to transduce the signal. Involved in the development and/or maintenance of the adult intestinal stem cells during postembryonic development.

Cellular Location
Cell membrane; Multi-pass membrane protein. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein Note=Rapidly and constitutively internalized to the trans-Golgi network at steady state. Internalization to the trans-Golgi network may be the result of phosphorylation at Ser-861 and Ser-864; however, the phosphorylation event has not been proven (PubMed:23439653)

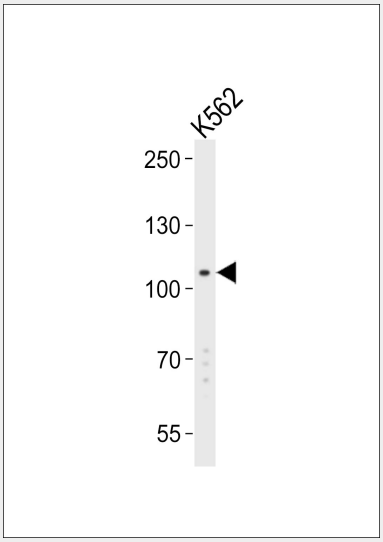
Tissue Location
Expressed in skeletal muscle, placenta, spinal cord, and various region of brain. Expressed at the base of crypts in colonic and small mucosa stem cells. In premalignant cancer expression is not restricted to the cript base. Overexpressed in cancers of the ovary, colon and liver.

LGR5/GPR49 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

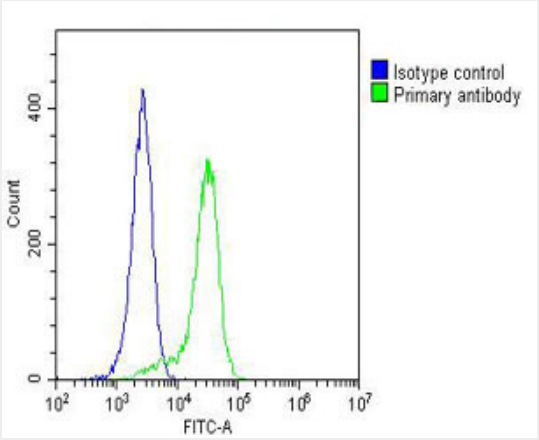
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

LGR5/GPR49 Antibody - Images



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Western blot analysis of lysates from K562 cell line (from left to right), using LGR5/GPR49 Antibody (Center)(Cat. #AM1992b). AM1992b was diluted at 1:2000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysates at 20µg per lane.



Overlay histogram showing Hela cells stained with AM1992b(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 (AM1992b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

LGR5/GPR49 Antibody - Background

Orphan receptor. Stem cell marker of the intestinal epithelium and the hair follicule. Target gene of Wnt signaling.

LGR5/GPR49 Antibody - References

Fontaine-Bisson, B., et al. Diabetologia 53(10):2155-2162(2010)
Voight, B.F., et al. Nat. Genet. 42(7):579-589(2010)
Uchida, H., et al. Cancer Sci. 101(7):1731-1737(2010)
Fan, X.S., et al. Int J Colorectal Dis 25(5):583-590(2010)
Acevedo, A.C., et al. J. Dent. Res. 89(2):128-132(2010)