abcam

ab326042

Anti-GPR56 antibody [RM2094]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Multiclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM2094
Purification technique	Affinity purification Protein A
Concentration	0.499 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/500
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
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:31628191, 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: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:18378689, PubMed:33097663, 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 (PubMed:39389061). 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 (PubMed:18509043). 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:19515912, PubMed:21768377, PubMed:24531968). Together with TGM2, acts as a regulator of myelination and myelin repair in oligodendrocyte precursor cells (PubMed:29809138). 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 (By similarity). Plays a role in the maintenance of hematopoietic stem cells in bone marrow niche (PubMed:23478665). Plays an essential role in testis development (PubMed:20981830). Isoform 2. Adhesion G-protein coupled receptor (aGPCR) for phosphatidylserine, which is involved in microglia-mediated synapse pruning during development (PubMed:32452062). Required to maintain appropriate synaptic numbers in several brain regions in a time- and circuit-dependent fashion: phosphatidylserine-binding acts as a 'eat-me' signal for apoptotic cells, leading to microglial engulfment of phosphatidylserine-positive synapses (PubMed:32452062).

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

Notes

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 recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply

- Animal-free batch production

View our range of recombinant multiclonal antibodies.

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

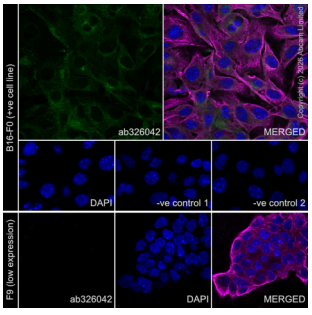
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images



Immunocytochemistry/ Immunofluorescence - Anti-GPR56 antibody [RM2094] (ab326042)

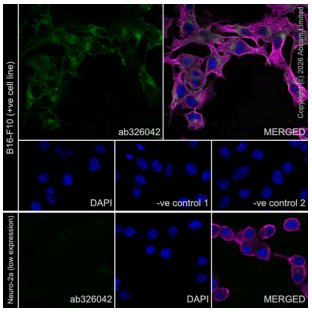
GPR56 Immunocytochemistry/ Immunofluorescence staining of B16-F0 (mouse melanoma epithelial-like cell) using rabbit Anti-GPR56 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized B16-F0 (mouse melanoma epithelial-like cell) F9 (mouse embryonal carcinoma epithelial cell) cells labelling GPR56 with ab326042 at 1/50 (9.98 µg/ml) dilution , followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing cytoplasmic staining in B16-F0 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Low expression: F9. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

-ve control 1: ab326042 at 1/50 dilution, followed by ab150120 at 1/1000 dilution.-ve control 2: ab7291 at 1/1000 dilution, followed by ab150081 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-GPR56 antibody [RM2094] (ab326042)

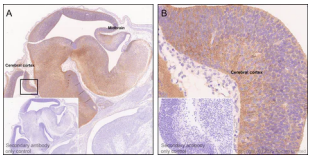
GPR56 Immunocytochemistry/ Immunofluorescence staining of B16-F10 (mouse skin melanoma cell) using rabbit Anti-GPR56 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized B16-F10 (mouse skin melanoma cell) Neuro-2a (mouse neuroblastoma neuroblast) cells labelling GPR56 with ab326042 at 1/50 (9.98 µg/ml) dilution , followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing cytoplasmic staining in B16-F10 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Low expression: Neuro-2a. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

-ve control 1: ab326042 at 1/50 dilution, followed by ab150120 at 1/1000 dilution.-ve control 2: ab7291 at 1/1000 dilution, followed by ab150081 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse E14.5 (Brain section) using rabbit Anti-GPR56 antibody

Immunohistochemical analysis of paraffin-embedded Mouse E14.5 (Brain section) tissue labeling GPR56 with ab326042 at 1/100 (4.99 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse E14.5 brain. (A) Low-powered (magnification, x20) and (B) high-powered (magnification, x400) microscopic images. (PMID: 21768377).

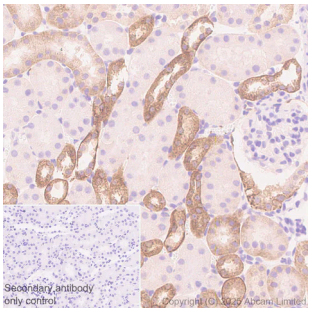
The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse kidney using rabbit Anti-GPR56 antibody

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling GPR56 with ab326042 at 1/100 (4.99 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse kidney (PMID: 17932623).

