

## Product datasheet

# Anti-GABA B Receptor 1 antibody [EPR22954-47] ab238130

Recombinant RabMAb

★★★★★ [3 Abreviews](#) [2 References](#) [8 Images](#)

### Overview

<b>Product name</b>	Anti-GABA B Receptor 1 antibody [EPR22954-47]
<b>Description</b>	Rabbit monoclonal [EPR22954-47] to GABA B Receptor 1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, IHC-Fr <b>Unsuitable for:</b> Flow Cyt, ICC/IF or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Human brain, Human cerebellum, Mouse cerebellum and Rat brain lysates. IHC-P: Mouse cerebellum, Rat cerebellum, Human cerebellum and Human liver tissues. IHC-Fr: Mouse cerebellum tissue.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR22954-47
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab238130 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	★★★★★ (2)	1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Predicted molecular weight: 108 kDa.
IHC-Fr	★★★★★ (1)	1/100. Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

**Application notes** Is unsuitable for Flow Cyt, ICC/IF or 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. Activated by (-)-baclofen, cgp27492 and blocked by phaclofen.

Isoform 1E function may be to regulate the availability of functional GABA-B-R1A/GABA-B-R2 heterodimers by competing for GABA-B-R2 dimerization. This could explain the observation that certain small molecule ligands exhibit differential affinity for central versus peripheral sites.

**Tissue specificity** Highly expressed in brain and weakly in heart, small intestine and uterus. Isoform 1A is mostly expressed in granular cell and molecular layer. Isoform 1B is mostly expressed in Purkinje cells. Isoform 1E is predominantly expressed in peripheral tissues as kidney, lung, trachea, colon, small intestine, stomach, bone marrow, thymus and mammary gland.

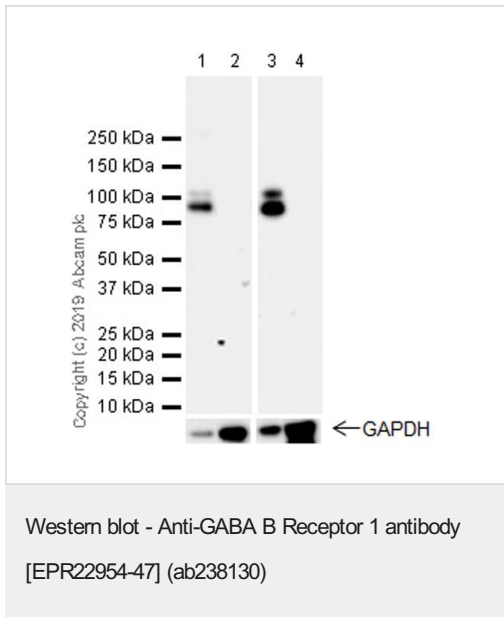
**Sequence similarities** Belongs to the G-protein coupled receptor 3 family. GABA-B receptor subfamily. Contains 2 Sushi (CCP/SCR) domains.

**Domain** Alpha-helical parts of the C-terminal intracellular region mediate heterodimeric interaction with GABA-B receptor 2. The linker region between the transmembrane domain 3 (TM3) and the transmembrane domain 4 (TM4) probably play a role in the specificity for G-protein coupling.

**Cellular localization** Secreted and Cell membrane. Cell junction > synapse > postsynaptic cell membrane. Colocalizes with ATF4 in hippocampal neuron dendritic membranes (By similarity). 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



**All lanes** : Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130) at 1/1000 dilution

**Lane 1** : Mouse cerebellum tissue lysate

**Lane 2** : Mouse skeletal muscle tissue lysate

**Lane 3** : Rat brain tissue lysate

**Lane 4** : Rat skeletal muscle tissue lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/50000 dilution

**Predicted band size:** 108 kDa

**Observed band size:** 108,95 kDa

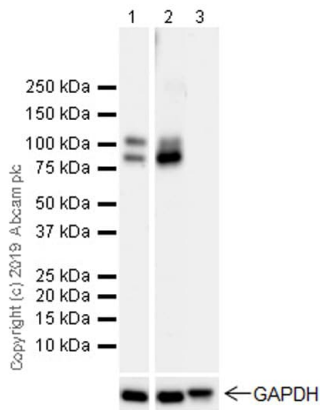
Blocking and diluting buffer and concentration: 5% NFDm/TBST.

All the lysates were unboiled.

Skeletal muscle is a low-expression tissue.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 26033241, 10996466).

Exposure time: Lanes 1-2: 75 seconds Lanes 3-4: 3 minutes.



