abcam

Product datasheet

Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free ab256589

Recombinant RabMAb

6 Images

Overview

Product name	Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free
Description	Rabbit monoclonal [EPR2425Y] to Metabotropic Glutamate Receptor 5 - BSA and Azide free
Host species	Rabbit
Specificity	The Human species recommendation is based on the WB results. This antibody has been tested for IHC-P and IHC-Fr in Human samples and we obtain positive signal only in IHC-Fr. We do not recommend this antibody for IHC-P in Human samples.
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, IHC-Fr, Electron Microscopy **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse brain lysate. IHC-P: Rat caudate putamen and cerebrum tissue; mouse caudate putamen tissue and cerebrum IHC-Fr: Mouse caudate ptamen tissue. IHC (resin): Mouse neocortex tissue. EM: Mouse neocortex tissue. Flow Cyt (intra): SH-SY5Y cells.
General notes	ab256589 is the carrier-free version of **ab76316**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. 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. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. 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**.

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	EPR2425Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab256589 in the following tested applications.

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

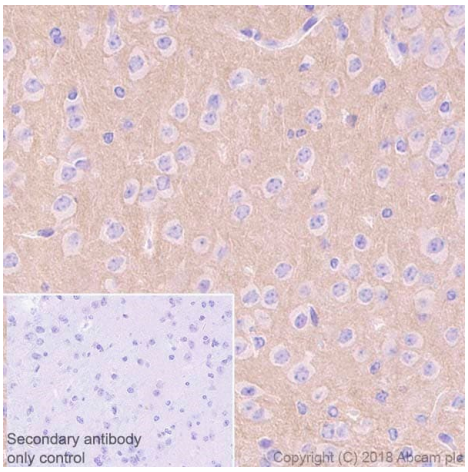
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab199376**- Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		Use at an assay dependent concentration. Predicted molecular weight: 132 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Use of HRP-conjugated or polymerized HRP secondary antibodies, stronger signals have been found using the polymerized HRP secondary. We only recommend mouse and rat species for IHC-P.
IHC-Fr		Use at an assay dependent concentration. This antibody has been tested for IHC-P and IHC-Fr in Human samples and we obtain positive signal only in IHC-Fr. We do not recommend this antibody for IHC-P in Human samples.
Electron Microscopy		Use at an assay dependent concentration.

Application notes Is unsuitable for IP.

Target

Function	G-protein coupled receptor for glutamate. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors. Signaling activates a phosphatidylinositol-calcium second messenger system and generates a calcium-activated chloride current. Plays an important role in the regulation of synaptic plasticity and the modulation of the neural network activity.
Sequence similarities	Belongs to the G-protein coupled receptor 3 family.
Cellular localization	Cell membrane.

Images

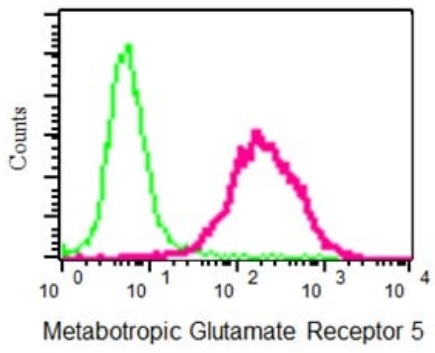


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

Immunohistochemical analysis of Paraffin-embedded mouse cerebrum tissue sections labeling Metabotropic Glutamate Receptor 5 with **ab76316** at 1/400 dilution followed by Goat Anti-Rabbit IgG H&L (HRP Polymer) secondary antibody. Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated using **ab93684** (Tris/EDTA buffer, pH 9.0).

Positive staining on mouse cerebrum.

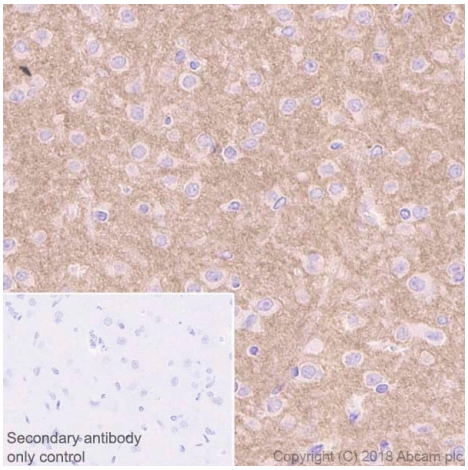
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76316**).



