abcam

ab274428

Anti-GPR56 antibody [EPR23908-109] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23908-109
Purification technique	Affinity purification Protein A
Concentration	1.031 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

Target data

See full target information ADGRG1

Function	Adhesion G-protein coupled receptor (aGPCR) for steroid hormone 17alpha-hydroxypregnenolone (17-OH), which is involved in cell adhesion and cell-cell interactions (PubMed:39389061). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as RhoA pathway (PubMed:28874577, PubMed:35418682, PubMed:39389061). ADGRG1 is coupled to G(12) and/or G(13) G proteins (GNA12 and GNA13, respectively) and mediates the activation Rho small GTPases (PubMed:22238662, PubMed:28424266, PubMed:35418682, PubMed:39389061). Acts as a potent suppressor of ferroptosis: binding to 17-OH-binding initiates signaling that down-regulates CD36 and alleviates ferroptosis-induced liver injury (By similarity). Ligand-binding also induces cell adhesion activity via association with proteins such as collagen III/COL3A1 and TGM2 (By similarity). Mediates cell matrix adhesion in developing neurons and hematopoietic stem cells (By similarity). Involved in cortical development, specifically in maintenance of the pial basement membrane integrity and in cortical lamination: association with COL3A1 in the developing brain inhibits neuronal migration via activation of the RhoA pathway (PubMed:24531968). Together with TGM2, acts as a regulator of myelination and myelin repair in oligodendrocyte precursor cells (By similarity). Acts as a hemostatic sensor of shear force: G protein-coupled receptor signaling is activated in response to shear force in platelets, promoting G(13) G protein signaling, and platelet shape change and aggregation in a COL3A1-dependent manner (PubMed:33097663). Acts as an inhibitor of VEGFA production thereby inhibiting angiogenesis through a signaling pathway mediated by PRKCA (PubMed:16757564, PubMed:19572147, PubMed:21724588). Plays a role in the maintenance of hematopoietic stem cells in bone marrow niche (By similarity). Plays an essential role in testis development (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

This antibody ab274428 [EPR23908-109] is a different clone to ab274429 [EPR23908-115].
ab274428 is the carrier-free version of ab259820.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	GPR56 also known as ADGRG1 is a G protein-coupled receptor. It has a mass of around 75 kDa. It plays an essential role in cellular signaling. Found in various tissues GPR56 is expressed significantly in brain and prostate tissue. This receptor is part of the adhesion GPCR family characterized by its large N-terminal region which is involved in cell adhesion and interaction. The mechanical functions of GPR56 involve regulating cell communication which influences cellular growth and behavior.
Biological function summary	GPR56 participates in brain development particularly in the formation of the cerebral cortex. It interacts with extracellular matrix components like collagen III which impacts cell adhesion and migration processes. GPR56 does not commonly form complexes but interacts with other cell membrane molecules to carry out its biological roles. Research indicates its involvement in cellular processes such as cell signaling pathways and the maintenance of tissue integrity.
Pathways	GPR56 is involved in both the inside-out and outside-in signaling pathways. In these pathways GPR56 modulates cell adhesion and migration dynamics. Related proteins such as collagen III interact with GPR56 to facilitate these processes. Furthermore the receptor interacts with integrin signaling pathways that help

	regulate the homeostasis of the extracellular matrix proving critical in maintaining normal cellular physiology.
Associated diseases and disorders	Mutations or dysregulation of GPR56 have been associated with brain malformations such as bilateral frontoparietal polymicrogyria. It also plays a role in certain cancers including melanoma where its function in cell adhesion contributes to metastasis. Researchers study its relationship with proteins like integrins which when altered may contribute to cancer progression. Understanding GPR56's roles could offer new insights into potential therapeutic targets for these conditions.

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

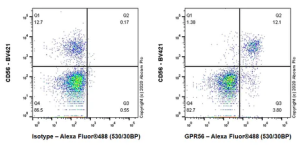
We do not recommend this combination. It is not covered by our product promise.

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



Flow Cytometry - Anti-GPR56 antibody [EPR23908-109] - BSA and Azide free (ab274428)

GPR56 Flow Cytometry staining using rabbit Anti-GPR56 antibody

This data was developed using ab259820, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Human peripheral blood mononuclear cell (PBMC) cells labelling GPR56 with ab259820 at 1/50 dilution (1ug) (Right) compared with a Rabbit monoclonal IgG

(ab172730) isotype control (Left). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Cells were stained with rabbit IgG or ab259820. Then stained with anti-CD56 conjugated to BV421.

Gated on viable cells.

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