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

GPR48 Rabbit pAb

Catalog # AP97381

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9BXB1
Other Accession	Q9BXB1
Reactivity	Human
Predicted	Rat, Pig, Mouse, Rabbit, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	104475
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human LGR4
Epitope Specificity	65-170/951
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the G-protein coupled receptor 1 family.Contains 15 LRR (leucine-rich) repeats.Contains 1 LRRNT domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	G protein-coupled receptors (GPCRs), also designated seven transmembrane (7TM) receptors or heptahelical receptors, interact with G proteins (heterotrimeric GTPases) to synthesize intracellular second messengers, such as diacylglycerol, cyclic AMP, inositol phosphates and calcium ions. Their diverse biological functions range from vision and olfaction to neuronal and endocrine signaling and are involved in many pathological conditions. LGR4 (leucine-rich repeat-containing G protein-coupled receptor 4), also known as GPR48, is a 951 amino acid multi-pass membrane protein that contains 15 LRR (leucine-rich repeats) and belongs to the GPCR family. Expressed in multiple tissues, including testis, ovary, placenta, stomach, heart, kidney, pancreas and spleen, LGR4 functions as an orphan receptor that may be involved in physiologic activities throughout the cell. LGR4 is overexpressed in various cancer types and is thought to enhance carcinoma invasiveness and metastasis, suggesting an important role in tumor progression.

Additional Information

Gene ID	55366
Other Names	BNMD17; DPSL; GPR48; 9130225G07; A330106J01Rik; A930009A08Rik; LGR4_HUMAN; LGR4; G-protein coupled receptor 48; LGR4_MOUSE; LGR4_RAT; leucine rich repeat containing G protein-coupled receptor 4; G protein-coupled receptor 48
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LGR4
Synonyms	GPR48
Function	Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and is involved in the formation of various organs. 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. Its function as activator of the Wnt signaling pathway is required for the development of various organs, including liver, kidney, intestine, bone, reproductive tract and eye. May also act as a receptor for norrin (NDP), such results however require additional confirmation in vivo. Required during spermatogenesis to activate the Wnt signaling pathway in peritubular myoid cells. Required for the maintenance of intestinal stem cells and Paneth cell differentiation in postnatal intestinal crypts. Acts as a regulator of bone formation and remodeling. Involved in kidney development; required for maintaining the ureteric bud in an undifferentiated state. Involved in the development of the anterior segment of the eye. Required during erythropoiesis. Also acts as a negative regulator of innate immunity by inhibiting TLR2/TLR4 associated pattern-recognition and pro-inflammatory cytokine production. Plays an important role in regulating the circadian rhythms of plasma lipids, partially through regulating the rhythmic expression of MTTP (By similarity). Required for proper development of GnRH neurons (gonadotropin-releasing hormone expressing neurons) that control the release of reproductive hormones from the pituitary gland (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in multiple steroidogenic tissues: placenta, ovary, testis and adrenal. Expressed also in spinal cord, thyroid, stomach, trachea, heart, pancreas, kidney, prostate and spleen

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