

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 Cytometry](#)
- [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 Thiazolinedione-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.

Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. Am J Hum Genet, 2009 Nov. PMID 19913121.

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.

Overexpression of GPR40 in pancreatic beta-cells augments glucose-stimulated insulin secretion and improves glucose tolerance in normal and diabetic mice. Nagasumi K, et al. Diabetes, 2009 May. PMID 19401434.