abcam

Product datasheet

# Anti-RGS9 antibody [EPR2873] ab108975

Recombinant RabMAb

1 References 7 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-RGS9 antibody [EPR2873] |
| **Description** | Rabbit monoclonal [EPR2873] to RGS9 |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt (Intra), WB, ICC/IF<br>**Unsuitable for:** IHC-P or IP |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | WB: Y79 and PC12 cell lysates and human and mouse spleen tissue lysates. ICC/IF: Neuro-2a cells. Flow Cyt (intra): PC12 and Y79 cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C. |
| **Storage buffer** | pH: 7.20<br>Preservative: 0.01% Sodium azide<br>Constituents: 40% Glycerol, 59% PBS, 0.05% BSA |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR2873 |

**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab108975 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt (Intra)** | | 1/30 - 1/60.<br>**ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| **WB** | | 1/1000. Detects a band of approximately 55 kDa (predicted molecular weight: 77 kDa). |
| **ICC/IF** | | 1/50 - 1/100. |

**Application notes** Is unsuitable for IHC-P or IP.

## Target

**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 G(t)-alpha. Involved in phototransduction; key element in the recovery phase of visual transduction.

**Tissue specificity** Highly expressed in the caudate and putamen, lower levels found in the hypothalamus and nucleus accumbens and very low levels in cerebellum. Not expressed in globus pallidus or cingulate cortex. Isoform 2 is expressed predominantly in pineal gland and retina. Isoform 3 is expressed in retina (abundant in photoreceptors).

**Involvement in disease** Defects in RGS9 are a cause of prolonged electroretinal response suppression (PERRS) [MIM:608415]; also known as bradyopsia. PERRS is characterized by difficulty adjusting to sudden changes in luminance levels mediated by cones.

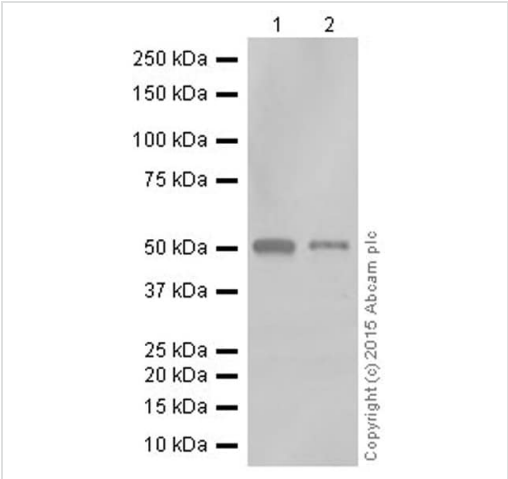
**Sequence similarities** Contains 1 DEP domain.
Contains 1 G protein gamma domain.
Contains 1 RGS domain.

**Domain** In photoreceptor cells the DEP domain is essential for targeting RGS9 to the outer rod segments.

**Post-translational modifications** Retinal isoform 3 is light-dependent phosphorylated at 'Ser-478'. Phosphorylation is decreased by light exposition.

**Cellular localization** Membrane. Isoform 3 is targeted to the membrane via its interaction with RGS9BP.

## Images




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

**All lanes :** Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution (purified)

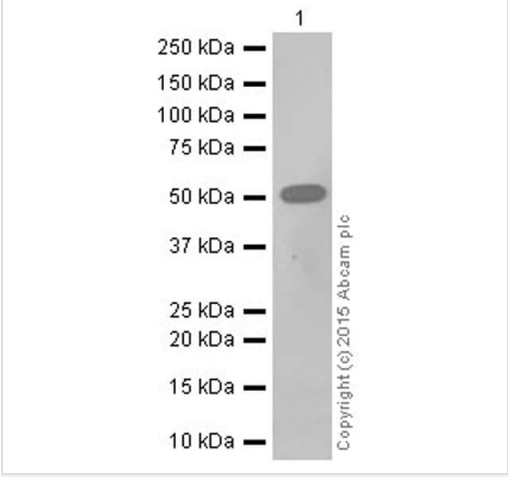
**Lane 1 :** Y79 whole cell lysate
**Lane 2 :** Mouse spleen tissue lysate

Lysates/proteins at 20 µg per lane.

