abcam

ab325346

Anti-GPCR GPR97 antibody [RM2090]

Recombinant | RabMAb | Advanced Validation | 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	RM2090
Purification technique	Affinity purification Protein A
Concentration	0.495 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Transfected cell line - Mouse
Dilution info	1/500
Notes	-

Species	Mouse

Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Not recommended

Species	Human, Rat, Transfected cell line - Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Not recommended

Species	Human, Rat, Transfected cell line - Mouse
Dilution info	-

Notes	-

mIHC

Tested

Species	Mouse
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Transfected cell line - Mouse, Human, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Not recommended

Species	Transfected cell line - Mouse, Human, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Transfected cell line - Mouse, Human, Rat
Dilution info	-

Notes	-

Target data

See full target information Adgrg3

Function	Adhesion G-protein coupled receptor (aGPCR) for glucocorticoid hormones such as cortisol, cortisone and 11-deoxycortisol (By similarity). 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 adenylate cyclase (By similarity). ADGRG3/GPR97 is coupled to G(o)/GNAO1 G proteins and mediates signaling by inhibiting adenylate cyclase activity (By similarity). May also signal through G-alpha(q)-proteins; additional evidence are however required to confirm this result in vivo (By similarity). Plays a role in the regulation of various processes including B-cell development, inflammation or innate immunity (PubMed:24113187, PubMed:27089991, PubMed:38345813). Regulates migration of lymphatic endothelial cells in vitro via the small GTPases RhoA and CDC42 (PubMed:24178298). Antibody ligation leads to the production and activation of antimicrobial mediators like reactive oxygen species (ROS) and myeloperoxidase (MPO) as well as enhanced bacteria uptake and killing by granulocytes (By similarity). Additionally, collaborates with protease-activated receptor 2/PAR2 to stimulate neutrophil-driven antimicrobial responses and endothelial cell activation (By similarity).

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

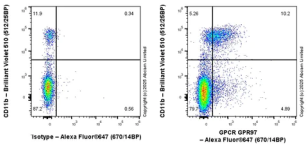
We do not recommend this combination. It is not covered by our product promise.

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



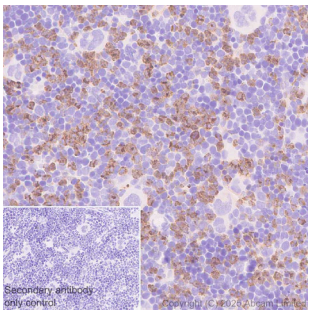
Flow Cytometry - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Flow Cytometry staining of Mouse Blood using rabbit Anti-GPCR GPR97 antibody

Flow cytometric analysis of Mouse Blood cells labelling with ab325346 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left 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. Cells were co-stained with anti mouse CD11b conjugated to Brilliant Violet 421.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse bone marrow using rabbit Anti-GPCR GPR97 antibody

Immunohistochemical analysis of paraffin-embedded Mouse bone marrow tissue labeling with ab325346 at 1/2000 (0.249 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) .

Positive staining on mouse bone marrow ((PMID: 24113187).

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

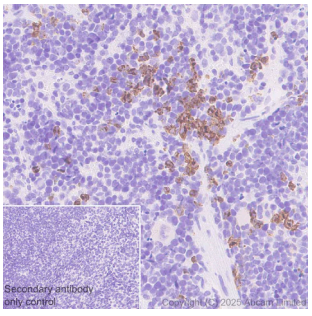
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Slides were incubated with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background

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 citrate buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse spleen using rabbit Anti-GPCR GPR97 antibody

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling with ab325346 at 1/2000 (0.249 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) .

Positive staining on mouse spleen ((PMID: 24113187).

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

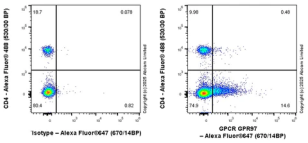
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Slides were incubated with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background

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 citrate buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



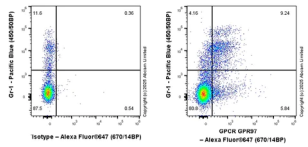
Flow Cytometry - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Flow Cytometry staining of Mouse Blood using rabbit Anti-GPCR GPR97 antibody

Flow cytometric analysis of Mouse Blood cells labelling with ab325346 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left 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. Cells were co-stained with anti mouse CD4 conjugated to Alexa Fluor®488.



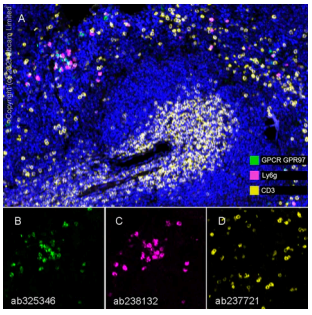
Flow Cytometry - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Flow Cytometry staining of Mouse Blood using rabbit Anti-GPCR GPR97 antibody

Flow cytometric analysis of Mouse Blood cells labelling with ab325346 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left 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. Cells were co-stained with anti mouse Gr-1 conjugated to Pacific Blue.



