10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

LGR5/GPR49 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1992b

Product Information

Application	WB, FC, E
Primary Accession	O75473
Other Accession	NP_003658.1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	349CT16.1.3.1
Calculated MW	99998
Antigen Region	689-719

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 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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.

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.

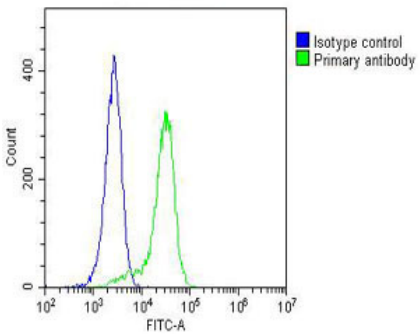
Background

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

References

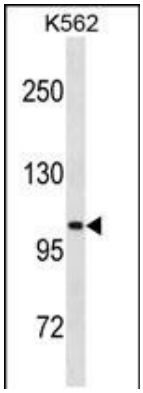
Fontaine-Bisson, B., et al. Diabetologia 53(10):2155-2162(2010)
Voight, B.F., et al. Nat. Genet. 42(7):579-589(2010)
Uchida, H., et al. Cancer Sci. 101(7):1731-1737(2010)
Fan, X.S., et al. Int J Colorectal Dis 25(5):583-590(2010)
Acevedo, A.C., et al. J. Dent. Res. 89(2):128-132(2010)

Images



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 (Cat. #AM1992b) western blot analysis in K562 cell line lysates (35µg/lane).This demonstrates the LGR5/GPR49 antibody detected the LGR5/GPR49 protein (arrow).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.