

DESCRIPTION

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

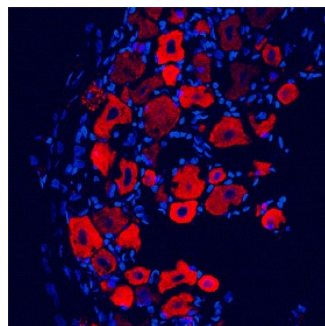
APPLICATIONS

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.

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

DATA

Immunohistochemistry



GABA_B R1 in Rat Trigeminal Ganglia.

GABA_B R1 was detected in perfusion fixed frozen sections of rat trigeminal ganglia using Mouse Anti-Rat GABA_B 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

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

GABA_B 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⁺ channels. Presynaptically, this blocks neurotransmitter release; postsynaptically, it lowers neuron excitability. Rat GABA_B 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_B 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_B 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_B R1e/a shares 99% aa identity with both mouse and human GABA_B R1.