PRODUCT INFORMATION

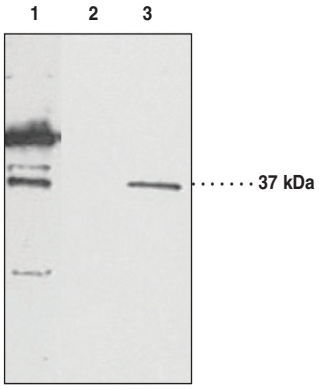
GPR55 Polyclonal Antibody

Item No. 10224

Overview and Properties

Contents:	This vial contains 500 µl of peptide-affinity purified polyclonal antibody.
Synonyms:	G Protein-Coupled Receptor 55, LIP1, Lysophosphatidylinositol Receptor 1
Immunogen:	Synthetic peptide from an internal cytoplasmic region of human GPR55
Species Reactivity:	(+) Human and bovine GPR55
Uniprot No.:	Q9Y2T6
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol, and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA and Western blot (WB); the recommended starting dilution is 1:500 and 1:200, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



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 an orphan G protein-coupled receptor.[1] GPR55 is expressed in the brain, large dorsal root ganglion neurons, and many peripheral tissues.[2,3] Endogenous agonists for GPR55 include lysophosphatidylinositol (EC_{50} = 1.2 µM in a β-arrestin-GFP biosensor assay) and the endocannabinoids anandamide (arachidonoyl ethanolamide; Item No. 90050) and 2-arachidonoyl glycerol (Item No. 62160; EC_{50}s = 18.4 and 3.5 nM in GTPγS binding assays).[1,4] It is also activated by the cannabinoid Δ^9-tetrahydrocannabinol (Δ^9-THC; EC_{50} = 8 nM in a GTPγS binding assay).[1,5] GPR55 is expressed in β cells and pharmacological activation increases glucose-induced insulin release in wild-type mice and, to a lesser extent, in Gpr55 knockout mice.[6] GPR55 expression is increased in the visceral adipose tissue of obese patients and, to a larger extent, in obese patients with type-2 diabetes.[7] Activation of GPR55 increases the growth and invasiveness of cancer cells *in vitro*, and its expression in patient-derived tumors is positively correlated with a worse prognosis.[6] GPR55 activation has also been associated with inhibition of osteoclast formation. Cayman's GPR55 Polyclonal Antibody can be used for flow cytometry, immunofluorescence, and Western blot applications. The antibody recognizes GPR55 at 37 kDa from human and bovine samples. Post-translational modifications such as glycosylation may retard receptor electrophoretic migration such that the protein signal may be detected above 37 kDa.

References

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