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GPR37 Rabbit pAb

Catalog # AP99999

Product Information

Application	E
Primary Accession	O15354
Other Accession	O15354
Reactivity	Rat, Human
Predicted	Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67114
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GPR37
Epitope Specificity	201-300/613
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.
SUBUNIT	Forms a complex with PARK2, STUB1 and HSP70. The amount of STUB1 in the complex increases during ER stress. STUB1 promotes the dissociation of HSP70 from PARK2, thus facilitating PARK2-mediated GPR37 ubiquitination. Interacts with PACRG.
Post-translational modifications	Ubiquitinated by PARK2 in the presence of UBE2E1 and UBE2L3 in the endoplasmic reticulum. The unfolded form is specifically ubiquitinated by SYVN1, which promotes its proteasomal degradation and prevents neuronal cell death.
DISEASE	Expressed in brain and spinal cord, and at lower levels in testis, placenta and liver, but no detectable expression observed in any other tissue. When overexpressed in cells, tends to become insoluble and unfolded. Accumulation of the unfolded protein may lead to dopaminergic neuronal death in juvenile Parkinson disease (PDJ).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Pael receptor (Pael-R), also known as Parkin-associated endothelin receptor-like receptor, is a putative G protein-coupled transmembrane polypeptide. The gene that encodes Pael-R maps to chromosome 7q31. Pael-R belongs to family 1 of the G protein-coupled receptors and is mainly expressed in the brain. Pael-R interacts with Parkin, the gene product responsible for familial Parkinson's disease.

Additional Information

Gene ID	2861
Other Names	EDNRBL; PAELR; hET(B)R-LP; Pael-R; GPR37_HUMAN; GPR37; Endothelin B receptor-like protein 1 (ETBR-LP-1); G-protein coupled receptor 37;

	Parkin-associated endothelin receptor-like receptor (PAELR); GPR37_MOUSE; GPR37_RAT; G-protein coupled receptor CNS1; G protein-coupled receptor 37; G protein-coupled receptor 37 (endothelin receptor type B-like); endothelin receptor type B-like
Dilution	ICC/IF=1:100-500,ELISA=1:5000-10000
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	GPR37
Function	G protein-coupled receptor that plays a role in several physiological pathways such as resolution of inflammatory pain and oligodendrocyte differentiation (By similarity). Acts as a receptor for several ligands including prosaposin, osteocalcin or neuroprotectin D1. Ligand binding induces endocytosis, followed by an ERK phosphorylation cascade (PubMed:11439185, PubMed:23690594). Acts as a receptor for osteocalcin (OCN) to regulate oligodendrocyte differentiation and central nervous system myelination. Mechanistically, plays a negative role in oligodendrocyte differentiation and myelination during development via activation of the ERK1/2 signaling pathway. Therefore, regulates the stability of myelin or resistance of myelin itself to demyelination. Upon activation by neuroprotectin D1 (NPD1), promotes the activation of phagocytosis in macrophages as well as the shift in cytokine release toward an anti-inflammatory profile, and thus helps to reverse inflammatory pain. In addition, the increased macrophage phagocytosis mediates protection against sepsis upon pathogen infection. Additionally, extracellular vesicles derived from efferocyte express prosaposin, which binds to macrophage GPR37 to increase expression of the efferocytosis receptor TIM4 via an ERK-AP1-dependent signaling axis, leading to increased macrophage efferocytosis efficiency and accelerated resolution of inflammation (By similarity). May also act as a maturation factor of LRP6, protecting LRP6 from the endoplasmic reticulum (ER)-associated protein degradation (ERAD) and thereby promoting the Wnt/beta-catenin signaling pathway (PubMed:28341812).
Cellular Location	Cell projection, dendrite. Synapse Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Expressed in brain and spinal cord, and at lower levels in testis, placenta and liver, but no detectable expression observed in any other tissue. When overexpressed in cells, tends to become insoluble and unfolded. Accumulation of the unfolded protein may lead to dopaminergic neuronal death in juvenile Parkinson disease (PDJ).

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