Flow Cytometry (Intracellular) - Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

Intracellular flow cytometric analysis of permeabilized SH-SY5Y cells using **ab76316** (red) at 1/20 or a rabbit IgG (**ab172730**) as a negative control (green). The cells were permeabilized with 2% PFA and a goat anti-rabbit IgG FITC was used as the secondary at 1/150.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76316**).

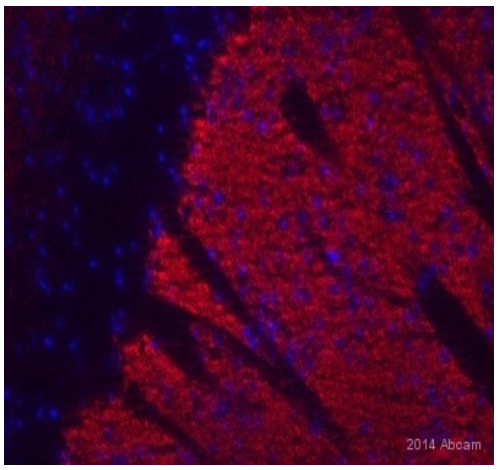


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

Immunohistochemical analysis of Paraffin-embedded rat cerebrum tissue sections labeling Metabotropic Glutamate Receptor 5 with **ab76316** at 1/400 dilution followed by Goat Anti-Rabbit IgG H&L (HRP Polymer) secondary antibody. Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated using **ab93684** (Tris/EDTA buffer, pH 9.0).

Positive staining on rat cerebrum.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76316**).

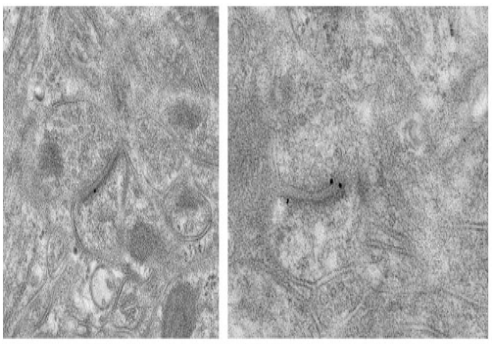


Immunohistochemistry (Frozen sections) - Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

Image courtesy of Carl Hobbs, King College London, U.K.

This data was developed using the same antibody clone in a different buffer formulation (**ab76316**).

ab76316 staining Metabotropic Glutmate Receptor 5 in mouse caudate putamen/ Corpus callosum by immunohistochemistry (frozen sections). Tissue was fixed with formaldehyde and samples were blocked with 1% BSA for 10 minutes at 21°C, before incubation with the primary antibody (1/2000) for 16 hours at 21°C. An alexa fluor® 594 conjugated goat anti-rabbit IgG secondary was used at 1/500.



Electron Microscopy - Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

Images courtesy of Professor Richard Weinberg, UNC School of Medicine

This data was developed using **ab76316**, the same antibody clone in a different buffer formulation.

Postembedding immunogold labeling of mouse neocortex using Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] (**ab76316**). The tissue was embedded in Lowicryl HM20 resin. 60 nm sections were then cut and mounted on nickel mesh grids before undergoing antigen retrieval for 15 minutes in 0.01 M citrate buffer, pH 6 at 60°C.

The sections were then blocked in 1% BSA/TBSN pH 7.6 and incubated overnight at room temperature with Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] (**ab76316**) at 1:250. Sections were washed twice in TBSN pH 7.6, treated with 1% normal donkey serum/TBSN pH 8.2 for 30 minutes, before being incubated with donkey anti-rabbit IgG-Au 10-20 nm at 1:20 for two hours at room temperature.

Sections were then washed in TBSN pH 8.2, followed by water, before undergoing post-staining with 1% uranyl acetate and Sato's lead. They were then air dried before being transferred to an oven for 30 minutes at 60°C.

In these images you can see gold immunoparticles on the postsynaptic density of synapses.

(TBSN = 0.02M TRIS buffered saline (0.3 N, pH 7.6 or 8.2) with 0.005% Tergitol NP-10)

Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] - BSA and Azide free (ab256589)

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