abcam

ab108975

Anti-RGS9 antibody [EPR2873]

Recombinant | RabMAb

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	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR2873
Purification technique	Affinity purification Protein A
Concentration	0.32 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50 - 1/100
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	1/30 - 1/60
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	1/30 - 1/60
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information Regulator of G-protein signaling 9

Function	Inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits thereby driving them into their inactive GDP-bound form. Binds to GNAT1. Involved in phototransduction; key element in the recovery phase of visual transduction (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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	Stable for 12 months at -20°C

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 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.

Supplementary info

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

Activity summary	Regulator of G protein Signaling 9 or RGS9 plays an important role in the regulation of G protein-coupled receptor (GPCR) signaling pathways. RGS9 acts as a GTPase-activating protein (GAP) accelerating the deactivation of Gα subunits which helps terminate the signal transduction. This protein with a molecular mass of roughly 73 kDa is highly expressed in the brain especially in the striatum and in the retina. These tissues suggest its specialized involvement in visual and neurological functions.
Biological function summary	RGS9 functions as an important regulator within multiple signaling complexes. It associates with RGS9-binding protein (R9AP) and Gβ5 subunits to form larger complexes that enhance its activity. RGS9 regulates phototransduction in rod and cone photoreceptors by controlling the inactivation of transducin a heterotrimeric G protein involved in visual processing. This regulation ensures proper recovery of photoreceptors after light-induced activation maintaining visual acuity and stability.
Pathways	RGS9 is integral to visual signal transduction and dopaminergic signaling pathways. In the visual system it modulates the phototransduction cascade by interacting with transducin within the rod outer segment. Within dopamine pathways it affects signaling by modulating receptors like D2 dopamine receptors involving proteins such as Gαolf which mediates cAMP production. These interactions regulate neuronal responses to various stimuli impacting vision and limbic system functions.
Associated diseases and disorders	RGS9 abnormalities relate to conditions like bradyopsia and drug addiction. Bradyopsia characterized by slow vision recovery after light exposure is linked to

RGS9 mutations which disrupt normal photoreceptor recovery. In addiction altered RGS9 expression impacts dopamine signaling affecting addiction pathways with involvement of D2 dopamine receptors. Together these insights highlight RGS9's critical role in maintaining normal visual and neurological health.

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

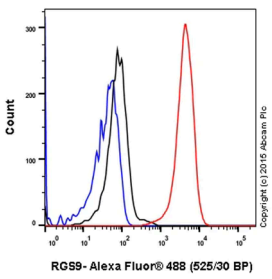
We do not recommend this combination. It is not covered by our product promise.

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.

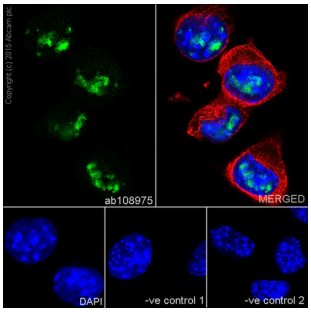
6 product images



Flow Cytometry (Intracellular) - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Flow Cytometry (Intracellular) staining using rabbit Anti-RGS9 antibody

Intracellular Flow Cytometry analysis of Y79 cells labelling RGS9 with purified ab108975 at a dilution of1/60 (red). Cells were fixed with 4% paraformaldehyde. An Alexa Fluorr® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

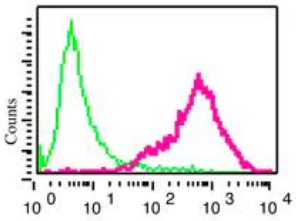


Immunocytochemistry/ Immunofluorescence - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RGS9 antibody

Immunocytochemistry/Immunofluorescence analysis of Neuro-2a cells labelling RGS9 with purified ab108975 at a dilution of 1/100. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077 an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. ab7291 a mouse anti-tubulin (1/1000) and ab150120 an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) were also used.
Control 1: primary antibody (1/100) and secondary antibody ab150120 an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000).

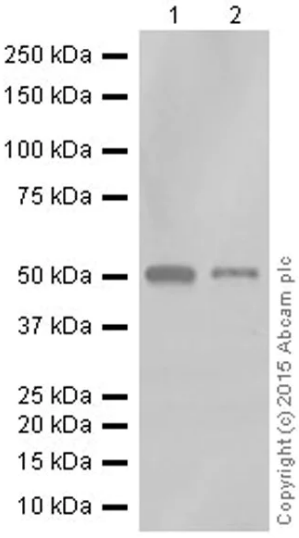
Control 2: ab7291 (1/1000) and secondary antibody ab150077 an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000).



Flow Cytometry (Intracellular) - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Flow Cytometry (Intracellular) staining using rabbit Anti-RGS9 antibody

Intracellular flow cytometric analysis ofpermeabilized PC12 cells labelling RGS9with unpurified ab108975 (red) at a dilution of 1/30 or a rabbit IgG (negative) (green).



Western blot - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Western blot staining using rabbit Anti-RGS9 antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution

Lane 1:
Y79 whole cell lysate at 20 µg

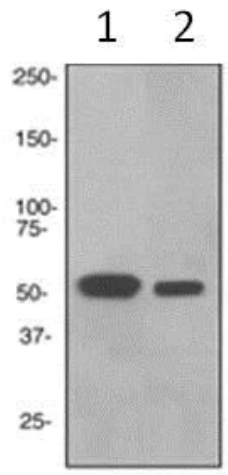
Lane 2:
Mouse spleen tissue lysate at 20 µg

Secondary

All lanes:
HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 77 kDa

Observed band size: 55 kDa



Western blot - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Western blot staining using rabbit Anti-RGS9 antibody

Note: Predicted molecular weights for UniProt ID O75916 isoforms 1 to 4 are ~77, 55, 57 and 50 kDa respectively. Therefore, the observed WB band may correspond to isoform 2, 3 or 4.
All lanes:
Western blot - Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution

Lane 1:
PC12 lysates at 10 µg

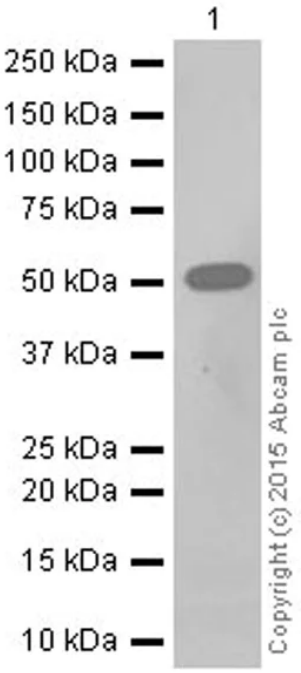
Lane 2:
Human spleen lysates at 10 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 77 kDa

Observed band size: 55 kDa



Western blot - Anti-RGS9 antibody [EPR2873] (ab108975)

RGS9 Western blot staining of PC-12 whole cell lysate using rabbit Anti-RGS9 antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution

All lanes:
PC-12 whole cell lysate at 10 µg

Secondary

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

Predicted band size: 77 kDa

Observed band size: 55 kDa

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