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FFAR2 / GPR43 Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS10846

Specification

FFAR2 / GPR43 Antibody (C-Terminus) - Product Information

Application	IHC
Primary Accession	O15552
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	37kDa KDa

FFAR2 / GPR43 Antibody (C-Terminus) - Additional Information

Gene ID 2867

Other Names
Free fatty acid receptor 2, G-protein coupled receptor 43, FFAR2, FFA2, GPCR43, GPR43

Target/Specificity
Human GPR43. BLAST analysis of the peptide immunogen showed no homology with other human proteins, except BMI1 (50%).

Reconstitution & Storage
Long term: -70°C; Short term: +4°C

Precautions
FFAR2 / GPR43 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

FFAR2 / GPR43 Antibody (C-Terminus) - Protein Information

Name FFAR2

Synonyms FFA2, GPCR43, GPR43

Function
G protein-coupled receptor that is activated by a major product of dietary fiber digestion, the short chain fatty acids (SCFAs), and that plays a role in the regulation of whole-body energy homeostasis and in intestinal immunity. In omnivorous mammals, the short chain fatty acids acetate, propionate and butyrate are produced primarily by the gut microbiome that metabolizes dietary fibers. SCFAs serve as a source of energy but also act as signaling molecules. That G protein-coupled receptor is probably coupled to the pertussis toxin- sensitive, G(i/o)-alpha family of G proteins but also to the Gq family (PubMed:12496283, PubMed:12711604, PubMed:23589301). Its activation

results in the formation of inositol 1,4,5-trisphosphate, the mobilization of intracellular calcium, the phosphorylation of the MAPK3/ERK1 and MAPK1/ERK2 kinases and the inhibition of intracellular cAMP accumulation. May play a role in glucose homeostasis by regulating the secretion of GLP-1, in response to short-chain fatty acids accumulating in the intestine. May also regulate the production of LEP/Leptin, a hormone acting on the central nervous system to inhibit food intake. Finally, may also regulate whole-body energy homeostasis through adipogenesis regulating both differentiation and lipid storage of adipocytes. In parallel to its role in energy homeostasis, may also mediate the activation of the inflammatory and immune responses by SCFA in the intestine, regulating the rapid production of chemokines and cytokines. May also play a role in the resolution of the inflammatory response and control chemotaxis in neutrophils. In addition to SCFAs, may also be activated by the extracellular lectin FCN1 in a process leading to activation of monocytes and inducing the secretion of interleukin-8/IL-8 in response to the presence of microbes (PubMed:21037097). Among SCFAs, the fatty acids containing less than 6 carbons, the most potent activators are probably acetate, propionate and butyrate (PubMed:12496283, PubMed:12711604). Exhibits a SCFA- independent constitutive G protein-coupled receptor activity (PubMed:23066016).

Cellular Location
Cell membrane; Multi-pass membrane protein

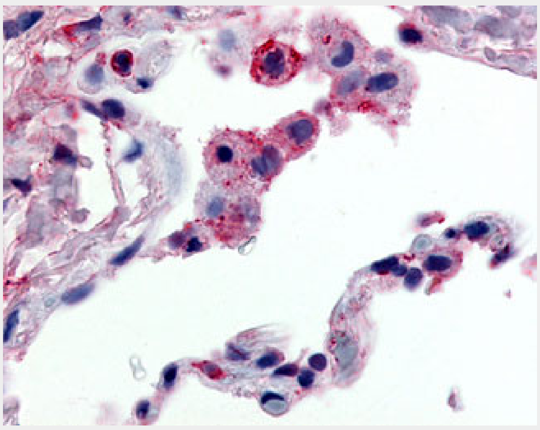
Tissue Location
Expressed at relatively high levels in peripheral blood leukocytes and, to lesser extent, in spleen

FFAR2 / GPR43 Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FFAR2 / GPR43 Antibody (C-Terminus) - Images



Anti-GPR43 antibody ALS10846 IHC of human lung, alveolar macrophages.

FFAR2 / GPR43 Antibody (C-Terminus) - Background

G protein-coupled receptor that is activated by a major product of dietary fiber digestion, the short chain fatty acids (SCFAs), and that plays a role in the regulation of whole-body energy homeostasis and in intestinal immunity. In omnivorous mammals, the short chain fatty acids acetate, propionate and butyrate are produced primarily by the gut microbiome that metabolizes dietary fibers. SCFAs serve as a source of energy but also act as signaling molecules. That G protein-coupled receptor is probably coupled to the pertussis toxin-sensitive, G(i/o)-alpha family of G proteins but also to the Gq family (PubMed:12496283, PubMed:12711604, PubMed:23589301). Its activation results in the formation of inositol 1,4,5-trisphosphate, the mobilization of intracellular calcium, the phosphorylation of the MAPK3/ERK1 and MAPK1/ERK2 kinases and the inhibition of intracellular cAMP accumulation. May play a role in glucose homeostasis by regulating the secretion of GLP-1, in response to short-chain fatty acids accumulating in the intestine. May also regulate the production of LEP/Leptin, a hormone acting on the central nervous system to inhibit food intake. Finally, may also regulate whole-body energy homeostasis through adipogenesis regulating both differentiation and lipid storage of adipocytes. In parallel to its role in energy homeostasis, may also mediate the activation of the inflammatory and immune responses by SCFA in the intestine, regulating the rapid production of chemokines and cytokines. May also play a role in the resolution of the inflammatory response and control chemotaxis in neutrophils. In addition to SCFAs, may also be activated by the extracellular lectin FCN1 in a process leading to activation of monocytes and inducing the secretion of interleukin- 8/IL-8 in response to the presence of microbes (PubMed:21037097). Among SCFAs, the fatty acids containing less than 6 carbons, the most potent activators are probably acetate, propionate and butyrate (PubMed:12496283, PubMed:12711604). Exhibits a SCFA- independent constitutive G protein-coupled receptor activity (PubMed:23066016).

FFAR2 / GPR43 Antibody (C-Terminus) - References

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