

DESCRIPTION

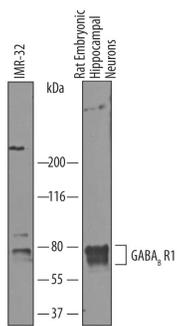
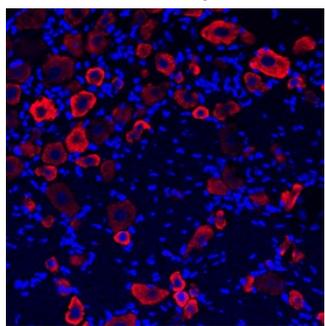
Species Reactivity	Human/Mouse/Rat
Specificity	Detects recombinant mouse and rat GABA _B R1 in direct ELISAs and Western blots. Detects human and rat GABA _B R1 in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant rat GABA _B R2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human and Rat GABA_B R1 by Western Blot. Western blot shows lysates of IMR-32 human neuroblastoma cell line and rat embryonic hippocampal neurons. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse/Rat GABA_B R1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7000) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for GABA_B R1 at approximately 70-80 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>GABA_B R1 in Rat Brain. GABA_B R1 was detected in perfusion fixed frozen sections of rat brain (dorsal root ganglia) using Sheep Anti-Mouse/Rat GABA_B R1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7000) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Northern-Lights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to the cell bodies of dorsal root ganglia neurons. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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 member of 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 is a 7-transmembrane glycoprotein that 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.