GPR55 Polyclonal Antibody
Item No. 10224

Overview and Properties

Contents: This vial contains 500 μl of peptide-affinity purified antibody.
Synonyms: G Protein-Coupled Receptor 55, LIP1, Lysophosphatidylinositol Receptor 1
Immunogen: Synthetic peptide from an internal region of human GPR55
Species Reactivity: (+) Human, bovine, and mouse
Uniprot No.: Q9Y2T6
Form: Liquid
Storage: -20°C (as supplied)
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly
Storage Buffer: TBS, pH7.4, containing 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 1:40 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image(s)

Lane 1: Bovine cornea (5 μg)
Lane 2: HEK293 lysate (13 μg)
Lane 3: GPR55-transfected HEK293 lysate (13 μg)

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Description

GPR55 is a G protein-coupled receptor that has been identified as a novel cannabinoid receptor, although its exact role is still controversial.\textsuperscript{1,2} Previously central cannabinoid (CB\textsubscript{1}) and peripheral cannabinoid (CB\textsubscript{2}), two widely characterized receptors have been shown to bind THC the active component of cannabis and other endocannabinoids. Mounting evidence suggests that additional receptors play a role in cannabinoid-related signal transduction and GPR55 has been identified as one of them.\textsuperscript{3} This receptor is widely expressed in the brain, specifically found in large dorsal root ganglion neurons.\textsuperscript{4} Along with binding THC, it also shows high affinity to anandamide, methanandamide, JWH015, and many other cannabinoid ligands.\textsuperscript{5,6} The human protein shows 75\% and 78\% overall sequence homology with the rat and mouse proteins, respectively.\textsuperscript{1} GPR55 is composed of 319 amino acids and has an expected molecular weight of 37 kDa. Post-translational modifications such as glycosylation may retard receptor electrophoretic migration and thereby protein signal may be detected above 37 kDa.

References