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LGR5 (GPR49) Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2745f

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O75473
Other Accession	F1MT22
Reactivity	Human
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	99998
Antigen Region	443-473

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 rabbits immunized with a KLH conjugated synthetic peptide between 443-473 amino acids from the Central region of human LGR5 (GPR49).
Dilution	WB~~1:1000 IHC-P~~1:100 FC~~1:10~50 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 (Center) 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.

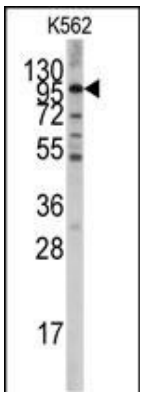
Background

LGR5/GPR49 is an orphan receptor. It may be an important receptor for signals controlling growth and differentiation of specific embryonic tissues.

References

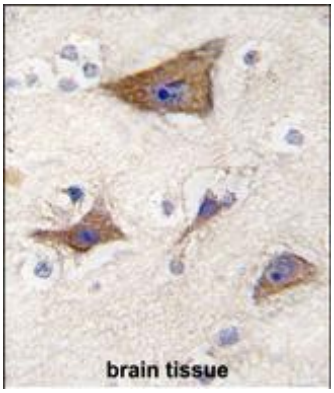
Barker,N., Nature 449 (7165), 1003-1007 (2007) McClanahan,T., Cancer Biol. Ther. 5 (4), 419-426 (2006) Yamamoto,Y., Hepatology 37 (3), 528-533 (2003) Hsu,S.Y., Mol. Endocrinol. 14 (8), 1257-1271 (2000)

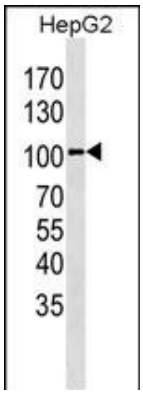
Images



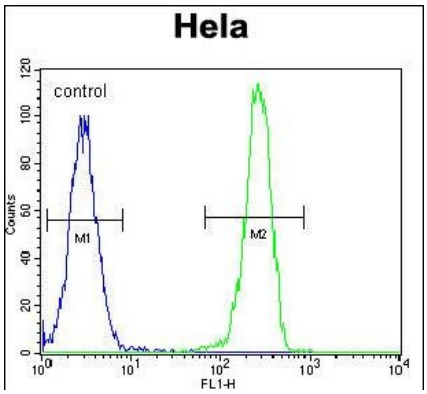
Western blot analysis of anti-LGR5/GPR49 Antibody (Center) (Cat.#AP2745f) in K562 cell line lysates (35ug/lane). LGR5/GPR49(arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human brain tissue reacted with LGR5/GPR49 antibody (Center) (Cat.#AP2745f), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

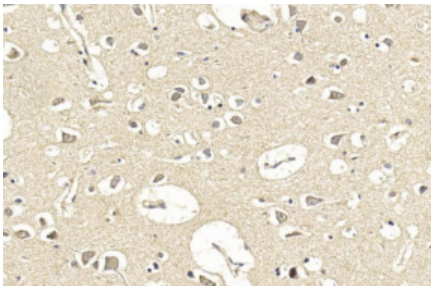




LGR5/GPR49 Antibody (Center) (Cat.#AP2745f) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the LGR5/GPR49 antibody detected the LGR5/GPR49 protein (arrow)(Kindly offered by Dr. Li).



LGR5 (GPR49) Antibody (Center) (Cat. #AP2745f) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Immunohistochemical analysis of paraffin-embedded Human brain section using Pink1(Cat#AP2745F). AP2745F was diluted at 1:100 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

Citations

- Multiple roles of integrin-linked kinase in epidermal development, maturation and pigmentation revealed by molecular profiling.
- LGR5 is a negative regulator of tumourigenicity, antagonizes Wnt signalling and regulates cell adhesion in colorectal cancer cell lines.