

PRODUCT INFORMATION



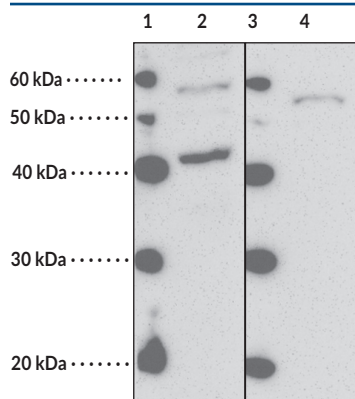
FFAR3 (GPR41) (N-Term) Polyclonal Antibody

Item No. 16104

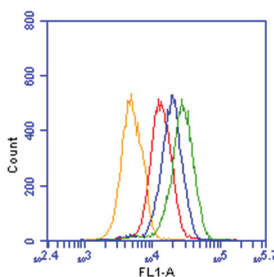
Overview and Properties

Contents: This vial contains 500 μ l of peptide affinity-purified polyclonal antibody
Synonyms: Free Fatty Acid Receptor 3, G Protein-Coupled Receptor 41
Immunogen: Synthetic peptide from the N-terminal region of human GPR41
Species Reactivity: (+) Human; other species not tested
Uniprot No.: O14843
Form: Liquid
Storage: -20°C (as supplied)
Stability: \geq 3 years
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Rabbit
Applications: Flow cytometry (FC), immunofluorescence (IF), and western blot (WB); the recommended starting dilution for FC and IF is 1:100 and 1:200 for WB. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Images



Lane 1: MW Markers
Lane 2: LoVo cell lysates (50 μ g)
Lane 3: MW Markers
Lane 4: LoVo cell lysates (50 μ g) + immunizing peptide



Orange: Goat Anti-Rabbit IgG FITC (Item No. 10006588; 1:200)
Red: GPR41 (N-Term) Polyclonal Antibody (1 μ g/ml)
Blue: GPR41 (N-Term) Polyclonal Antibody (5 μ g/ml)
Green: GPR41 (N-Term) Polyclonal Antibody (10 μ g/ml)

LoVo cells were fixed with 4% formaldehyde and permeabilized with 1% saponin, followed by blocking with 1% fetal bovine serum. Cells were probed with indicated antibodies, washed between steps, and fluorescence was detected with a BD Accuri C6 flow cytometer.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

GPR41 is a G protein-coupled receptor activated by short chain fatty acids (SCFAs).¹⁻³ Several SCFAs have the potential to bind and activate GPR41, with pentanoate being the most potent agonist.² GPR41 couples through the Pertussis toxin-sensitive G_{i/o} family and its expression has been described in adipose tissue and the colonic lumen.¹⁻³ The activation of GPR41 induces an increase in intracellular Ca²⁺, ERK1/2 activation and a decrease in intracellular cAMP.¹⁻³ Activation of GPR41 may be involved in intestinal inflammation. The predicted size for GPR41 is 39 kDa. Cayman's GPR41 (N-Term) Polyclonal Antibody detects a 43 kDa band by western blot in cell lysates.

References

1. Tazoe, H., Otomo, Y., Kaji, I., *et al.* Roles of short-chain fatty acids receptors, GPR41 and GPR43 on colonic functions *J. Physiol. Pharmacol.* **59(Suppl 2)**, 251-262 (2008).
2. Brown, A.J., Goldsworthy, S.M., Barnes, A.A., *et al.* The Orphan G protein-coupled receptors GPR41 and GPR43 are activated by propionate and other short chain carboxylic acids *J. Biol. Chem.* **278(13)**, 11312-11319 (2003).
3. Le Poul, E., Loison, C., Struyf, S., *et al.* Functional characterization of human receptors for short chain fatty acids and their role in polymorphonuclear cell activation *J. Biol. Chem.* **278(28)**, 25481-24591 (2003).

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