abcam

ab203663

Anti-GPCR GPR55 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human GPR55 aa 150-200 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q9Y2T6
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/100 - 1/1000
Notes	-

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

Target data

See full target information GPR55

Function	G-protein coupled receptor that binds to several ligands including 2-arachidonoyl lysophosphatidylinositol or lysophosphatidylglucoside with high affinity, leading to rapid and transient activation of numerous intracellular signaling pathways (PubMed:36142844, PubMed:36523570, PubMed:37544935). Induces the Ca(2+) release from intracellular stores via ERK, the heterotrimeric G protein GNA13 and RHOA leading to morphological changes including cell rounding and stress fiber formation (PubMed:36142844). In macrophages, acts downstream of lysophosphatidylglucoside to inhibit the translocation of the phospholipid-transporting ABCA1 to plasma membrane and subsequent cholesterol efflux leading to lipid accumulation and foam cell formation (PubMed:37544935).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The GPR55 receptor also known as G protein-coupled receptor 55 or GPR-55 is a member of the G-protein-coupled receptor (GPCR) family. GPR55 is involved mechanically in cell signaling by interacting with ligands to activate intracellular signal transduction pathways. It has a molecular mass of approximately 37 kDa. This receptor is widely distributed in tissues including the brain spleen and gastrointestinal tract which supports its involvement in various physiological processes.
Biological function summary	GPR55 influences numerous functions such as modulation of neurotransmitter release and immune responses. Although not part of a larger receptor complex it acts independently as a signaling entity. GPR55 is involved in the regulation of blood pressure potentially influencing cardiovascular health. Its expression and activity in the central nervous system suggest roles in nervous system signaling and regulation.
Pathways	GPR55 integrates into the cannabinoid signaling pathway and can impact phosphatidylinositol-45-bisphosphate 3-kinase (PI3K) pathway. GPR55 interacts closely with other cannabinoid receptors like CB1 and CB2 although they functionally differ. This receptor's involvement provides flexibility in the signaling networks important for maintaining homeostasis and cellular responses to external stimuli.
Associated diseases and disorders	GPR55 has associations with cancer and inflammation. Its signaling interference may contribute to tumor growth and could alter inflammatory responses. The receptor shares pathogenetic pathways with proteins such as CB1 and PI3K both of which influence oncogenic and inflammatory mechanisms. Understanding these interactions is essential for targeting GPR55 in therapeutic development for related diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

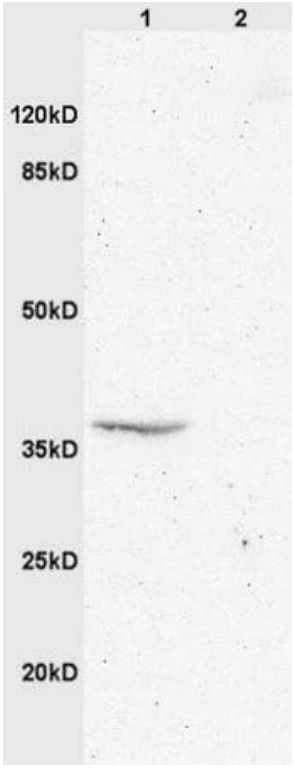
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Western blot - Anti-GPCR GPR55 antibody (ab203663)

All lanes:
Western blot - Anti-GPCR GPR55 antibody (ab203663) at 1/200 dilution

Lane 1:
Mouse brain lysate

Lane 2:
Mouse embryo lysate

Secondary

All lanes:
Goat Anti-Rabbit IgG Antibody (H+L), HRP Conjugated at 1/3000 dilution

Predicted band size: 37 kDa

Observed band size: 37 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.