**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

Blocking and dilution buffer: 5% NFDM/TBST.



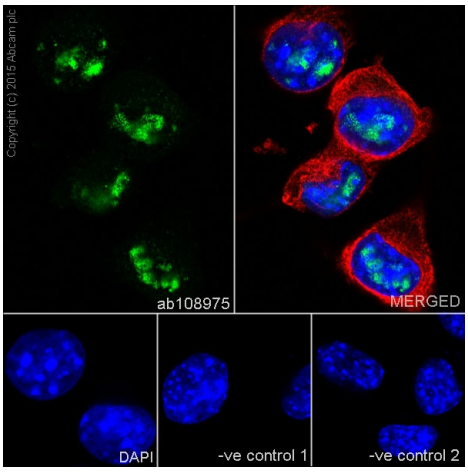

Western blot - Anti-RGS9 antibody [EPR2873] (ab108975)

Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution (purified) + PC-12 whole cell lysate at 10 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 77 kDa
**Observed band size:** 55 kDa

Blocking and dilution buffer: 5% NFDM/TBST.

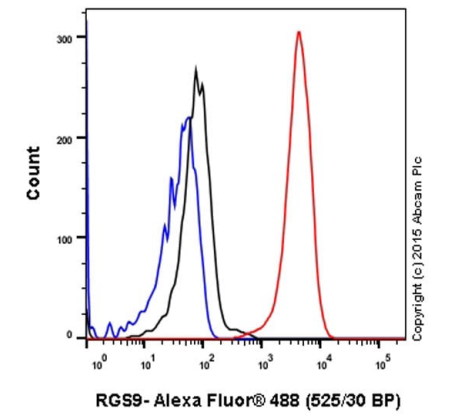



Immunocytochemistry/ Immunofluorescence - Anti-RGS9 antibody [EPR2873] (ab108975)

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.

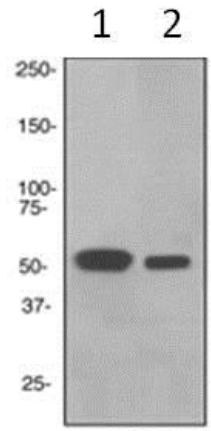
Control 1: primary antibody (1/100) and secondary antibody, **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000).

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)

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.




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

**All lanes :** Anti-RGS9 antibody [EPR2873] (ab108975) at 1/1000 dilution (unpurified)

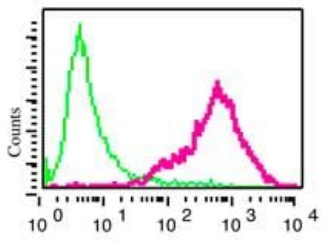
**Lane 1 :** PC12 lysates
**Lane 2 :** Human spleen lysates

Lysates/proteins at 10 µg per lane.

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

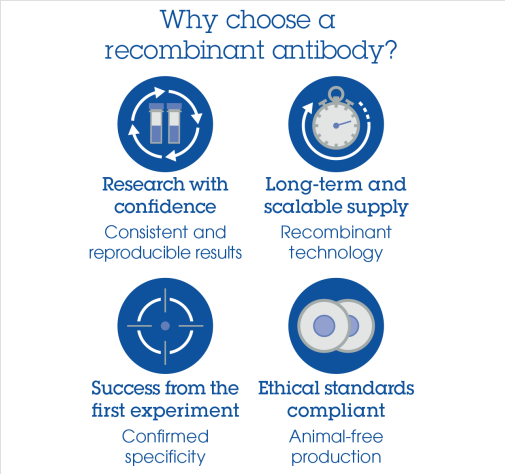
**Predicted band size:** 77 kDa
**Observed band size:** 55 kDa

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.




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

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




Anti-RGS9 antibody [EPR2873] (ab108975)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors