abcam

ab75838

Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y]

Recombinant | RabMAb | 20ul selling size

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	EP2411Y
Purification technique	Affinity purification Protein A
Concentration	1.077 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/40

Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

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

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/500 - 1/1000
Notes	We recommend not to boil the samples after lysis to get desired WB results.

Species	Rat
Dilution info	1/500 - 1/1000
Notes	We recommend not to boil the samples after lysis to get desired WB results.

Species	Human
Dilution info	1/500 - 1/1000
Notes	We recommend not to boil the samples after lysis to get desired WB results.

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Target data

See full target information GABBR2

Function

Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed:15617512, PubMed:18165688, PubMed:22660477, PubMed:24305054, PubMed:9872316, PubMed:9872744). Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed:18165688). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors, such as adenylate cyclase (PubMed:10075644, PubMed:10773016, PubMed:24305054). Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis (PubMed:10075644, PubMed:10773016, PubMed:10906333, PubMed:9872744). Plays a critical role in the fine-tuning of inhibitory synaptic transmission (PubMed:22660477, PubMed:9872744). Pre-synaptic GABA receptor inhibits neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA receptor

decreases neuronal excitability by activating a prominent inwardly rectifying potassium (Kir) conductance that underlies the late inhibitory postsynaptic potentials (PubMed:10075644, PubMed:22660477, PubMed:9872316, PubMed:9872744). Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception (Probable).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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.

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.

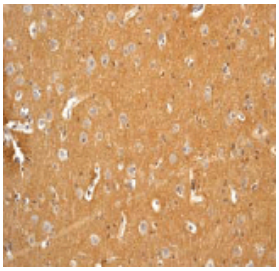
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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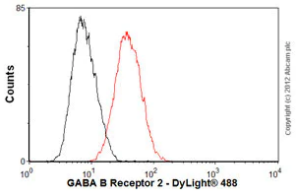
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838)

GABA B Receptor 2/GABBR2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GABA B Receptor 2/GABBR2 antibody

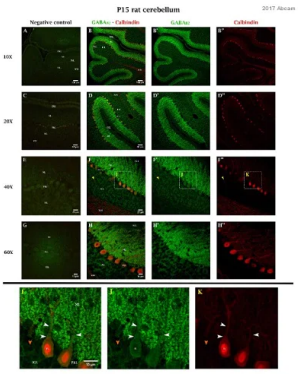
ab75838, at a 1/100 dilution, staining GABA B Receptor 2/GABBR2 in paraffin embedded human brain tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838)

GABA B Receptor 2/GABBR2 Flow Cytometry (Intracellular) staining using rabbit Anti-GABA B Receptor 2/GABBR2 antibody

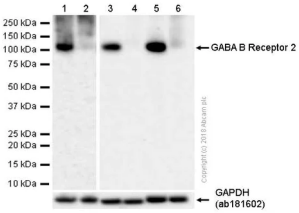
Overlay histogram showing SH-SY5Y cells stained with ab75838 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions 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/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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838)

GABA B Receptor 2/GABBR2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GABA B Receptor 2/GABBR2 antibody

ab75838 staining GABA B Receptor 2/GABBR2 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/GABBR2 (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.



Western blot - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838)

GABA B Receptor 2/GABBR2 Western blot staining using rabbit Anti-GABA B Receptor 2/GABBR2 antibody

Blocking/Diluting buffer and concentration: 5% NFDM/TBST.
Exposure time:

Lane 1 and 2: 140 seconds
Lane 3 to 6: 180 seconds

We recommend not to boil the samples after lysis to get desired WB results.

All lanes:
Western blot - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838) at 1/1000 dilution

Lane 1:
Human hippocampus lysates unboiled at 20 µg

Lane 2:
Human hippocampus lysates boiled at 20 µg

Lane 3:
Mouse brain lysates unboiled at 20 µg

Lane 4:
Mouse brain lysates boiled at 20 µg

Lane 5:
Rat brain lysates unboiled at 20 µg

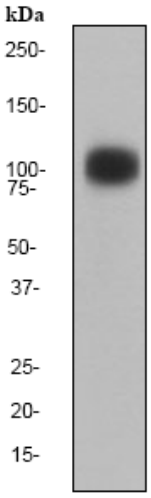
Lane 6:
Rat brain lysates boiled at 20 µg

Secondary

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

Predicted band size: 106 kDa

Observed band size: 106 kDa



Western blot - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838)

GABA B Receptor 2/GABBR2 Western blot staining of human cerebellum lysate using rabbit Anti-GABA B Receptor 2/GABBR2 antibody

All lanes:
Western blot - Anti-GABA B Receptor 2/GABBR2 antibody [EP2411Y] (ab75838) at 1/500 dilution

All lanes:
human cerebellum lysate at 10 µg

Secondary

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

Predicted band size: 106 kDa

Observed band size: 106 kDa

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