Western blot - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

**All lanes :** Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130) at 1/1000 dilution

**Lane 1 :** Human brain tissue lysate

**Lane 2 :** Human cerebellum tissue lysate

**Lane 3 :** Human skeletal muscle tissue lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution

**Predicted band size:** 108 kDa

**Observed band size:** 108,95 kDa

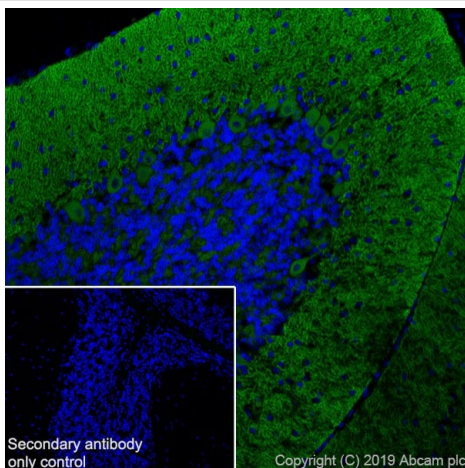
Blocking and diluting buffer and concentration: 5% NFD/MTBST.

All the lysates were unboiled.

Skeletal muscle is a low-expression tissue. T

he expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 26033241, 10996466).

Exposure time: Lane 1 3 minutes Lanes 2-3: 50 seconds.

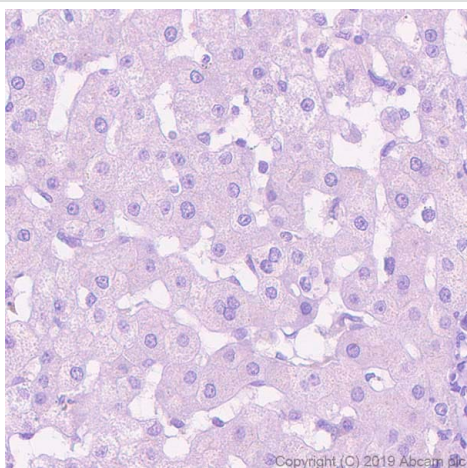


Immunohistochemistry (Frozen sections) - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse cerebellum tissue labeling GABA B Receptor 1 with ab238130 at 1/100 dilution followed by **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1000 dilution. Positive staining on mouse cerebellar cortex (PMID: 22107761) is observed. Nuclear counterstain DAPI.

Secondary antibody only control: Secondary antibody is **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

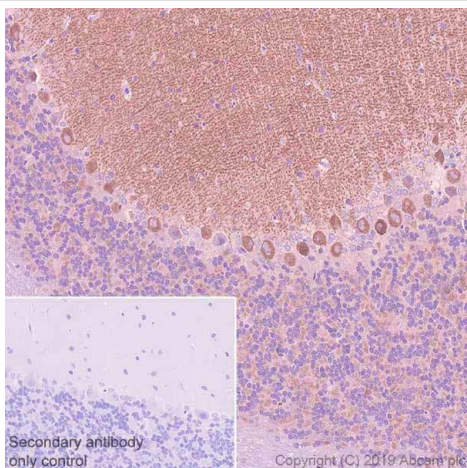


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling GABA B Receptor 1 with ab238130 at 1/500 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). **Negative control:** No staining on human liver. The section was incubated with ab238130 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins

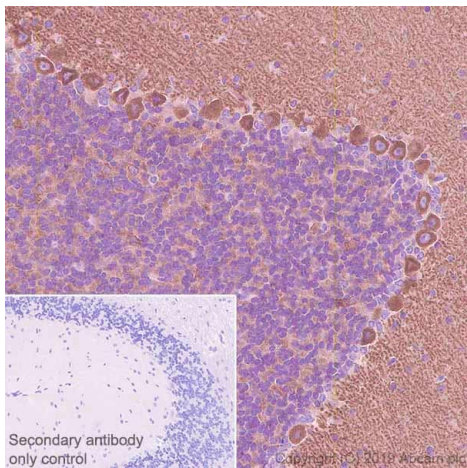


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue labeling GABA B Receptor 1 with ab238130 at 1/500 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat cerebellum. The section was incubated with ab238130 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins

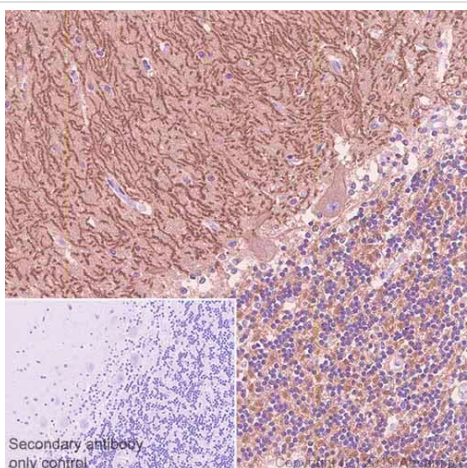


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue labeling GABA B Receptor 1 with ab238130 at 1/500 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mouse cerebellum. The section was incubated with ab238130 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GABA B Receptor 1 antibody [EPR22954-47] (ab238130)

Immunohistochemical analysis of paraffin-embedded human cerebellum tissue labeling GABA B Receptor 1 with ab238130 at 1/500 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human cerebellum. The section was incubated with ab238130 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-GABA B Receptor 1 antibody [EPR22954-47]  
(ab238130)

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

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