Multiplex immunohistochemistry - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Multiplex immunohistochemistry staining of Mouse spleen using rabbit Anti-GPCR GPR97 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse spleen tissue staining with ab325346 at a 1:5000 (0.099 µg/ml) dilution, ab238132 anti-Ly6g used at 1:100 (0.29 µg/ml) dilution and ab237721 anti-CD3 used at a 1:2000 (0.26 µg/ml) dilution.

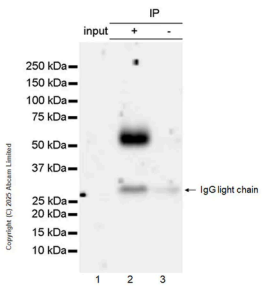
Panel A: anti-GPCR GPR97 (green; Opal™520), anti-Ly6g (magenta; Opal™690) and anti-CD3 (yellow; Opal™570) on mouse spleen.
Panel B: anti-GPCR GPR97 staining granulocytes in mouse spleen.
Panel C: anti-Ly6g staining neutrophils in mouse spleen.
Panel D: anti-CD3 staining T lymphocytes in mouse spleen.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab325346, ab238132 and ab237721 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Nuclear counter stain with DAPI.

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



Immunoprecipitation - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 was immunoprecipitated from 0.35 mg Mouse spleen tissue lysate with ab325346 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab325346 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: Mouse spleen tissue lysate
Lane 2: ab325346 IP in Mouse spleen tissue lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab325346 in mouse spleen tissue lysate

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

Exposure time: 137 seconds.

All lanes:
Immunoprecipitation - Anti-GPCR GPR97 antibody [RM2090] (ab325346) at 1/1000 dilution

Lane 1:
Mouse spleen tissue lysate at 10 µg

Lane 2:
ab325346 at 1/30 IP in Mouse spleen tissue lysate

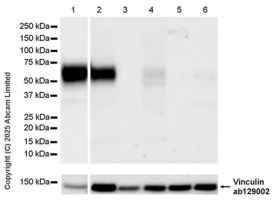
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab325346 in mouse spleen tissue lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 60 kDa

Exposure time: 137s



Western blot - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Western blot staining using rabbit Anti-GPCR GPR97 antibody

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

Low expression: brain, thymus, testis, heart (PMID: 24113187).

In Western blot, Anti-Vinculin antibody [EPR8185] (ab129002) (1:10000) (124KDa).

Exposure time: Lane 1: 10 seconds; Lanes 2-6: 70 seconds.

All lanes:
Western blot - Anti-GPCR GPR97 antibody [RM2090] (ab325346) at 1/1000 dilution

Lane 1:
Mouse bone marrow tissue lysate at 20 µg

Lane 2:

Mouse spleen tissue lysate at 20 µg

Lane 3:
Mouse brain tissue lysate at 20 µg

Lane 4:
Mouse thymus tissue lysate at 20 µg

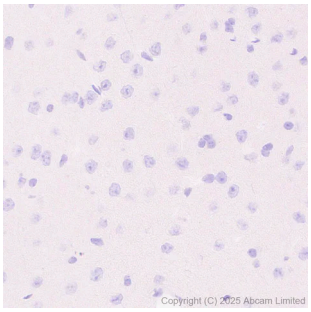
Lane 5:
Mouse testis tissue lysate at 20 µg

Lane 6:
Mouse heart 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: 60 kDa, 124 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cerebrum using rabbit Anti-GPCR GPR97 antibody

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling with ab325346 at 1/2000 (0.099 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) .

Negative control: No staining on mouse cerebrum (PMID: 24113187).

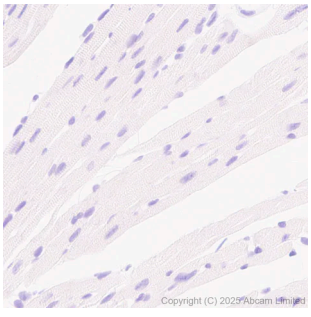
The primary antibody was incubated for 30 mins at room temperature.

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

Slides were incubated with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background

Counterstained with Hematoxylin.

Heat mediated antigen retrieval was performed with citrate buffer (pH 9.0, epitope retrieval solution 2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cardiac muscle using rabbit Anti-GPCR GPR97 antibody

Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labeling with ab325346 at 1/2000 (0.099 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) .

Negative control: No staining on mouse cardiac muscle (PMID: 24113187) .

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

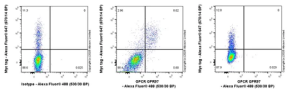
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Slides were incubated with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background

Counterstained with Hematoxylin.

Heat mediated antigen retrieval was performed with citrate buffer (pH 9.0, epitope retrieval solution 2) for 20 mins

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Flow Cytometry - Anti-GPCR GPR97 antibody [RM2090] (ab325346)

GPCR GPR97 Flow Cytometry staining using rabbit Anti-GPCR GPR97 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 0.1% Tween-20 permeabilized 293T cells transfected with a mouse AGRG3 expression vector containing a myc-His-tag® (Middle) 293T cells transfected with an empty expression vector containing a myc-His-tag® (Right) cells labelling with ab325346 at 1/500 dilution (0.1ug) / Right and middle compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells were surface stained with isotype control or our antibody. Then fixed with 4% PFA for 10min followed by intracellularly stained with anti-myc tag conjugated to Alexa Fluor® 647.

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