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

Goat Anti-GPR40 Antibody

Peptide-affinity purified goat antibody

Catalog # AF1495a

Specification

Goat Anti-GPR40 Antibody - Product Information

Application	**WB, E**
Primary Accession	O14842
Other Accession	NP_005294, 2864
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**31457**

Goat Anti-GPR40 Antibody - Additional Information

Gene ID 2864

Other Names
Free fatty acid receptor 1, G-protein coupled receptor 40, FFAR1, GPR40

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-GPR40 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-GPR40 Antibody - Protein Information

Name FFAR1

Synonyms GPR40

Function
G-protein coupled receptor for medium and long chain saturated and unsaturated fatty acids that

plays an important role in glucose homeostasis. Fatty acid binding increases glucose-stimulated insulin secretion, and may also enhance the secretion of glucagon-like peptide 1 (GLP-1). May also play a role in bone homeostasis; receptor signaling activates pathways that inhibit osteoclast differentiation (By similarity). Ligand binding leads to a conformation change that triggers signaling via G-proteins that activate phospholipase C, leading to an increase of the intracellular calcium concentration. Seems to act through a G(q) and G(i)-mediated pathway. Mediates the anti-inflammatory effects of omega-3 polyunsaturated fatty acids (PUFAs) via inhibition of NLRP3 inflammasome activation.

Cellular Location
Cell membrane; Multi-pass membrane protein

Tissue Location
Detected in brain and pancreas. Detected in pancreatic beta cells.

Goat Anti-GPR40 Antibody - 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

Goat Anti-GPR40 Antibody - Images

AF1495a (0.01 µg/ml) staining of Human Breast lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-GPR40 Antibody - Background

This gene encodes a member of the GP40 family of G protein-coupled receptors that are clustered together on chromosome 19. The encoded protein is a receptor for medium and long chain free fatty acids and may be involved in the metabolic regulation of insulin secretion. Polymorphisms in this gene may be associated with type 2 diabetes.

Goat Anti-GPR40 Antibody - References

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Molecular docking and molecular dynamics simulation studies of GPR40 receptor-agonist interactions. Lu SY, et al. J Mol Graph Model, 2010 Jun. PMID 20227312.
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G-protein-coupled receptor 40 (GPR40) expression and its regulation in human pancreatic islets: the role of type 2 diabetes and fatty acids. Del Guerra S, et al. Nutr Metab Cardiovasc Dis, 2010 Jan. PMID 19758793.
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