

**DESCRIPTION**

<b>Species Reactivity</b>	Rat
<b>Specificity</b>	Detects rat GABA <sub>B</sub> R1 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 751216
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant rat GABA <sub>B</sub> R1 Gly17-Leu586 Accession # Q9Z0U4
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

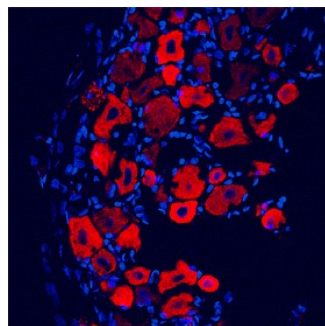
**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below

**DATA**

**Immunohistochemistry**



**GABA<sub>B</sub> R1 in Rat Trigeminal Ganglia.**  
GABA<sub>B</sub> R1 was detected in perfusion fixed frozen sections of rat trigeminal ganglia using Mouse Anti-Rat GABA<sub>B</sub> R1 Monoclonal Antibody (Catalog # MAB7000) at 25 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to plasma membranes and cytoplasm of sensory neurons. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

GABA<sub>B</sub> R1 (GABA-B receptor subunit 1; also GABA-BR1, GABBR1 and GB1) is a multispan glycoprotein in the GABA-B receptor subfamily, GPCR-3 family of proteins. It forms an obligatory heterodimer with GABA-BR2, creating a G-protein metabotropic GABA receptor that inhibits adenylyl cyclase activity and activates K<sup>+</sup> channels. Presynaptically, this blocks neurotransmitter release; postsynaptically, it lowers neuron excitability. Rat GABA<sub>B</sub> R1 is 991 amino acids (aa) in length. It contains a 16 aa signal sequence, an extended N-terminal extracellular region (aa 17-590) that contains two SUSHI domains (aa 29-158), and a long C-terminal cytoplasmic domain (aa 885-991). There are several splice variants with predicted molecular weights ranging from 90 to 111 kDa and multiple glycosylation sites. The 991 aa isoform described above is called GABA<sub>B</sub> R1e (R1e). There is also a 960 aa, 130 kDa isoform that shows a deletion of aa 771-801. This variant (R1a) is associated with postsynaptic membranes. A third isoform (R1b) is 844 aa in length and 100 kDa in size and possesses both a deletion of aa 771-801 and a 47 aa substitution for aa 1-163. This variant is presynaptic in location. Two other isoforms are variants of GABA<sub>B</sub> R1b. Each show the same N-terminal substitution, with a fourth isoform (R1c) retaining aa 771-801 and a fifth isoform (R1d) deleting aa 771-801, coupled to a 25 aa substitution for aa 935-991. Over aa 17-586, rat GABA<sub>B</sub> R1e/a shares 99% aa identity with both mouse and human GABA<sub>B</sub> R1.