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OXGR1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20310b

Product Information

Application	WB, E
Primary Accession	Q96P68
Reactivity	Human
Predicted	Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40456
Calculated MW	38251
Antigen Region	309-337

Additional Information

Gene ID	27199
Other Names	2-oxoglutarate receptor 1, Alpha-ketoglutarate receptor 1, G-protein coupled receptor 80, G-protein coupled receptor 99, P2Y purinoceptor 15, P2Y15, P2Y-like GPCR, P2Y-like nucleotide receptor, OXGR1, GPR80, GPR99, P2RY15, P2Y15
Target/Specificity	This OXGR1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 309-337 amino acids from the C-terminal region of human OXGR1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	OXGR1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

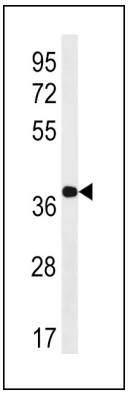
Name	OXGR1 {ECO:0000303|PubMed:36919698, ECO:0000312|HGNC:HGNC:4531}
Function	G protein-coupled receptor for dicarboxylates and amino dicarboxylates,

	such as alpha-ketoglutarate, itaconate and leukotriene E4 (PubMed:15141213, PubMed:36571463, PubMed:36919698, PubMed:41413034, PubMed:41791372). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as phospholipase C (PubMed:41413034, PubMed:41791372). OXGR1 is coupled to G(q) G proteins and mediates production of diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) (PubMed:36919698, PubMed:41413034, PubMed:41791372). Activation by alpha-ketoglutarate produced by proximal tubule renal cells upon metabolic alkalosis initiates an intrarenal paracrine signaling pathway that drives transepithelial salt reabsorption and bicarbonate secretion by SLC26A4/pendrin-positive intercalated cells (By similarity). Also acts as a regulator of vasodilatation in vascular smooth muscle cells: following activation by alpha-ketoglutarate, couples to GNAQ/G(q), initiating a signaling that activates MYLK/MLCK, thereby promoting MYL9 phosphorylation and vascular smooth muscle cell contraction and limiting vasodilation (PubMed:41791372). Receptor for itaconate, a metabolite produced by myeloid lineages (PubMed:36919698). In the respiratory epithelium, couples the binding of itaconate to the activation of GNA11/G(11) and downstream intracellular Ca(2+) release, leading to mucocilliary clearance of airborne pathogens (PubMed:36919698). Receptor for leukotriene E4 (LTE4) produced by mast cells upon allergic inflammation (PubMed:41413034). Binds with high affinity to LTE4 and elicits mucin release from pulmonary epithelium in response to airborne fungi allergens (By similarity). Regulates mucin-producing goblet cell homeostasis (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Note=Upon itaconate binding, internalizes via endocytosis in a beta-arrestin dependent manner
Tissue Location	Detected in kidney and, to a lower extent, in placenta (PubMed:12098360). Not detected in brain tissues including the frontal cortex, caudate putamen, thalamus, hypothalamus, hippocampus or pons (PubMed:12098360).

Background

Receptor for alpha-ketoglutarate. Seems to act exclusively through a G(q)-mediated pathway (By similarity).

Images



OXGR1 Antibody (C-term) (Cat. #AP20310b) western blot analysis in human placenta tissue lysates (35ug/lane).This demonstrates the OXGR1 antibody detected the OXGR1 protein (arrow).

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