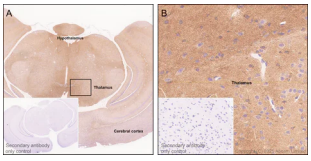
The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse brain (Coronal section) using rabbit Anti-GPR56 antibody

Immunohistochemical analysis of paraffin-embedded Mouse brain (Coronal section) tissue labeling GPR56 with ab326042 at 1/100 (4.99 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse brain. (A) Low-powered (magnification, x20) and (B) high-powered (magnification, x400) microscopic images. (PMID: 17932623).

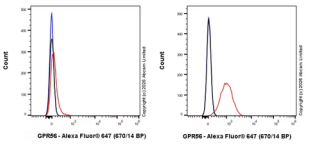
The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Flow Cytometry - Anti-GPR56 antibody [RM2094] (ab326042)

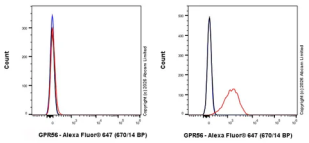
GPR56 Flow Cytometry staining of B16-F10 (mouse skin melanoma cell, Right) using rabbit Anti-GPR56 antibody

Flow cytometric analysis of Neuro-2a (mouse neuroblastoma neuroblast, Left) B16-F10 (mouse skin melanoma cell, Right) cells labelling GPR56 with ab326042 at 1/500 dilution (0.1ug) / Red

compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Low expression: Neuro-2a.



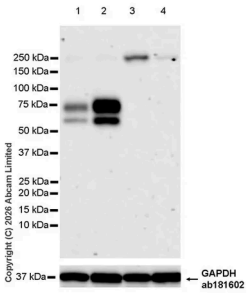
Flow Cytometry - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Flow Cytometry staining of B16-F0 (mouse melanoma epithelial-like cell, Right) using rabbit Anti-GPR56 antibody

Flow cytometric analysis of F9 (mouse embryonal carcinoma epithelial cell, Left) B16-F0 (mouse melanoma epithelial-like cell, Right) cells labelling GPR56 with ab326042 at 1/500 dilution (0.1ug) / Red compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Low expression: F9.



Western blot - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Western blot staining using rabbit Anti-GPR56 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: Neuro-2a, F9.

This antibody could detect 2 isoforms.

The identity of the higher MW band at approximately 250 kDa (in lane 3) is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:
Western blot - Anti-GPR56 antibody [RM2094] (ab326042) at 1/1000 dilution

Lane 1:
B16-F10 (mouse skin melanoma cell) whole cell lysate at 20 µg

Lane 2:
B16-F0 (mouse melanoma epithelial-like cell) whole cell lysate at 20 µg

Lane 3:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

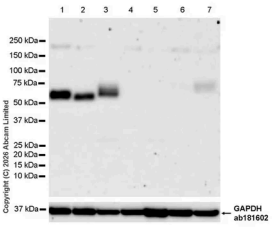
Lane 4:
F9 (mouse embryonal carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 57 kDa, 75 kDa, 36 kDa

Exposure time: 136s



Western blot - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Western blot staining using rabbit Anti-GPR56 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: liver, skeletal muscle, heart, lung.

This antibody could detect 2 isoforms.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:
Western blot - Anti-GPR56 antibody [RM2094] (ab326042) at 1/1000 dilution

Lane 1:
Mouse E14 brain tissue lysate at 20 µg

Lane 2:
Mouse brain tissue lysate at 20 µg

Lane 3:
Mouse kidney tissue lysate at 20 µg

Lane 4:
Mouse liver tissue lysate at 20 µg

Lane 5:
Mouse skeletal muscle tissue lysate at 20 µg

Lane 6:
Mouse heart tissue lysate at 20 µg

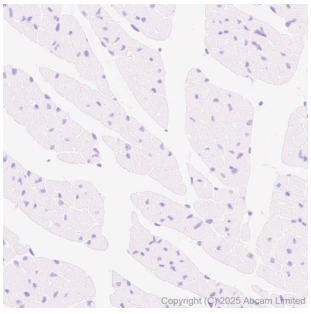
Lane 7:
Mouse lung tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 57 kDa, 75 kDa, 36 kDa

Exposure time: 136s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPR56 antibody

Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labeling GPR56 with ab326042 at 1/100 (4.99 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: No staining on mouse cardiac muscle (PMID: 17932623).

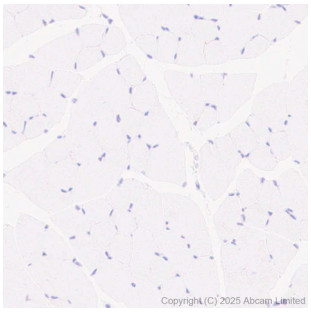
The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPR56 antibody [RM2094] (ab326042)

GPR56 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPR56 antibody

Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling GPR56 with ab326042 at 1/100 (4.99 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: No staining on mouse skeletal muscle.

The primary antibody was incubated for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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