abcam

Product datasheet

Anti-GAP43 antibody [EP890Y] - BSA and Azide free ab219582

Recombinant RabMAb

5 References 13 Images

Overview

Product name	Anti-GAP43 antibody [EP890Y] - BSA and Azide free
Description	Rabbit monoclonal [EP890Y] to GAP43 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** ICC, IHC-P, Flow Cyt, IP, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human GAP43 (C terminal). The exact sequence is proprietary.
Positive control	IHC-P: human cerebrum, mouse cerebrum, and rat cerebrum tissues. ICC/IF: Neuro-2a cells. Flow Cyt: SH-SY5Y cells. IP: SH-SY5Y cells.
General notes	Ab219582 is the carrier-free version of ab75810. This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. 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. ab219582 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* 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 production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents. **We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified**

format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP890Y
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab219582** 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
ICC		Use at an assay dependent concentration.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See IHC antigen retrieval protocols.
Flow Cyt		Use at an assay dependent concentration. ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 48 kDa (predicted molecular weight: 25 kDa). The expression of GAP43 is undetectable in undifferentiated PC-12 cells in Western Blot (Ref: PMID: 2139463, PMID: 15969743)

Target

Function

This protein is associated with nerve growth. It is a major component of the motile "growth cones" that form the tips of elongating axons.

Sequence similarities

Belongs to the neuromodulin family.
Contains 1 IQ domain.

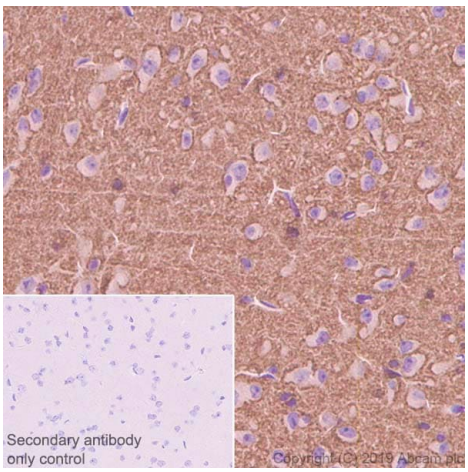
Post-translational modifications

Phosphorylation of this protein by a protein kinase C is specifically correlated with certain forms of synaptic plasticity.

Cellular localization

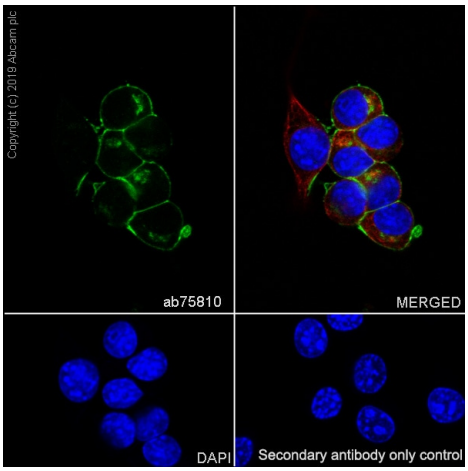
Cell membrane. Cell projection > growth cone membrane. Cell junction > synapse. Cytoplasmic surface of growth cone and synaptic plasma membranes.

Images



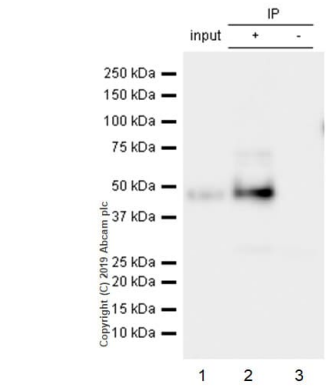
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse cerebrum tissue sections labeling GAP43 with Purified ab75810 at 1:3000 dilution (0.07 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



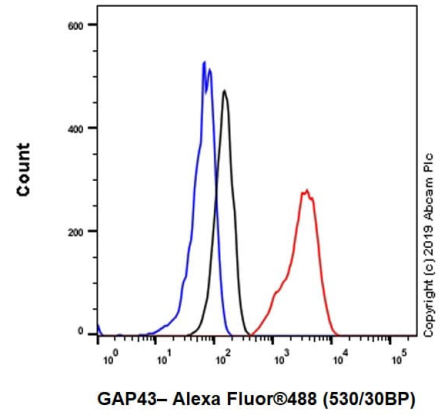
Immunocytochemistry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Immunocytochemistry/ Immunofluorescence analysis of Neuro-2a (Mouse neuroblastoma neuroblast) cells labeling GAP43 with Purified ab75810 at 1:160 dilution (1.4 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



