

Product datasheet

Anti-GABA B Receptor 2 antibody [EP2411Y] ab75838

Recombinant RabMAB

★★★★★ 4 Abreviews 5 References 6 Images

Overview

Product name	Anti-GABA B Receptor 2 antibody [EP2411Y]
Description	Rabbit monoclonal [EP2411Y] to GABA B Receptor 2
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, Flow Cyt, ICC/IF Unsuitable for: IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human GABA B Receptor 2 (C terminal). The exact sequence is proprietary.
Positive control	Human cerebellum lysate; human brain tissue.
General notes	

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.

This product is a recombinant rabbit monoclonal antibody.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.5% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EP2411Y
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab75838** 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
IHC-P	★★★★★	1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB	★★★★★	1/500. Predicted molecular weight: 106 kDa.
Flow Cyt		1/40. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/50 - 1/100.

Application notes Is unsuitable for IP.

Target

Function Receptor for GABA. The activity of this receptor is mediated by G-proteins that inhibit adenylyl cyclase activity, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipids hydrolysis. Plays a critical role in the fine-tuning of inhibitory synaptic transmission. Pre-synaptic GABA-B-R inhibit neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA-B-R decrease neuronal excitability by activating a prominent inwardly rectifying potassium (Kir) conductance that underlies the late inhibitory postsynaptic potentials. Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception.

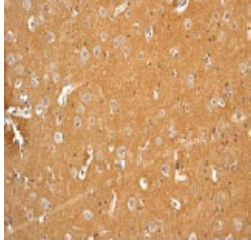
Tissue specificity Highly expressed in brain, especially in cerebral cortex, thalamus, hippocampus, frontal, occipital and temporal lobe, occipital pole and cerebellum, followed by corpus callosum, caudate nucleus, spinal cord, amygdala and medulla. Weakly expressed in heart, testis and skeletal muscle.

Sequence similarities Belongs to the G-protein coupled receptor 3 family. GABA-B receptor subfamily.

Domain Alpha-helical parts of the C-terminal intracellular region mediate heterodimeric interaction with GABA-B receptor 1.

Cellular localization Cell membrane. Cell junction > synapse > postsynaptic cell membrane. Moreover coexpression of GABA-B-R1 and GABA-B-R2 appears to be a prerequisite for maturation and transport of GABA-B-R1 to the plasma membrane.

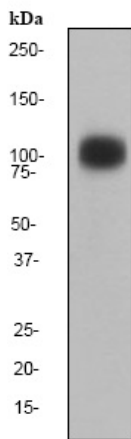
Images



ab75838, at a 1/100 dilution, staining GABA B Receptor 2 in paraffin embedded human brain tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)

Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)



Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838) at 1/500 dilution + human cerebellum lysate at 10 μ g

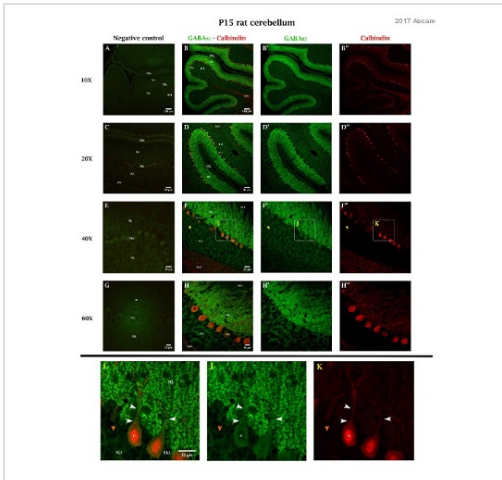
Secondary

goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 106 kDa

Observed band size: 106 kDa

Western blot - Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)

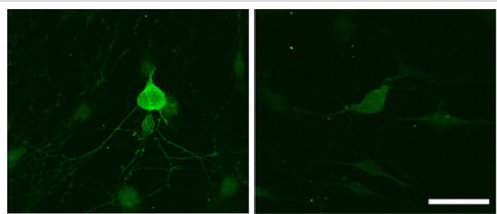


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)

This image is courtesy of an Abreview submitted by Estella Muñoz

Ab75838 staining GABA B receptor 2 in Rat Postnatal (P15) Cerebellum by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 10% serum for 1 hour at 25°C; antigen retrieval was by heat mediation in a 10mM citrate buffer, pH6. Samples were incubated with primary antibody (1/400 in PBS with 2% donkey serum) for 16 hours at 25°C. An Alexa Fluor® 488 conjugated Donkey anti-rabbit, polyclonal was used as the secondary antibody.

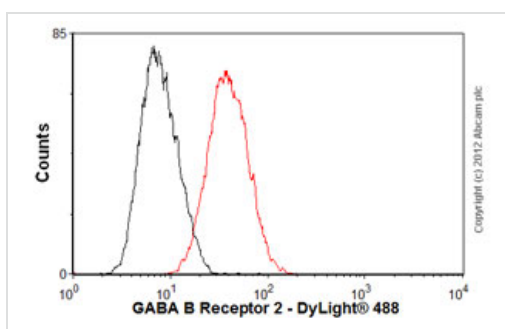
IHC and confocal microscopy for GABA B Receptor 2 (GABAB2) in the postnatal rat cerebellum. (A, C, E, G) Negative control by omission of the primary antibody at 10, 20, 40 and 60X. (B-B'', D-D'', F-F'', H-H'') Immunolabeling for GABAB2 (green) and/or the calcium-binding protein calbindin (red) at 10, 20, 40 and 60X. (I-K) Zooms of the insets shown in F-F''. Specific signal for GABAB2 is mainly observed in the molecular layer (ML) and internal granular layer (IGL) of the cerebellar grey matter. Purkinje cells (PkL) are enriched in GABAB2 especially at the surface of the dendritic trees (white arrowheads) oriented towards the ML. Golgi II cells (yellow arrowhead) located in the IGL are also positive for GABAB2. EGL: external granular layer. n: calbindin-positive nucleus of a Purkinje cell. Orange arrowhead: GABAB2-immunoreactive granular cell in the IGL. WM: white matter. An Olympus FV 1000 confocal microscope was used and images were processed with Adobe Photoshop CS4. Figure generated by Juan Vilchez Aruani and Estela Muñoz, IHEM, UNCuyo, CONICET, Mendoza, Argentina.



Immunocytochemistry/ Immunofluorescence - Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)

Image from Cuny H et al., J Biol Chem. 2012 Jul 6;287(28):23948-57. Epub 2012 May 21.; Fig 2.; doi: 10.1074/jbc.M112.342998; July 6, 2012, The Journal of Biological Chemistry, 287, 23948-23957.

Immunofluorescence analysis of GABA B Receptor 2 using ab75838 at 1/400 dilution. Left panel = normal rat DRG neurons. Right panel = rat DRG neurons transfected with siRNAs to disrupt GABA B Receptor 2.



Flow Cytometry - Anti-GABA B Receptor 2 antibody [EP2411Y] (ab75838)

Overlay histogram showing SH-SY5Y cells stained with ab75838 (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 (ab75838, 1/50 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10⁶ 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.

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