

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat GABA _B R2 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2605C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat GABA _B R2 Trp41-Ser482 Accession # O88871
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.

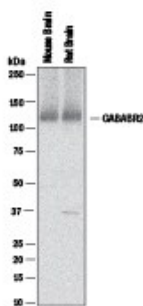
APPLICATIONS

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	8-25 µg/mL	See Below
Simple Western	20 µg/mL	Rat brain

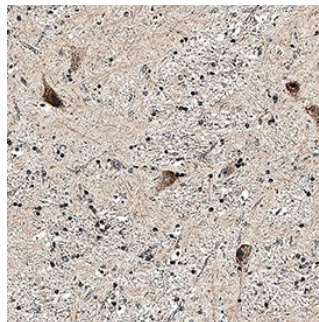
DATA

Western Blot



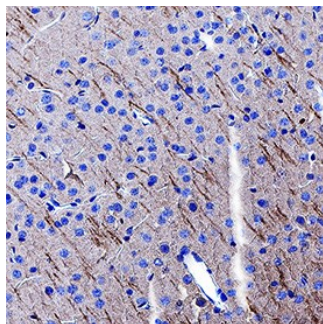
Detection of Mouse and Rat GABA_B R2 by Western Blot. Western blot shows lysates of mouse brain tissue and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-Human/Mouse/Rat GABA_B R2 Monoclonal Antibody (Catalog # MAB10456) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # Catalog # [HAF008](#)). A specific band was detected for GABA_B R2 at approximately 106 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

Immunohistochemistry



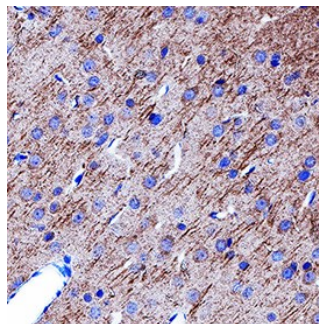
GABA_B R2 in Human Brain. GABA_B R2 was detected in immersion fixed paraffin-embedded sections of human brain (caudate putamen) using Rabbit Anti-Human/Mouse/Rat GABA_B R2 Monoclonal Antibody (Catalog # MAB10456) at 8 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # Catalog # [VC003](#)). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # [CTS013](#)). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neurons and neuronal processes. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

Immunohistochemistry

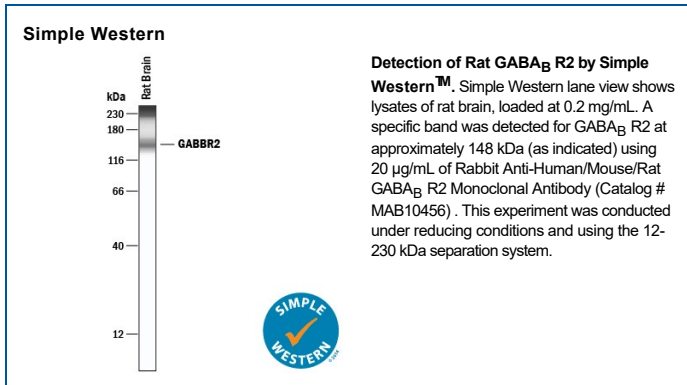


GABA_B R2 in Mouse Brain. GABA_B R2 was detected in perfusion fixed paraffin-embedded sections of mouse brain using Rabbit Anti-Human/Mouse/Rat GABA_B R2 Monoclonal Antibody (Catalog # MAB10456) at 10 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # Catalog # [VC003](#)). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # [CTS013](#)). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal processes. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

Immunohistochemistry



GABA_B R2 in Rat Brain. GABA_B R2 was detected in perfusion fixed paraffin-embedded sections of rat brain using Rabbit Anti-Human/Mouse/Rat GABA_B R2 Monoclonal Antibody (Catalog # MAB10456) at 10 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # Catalog # [VC003](#)). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # [CTS013](#)). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal processes. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).



PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.

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.

- 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

GABBR2 is half of a heterodimeric GPCR for GABA which mediates coupling to G proteins. B-type receptors for the neurotransmitter GABA (gamma-aminobutyric acid) inhibit neuronal activity through G protein-coupled second-messenger systems, which regulate the release of neurotransmitters and the activity of ion channels and adenylyl cyclase. As a homodimer, GABBR2 is retained in the endoplasmic reticulum and endoplasmic reticulum-Golgi intermediate compartment. When GBR1/GBR2 heterodimers are present they are localized to the plasma membrane. GABBR2 is differentially expressed in the nervous system. GABBR2 and GABBR1 mRNA's are coexpressed in various brain regions such as the Purkinje cell layer of the cerebellum. In situ hybridization histochemistry using an antisense probe to this novel receptor indicates GABBR2 is found exclusively in neurons. GABBR2 is implicated in synaptic inhibition, hippocampal long-term potentiation, slow wave sleep, muscle relaxation and nociception.