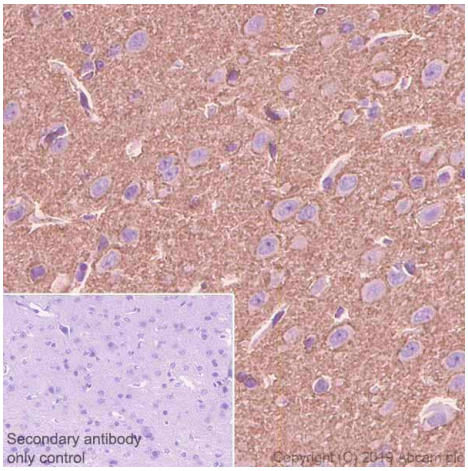
Immunoprecipitation - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

ab75810 (Purified) at 1:20 dilution (1 µg) immunoprecipitating GAP43 in SH-SY5Y whole cell lysate.
Lane 1 (input): SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate 10 µg
Lane 2 (+): ab75810 & SH-SY5Y whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab75810 in SH-SY5Y whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



Flow Cytometry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

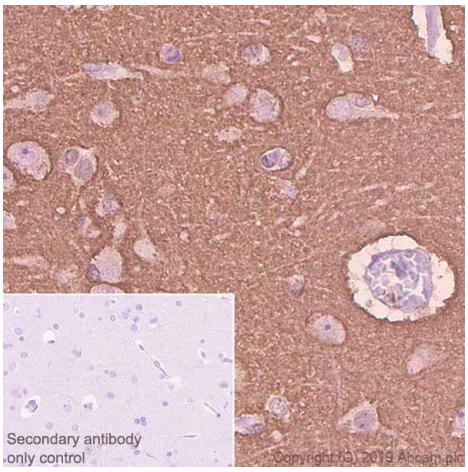
Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling GAP43 with Purified ab75810 at 1:20 dilution (10 µg/ml) (Red). Cells were fixed with 80% Methanol and permeabilised with 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

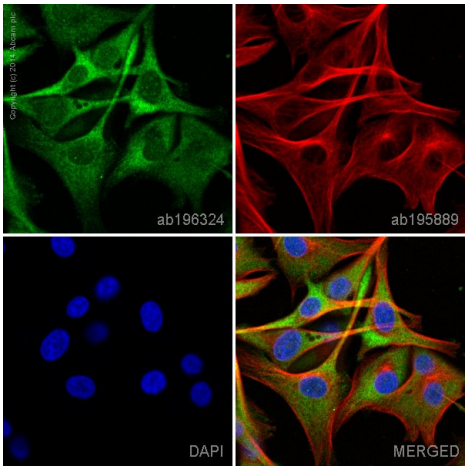
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat cerebrum tissue sections labeling GAP43 with Purified ab75810 at 1:3000 dilution (0.07 µg/ml). Heat mediated antigen retrieval using Bond© Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cerebrum tissue sections labeling GAP43 with Purified ab75810 at 1:3000 dilution (0.07 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810)



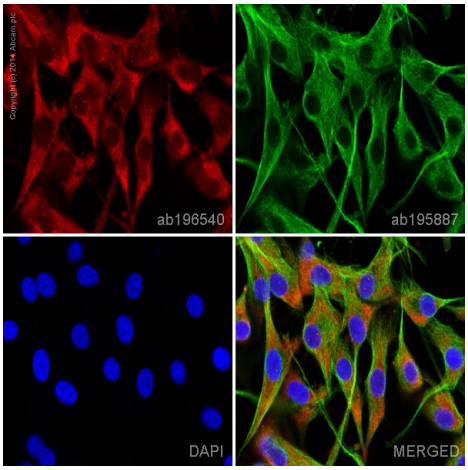
Immunocytochemistry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Clone EP890Y (ab219582) has been successfully conjugated by Abcam. This image was generated using Anti-GAP43 antibody [EP890Y] (Alexa Fluor® 488). Please refer to ab196324 for protocol details.

ab196324 staining GAP43 in U87MG cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196324 at a 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at a 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in U87MG cells fixed with 4% formaldehyde (10 min).



