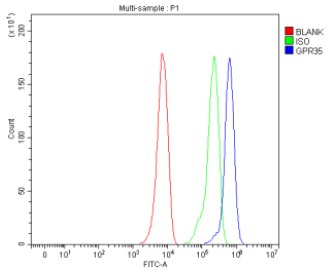
GPR35 Antibody / G protein-coupled receptor 35 (FY13315)

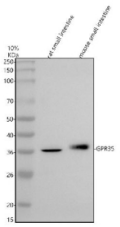
Catalog No.	Formulation	Size
FY13315	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9HC97
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This GPR35 antibody is available for research use only.



Flow Cytometry analysis of human HepG2 cells using anti-GPR35 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-GPR35 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of GPR35 using anti-GPR35 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat small intestine tissue lysates, Lane 2: mouse small intestine tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GPR35 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The predicted molecular weight of GPR35 is ~34 kDa, commonly observed at ~35 kDa.

Description

GPR35 antibody detects G protein-coupled receptor 35, a seven-transmembrane receptor encoded by the GPR35 gene on chromosome 2q37.3. GPR35 is a member of the rhodopsin-like class A GPCR family and functions as a receptor for kynurenic acid and related endogenous metabolites. This receptor localizes primarily to the plasma membrane of immune cells, gastrointestinal epithelium, and vascular endothelium, where it modulates immune responses, inflammation, and cell signaling. Activation of GPR35 triggers coupling to Galphai/o proteins, leading to inhibition of adenylyl cyclase and reduced cAMP production.

GPR35 antibody identifies a receptor that participates in multiple physiological and pathophysiological processes, including immune regulation, nociception, and gastrointestinal motility. It is expressed in leukocytes, monocytes, intestinal epithelial cells, and cardiomyocytes. The receptor also plays a role in chemotaxis and inflammatory signaling by regulating cytokine release and leukocyte migration. Ligand binding to GPR35 activates downstream pathways such as ERK1/2, RhoA, and PI3K-AKT, integrating metabolic and immune responses.

Structurally, GPR35 contains conserved transmembrane helices typical of GPCRs, an intracellular C-terminal tail that mediates beta-arrestin binding, and an extracellular N-terminal glycosylated region important for ligand recognition. The receptor's pharmacology has been extensively studied, and various endogenous and synthetic agonists-including kynurenic acid, lysophosphatidic acid, and zaprinast-have been identified. These ligands link GPR35 signaling to tryptophan metabolism and vascular regulation.

Clinically, GPR35 is associated with inflammatory and metabolic disorders. Genetic variants in the GPR35 gene are linked to inflammatory bowel disease (IBD), ulcerative colitis, and primary sclerosing cholangitis. In the cardiovascular system, GPR35 activation induces vasodilation and cardioprotective signaling, suggesting therapeutic potential for hypertension and ischemic injury. Conversely, aberrant activation has been implicated in cancer progression, particularly in gastric and colorectal carcinoma, where GPR35 may promote cell proliferation and migration.

Pathway analysis indicates that GPR35 functions within GPCR signaling networks, regulating MAPK and calcium-dependent pathways that affect cytokine expression and metabolic reprogramming. In the nervous system, it may influence pain sensitivity through modulation of sensory neuron excitability. The receptor's dual roles in immune and metabolic regulation position it as a promising drug target for inflammation and cardiovascular disease.

Immunohistochemical analysis using GPR35 antibody reveals membrane and cytoplasmic staining in immune and epithelial tissues, consistent with GPCR localization. The GPR35 antibody from NSJ Bioreagents is ideal for investigating G protein-coupled receptor signaling, immune regulation, and disease mechanisms related to inflammation and metabolism.

Application Notes

Optimal dilution of the GPR35 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human GPR35 was used as the immunogen for the GPR35 antibody.

Storage

After reconstitution, the GPR35 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.