

Datasheet for 612-401-C81**GABA(A) Receptor gamma 2 Antibody****Overview**

Description:	Anti-GABA(A) Receptor gamma 2 (RABBIT) Antibody - 612-401-C81
Item No.:	612-401-C81
Size:	100 µL
Applications:	IHC, Multiplex, WB, Other
Reactivity:	Mouse, Rat
Host Species:	Rabbit

Product Details**Background:**

Anti-GABA(A) Receptor gamma 2 Antibody detects GABA(A) Receptor gamma 2. Gamma-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system, causing a hyperpolarization of the membrane through the opening of a Cl⁻ channel associated with the GABAA receptor (GABAA-R) subtype. GABAA-Rs are important therapeutic targets for a range of sedative, anxiolytic, and hypnotic agents and are implicated in several diseases including epilepsy, anxiety, depression, and substance abuse. The GABAA-R is a multimeric subunit complex. To date six alphas, four betas and four gammas, plus alternative splicing variants of some of these subunits, have been identified. Injection in oocytes or mammalian cell lines of cRNA coding for alpha- and beta-subunits results in the expression of functional GABAA-Rs sensitive to GABA. However, coexpression of a gamma-subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different alpha-subunits of the receptor. Anti-GABA(A) Receptor gamma 2 Antibody is ideal for investigators involved in Neuroscience.

Synonyms:	Gamma-aminobutyric acid receptor subunit gamma-2, GABA(A) receptor subunit gamma-2, Gabrg2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Gabrg2
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Reactivity:	Mouse, Rat
Immunogen Type:	Recombinant Protein
Immunogen:	Anti-GABA(A) Receptor gamma 2 Antibody was produced by repeated immunizations with recombinant fusion proteins from the cytoplasmic loop of the gamma 2 subunit of rat GABAA.
Purity/Specificity:	Anti-GABA(A) Receptor gamma 2 Antibody is directed against rat GABA(A) Receptor gamma 2. The antibody was affinity purified from monospecific antiserum by immune affinity purification. Reactivity is expected from the following species based on 100% sequence homology: bovine, chicken, canine, human, mouse, and non-human primate.
Relevant Links:	• NCBI - NP_899156.1 • UniProtKB - P18508 • GeneID - 29709

Application Details

Tested Applications:	IHC, Multiplex, WB
Suggested Applications:	Other (Based on references)
Application Note:	Anti-GABA(A) Receptor gamma 2 (Rabbit) antibody has been tested in Western Blotting and IHC. Specific conditions for reactivity should be optimized by the end user. Expect a band of 46 kDa in size corresponding to the gamma 2 subunit of the GABA(A) receptor in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IHC:	1:100
WB:	1:1000

Formulation

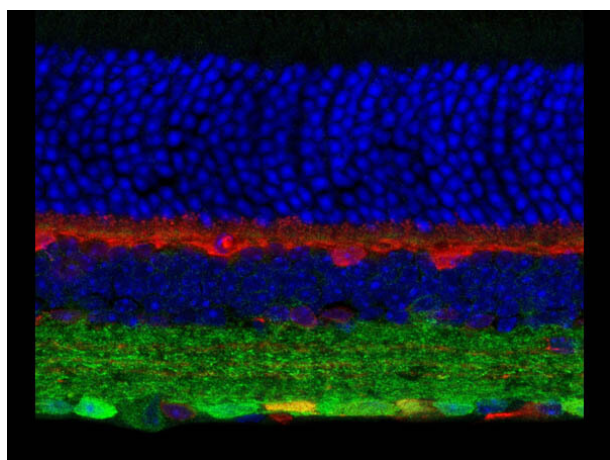
Physical State:	Liquid
Buffer:	0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5
Stabilizer:	0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

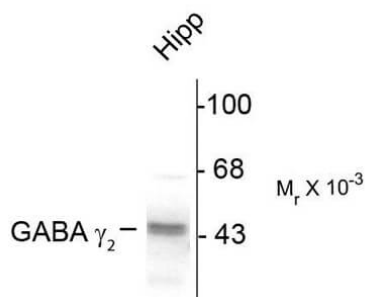
Images



Immunohistochemistry

Immunostaining results of Rabbit anti-GABAA Receptor $\gamma 2$ Antibody. Tissue: mouse retina. Primary Antibody: GABAA-R antibody at 1:100. Staining: GABA-gamma2 subunit in green, calbindin in red, DNA in blue. Photo courtesy of Dr. Arlene Hirano, UCLA.

Anti-GABAA-Receptor, Gamma2-Subunit



Western blot of 10 ug of rat hippocampal (Hipp) lysate showing specific immunolabeling of the ~46k Gamma2-subunit of GABAA -R.

Western Blot

Western Blot of Rabbit anti-GABAA Receptor $\gamma 2$ Antibody. Lane 1: rat hippocampal lysate. Lane 2: none. Load: 10 μ g per lane. Primary antibody: GABAA-R antibody at 1:400 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~46kDa/~46kDa for $\gamma 2$ -subunit of GABAA -R. Other band(s): none.

References

- Yamaura K et al. Construction of Protein-Based Biosensors Using Ligand-Directed Chemistry for Detecting Analyte Binding. *Methods Enzymol.* (2017)
- Yamaura K et al. Discovery of allosteric modulators for GABA A receptors by ligand-directed chemistry. *Nat Chem Biol.* (2016)

Disclaimer

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