

GPR18 Polyclonal Antibody

Catalog # AP70187

Product Information

Application WB, IF
Primary Accession Q14330
Reactivity Human
Host Rabbit
Clonality Polyclonal
Calculated MW 38134

Additional Information

Gene ID 2841

Other Names GPR18; GPCRW; N-arachidonyl glycine receptor; NAGly receptor; G-protein

coupled receptor 18

Dilution WB~~Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000.

ELISA: 1/40000. Not yet tested in other applications. IF~~1:50~200

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium

azide.

Storage Conditions -20°C

Protein Information

Name GPR18

Synonyms GPCRW

Function G protein-coupled receptor (GPCR) that plays a role in diverse physiological

processes particularly within the immune and nervous systems

(PubMed:21732409, PubMed:26195725). Becomes active when triggered by various endogenous ligands including endocannabinoid N- arachidonyl glycine (NAGly), delta-9-tetrahydrocannabinol or resolvin D2/RvD2 derived from the omega-3 fatty acid docosahexaenoic acid (DHA) (PubMed:16844083, PubMed:24762058, PubMed:26195725, PubMed:27572937). Upon RvD2 binding, facilitates the resolution of inflammation, aiding in tissue repair and homeostasis. Mechanistically, RvD2 ligation initiates Galphas protein coupling, activation of cAMP-PKA signaling pathway and phosphorylation of STAT3, leading to RvD2-stimulated macrophage phagocytosis (PubMed:27994074). Mediates NAGly-induced process of reorganization of actin filaments and induction of acrosomal exocytosis (PubMed:27572937). Activation by N-arachidonoyl glycine (NAGly) can also induce apoptosis in macrophages (By similarity). Plays a role in homeostasis of CD8+ subsets of intraepithelial

lymphocytes (IELs) (CD8alphaalpha and CD8alphabeta IELs) in small intestine by supporting preferential migration of CD8alphaalpha T-cells to intraepithelial compartment over lamina propria compartment, and by mediating their reconstitution into small intestine after bone marrow transplant (By similarity). Also participates in hypotensive responses, mediating reduction in intraocular and blood pressure (By similarity).

Cellular Location Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle

membrane

Tissue Location Expressed in midpiece of spermatozoon (at protein level)

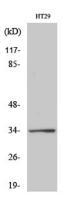
(PubMed:27572937). Most abundant in testis and spleen (PubMed:16844083). Highly expressed in CD4 and CD8-positive T-cells as well as CD19-positive

B-cells (PubMed:16844083)

Background

Receptor for endocannabinoid N-arachidonyl glycine (NAGly) (PubMed: 16844083, PubMed:24762058, PubMed:27572937). However, conflicting results about the role of NAGly as an agonist are reported (PubMed:27018161). Can also be activated by plant- derived and synthetic cannabinoid agonists (PubMed:24762058). The activity of this receptor is mediated by G proteins which inhibit adenylyl cyclase (PubMed:16844083). May contribute to regulation of the immune system. Is required for normal homeostasis of CD8+ subsets of intraepithelial lymphocytes (IELs) (CD8alphaalpha and CD8alphabeta IELs)in small intstine by supporting preferential migration of CD8alphaalpha T-cells to intraepithelial compartment over lamina propria compartment, and by mediating their reconstitution into small intestine after bone marrow transplant (By similarity). Plays a role in hypotensive responses, mediating reduction in intraocular and blood pressure (By similarity). Mediates NAGly-induced process of reorganization of actin filaments and induction of acrosomal exocytosis (PubMed:27572937).

Images



Western Blot analysis of various cells using GPR18 Polyclonal Antibody

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