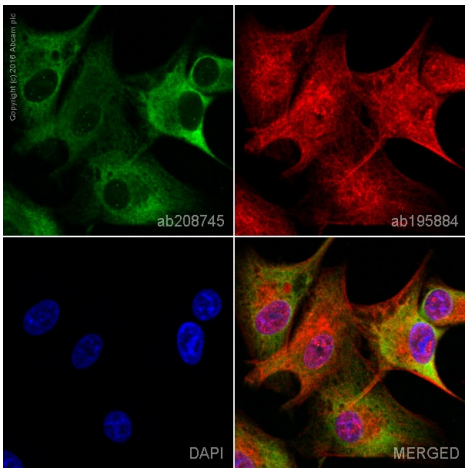
Immunocytochemistry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Clone EP890Y (ab219582) has been successfully conjugated by Abcam. This image was generated using Anti-GAP43 antibody [EP890Y] (Alexa Fluor® 647). Please refer to ab196540 for protocol details.

ab196540 staining GAP43 in U87MG cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab196540 at a 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at a 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in U87MG cells fixed with 4% formaldehyde (10 min).

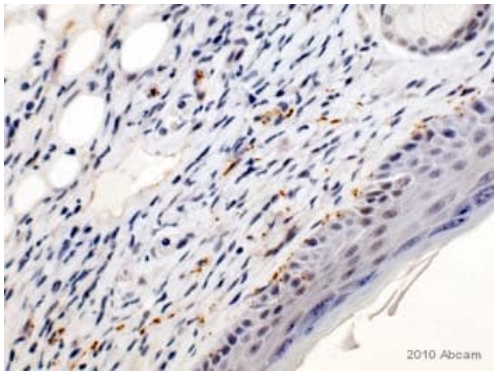


Immunocytochemistry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Clone EP890Y (ab219582) has been successfully conjugated by Abcam. This image was generated using Anti-GAP43 antibody [EP890Y] (PE). Please refer to ab208745 for protocol details.

ab208745 staining GAP43 in u87mg cells. The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab208745 at 1/100 dilution (Pseudocolored in green) and ab195884, Rat monoclonal to Tubulin (Alexa Fluor® 647), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

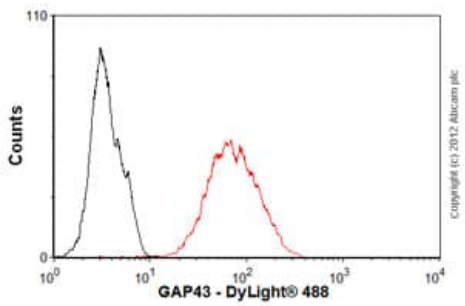


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

This image is courtesy of an anonymous Abreview.

ab75810 (unpurified) staining GAP43 in Mouse ear tissue sections by Immunohistochemistry (Formalin/ PFA-fixed paraffin-embedded tissue sections). The sections were formaldehyde fixed, subjected to heat mediated antigen retrieval at pH 6 and blocked for 10 minutes at 25C. The primary antibody was diluted 1/500 and incubated with the sample for 1 hour at 25°C. An HRP polymer anti-rabbit IgG system was used undiluted, as the secondary antibody.

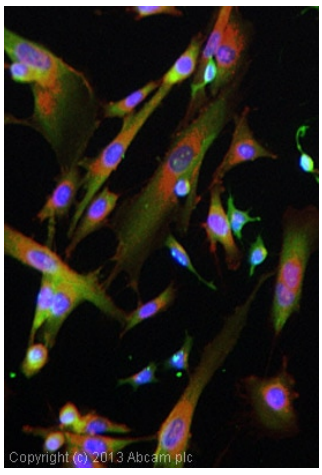
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810).



Flow Cytometry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

Overlay histogram showing SH-SY5Y cells stained with ab75810 (unpurified) (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab75810, 1/100 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

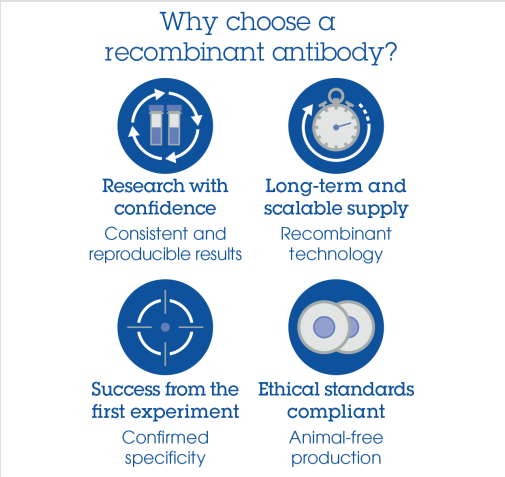
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810).



Immunocytochemistry - Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

ICC/IF image of ab75810 (unpurified) stained SKNSH cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab75810, 1/50 dilution) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG(H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab75810).



Anti-GAP43 antibody [EP890Y] - BSA and Azide free (ab219582)

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