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Datasheet for 600-401-C79

GABAA Receptor beta 3 Antibody

Overview

Description:	Anti-GABA(A) Receptor beta 3 (RABBIT) Antibody - 600-401-C79
Item No.:	600-401-C79
Size:	100 µL
Applications:	IHC, Multiplex, WB, Other
Reactivity:	Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	Anti-GABA(A) Receptor beta 3 Antibody detects GABA(A) Receptor beta 3. 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 αs, four βs and four γs, plus alternative splicing variants of some of these subunits, have been identified. Injection in oocytes or mammalian cell lines of cRNA coding for α- and β-subunits results in the expression of functional GABAA-Rs sensitive to GABA. However, coexpression of a γ-subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different α-subunits of the receptor. GABA(A) receptor beta 3 antibody is ideal for investigators involved in Neuroscience.
Synonyms:	Gamma-aminobutyric acid receptor subunit beta-3, GABA(A) receptor subunit beta-3, Gabrb3
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Gabrb3
Reactivity:	Mouse, Rat

Immunogen Type:	Recombinant Protein
Immunogen:	Anti-GABA(A) Receptor beta 3 Antibody was produced by repeated immunizations with recombinant fusion protein from the cytoplasmic loop of the beta 3 subunit of rat GABAA.
Purity/Specificity:	Anti-GABA(A) Receptor beta 3 Antibody is directed against rat GABA(A) Receptor beta 3. The antibody was affinity purified from monospecific antiserum by immunoaffinity purification. Reactivity is expected from the following species based on 100% sequence homology: mouse. Cross reactivity with GABA(A) Receptor beta 3 from other species has not been determined.
Relevant Links:	• NCBI - NP_058761.1 • UniProtKB - P63079 • GeneID - 24922

Application Details

Tested Applications:	IHC, Multiplex, WB
Suggested Applications:	Other (Based on references)
Application Note:	Anti-GABA(A) Receptor beta 3 (Rabbit) antibody tested for use in Western Blotting and Immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 53 kDa in size corresponding to the beta 3 subunit of 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:	User Optimized
WB:	1:1000

Formulation

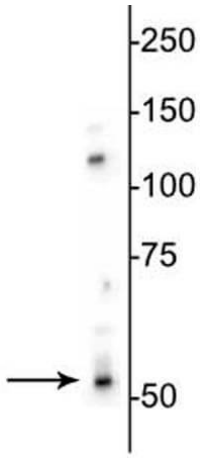
Physical State:	Liquid
Concentration:	Titrated value sufficient to run approximately 10 mini blots.
Buffer:	0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5
Stabilizer:	0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol

Shipping & Handling

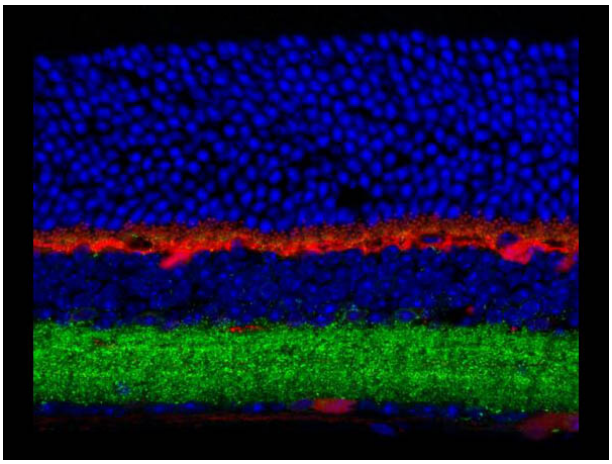
Shipping Condition:	Dry Ice

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.

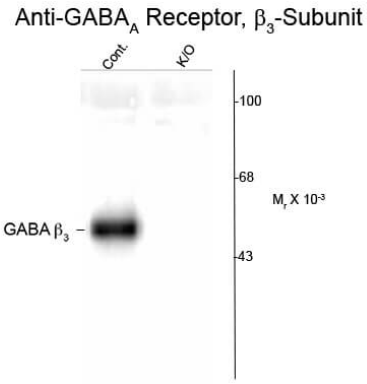
Images



Western Blot
Western Blot of Anti-GABA(A) Receptor beta 3 (Rabbit) Antibody. Lane 1: rat brain lysate. Primary Antibody: 1µg/mL of Anti-GABA(A) Receptor beta 3. Secondary Antibody: Goat Anti-Rabbit HRP of 611-103-122 at 1:40,000. Block: Universal BlockOut buffer MB-073. Expect: ~53 kDa.



Immunohistochemistry
Immunohistochemistry of Anti-GABA(A) Receptor beta 3 (Rabbit) Antibody. Tissue: mouse retina. Labeling: GABA(A) Receptor beta 3 subunit in green, calbindin in red, and DNA in blue.



Western blot of 5-7 μg of mouse cerebellum lysates from wild type (control) and β_3 knockout (β_3 K/O) animals showing specific immunolabeling of the ~53k β_3 subunit of the GABA$_A$-R in the wild type but not in the β_3 K/O animals.

Western Blot

Western Blot of Rabbit anti-GABAA Receptor ß3 Antibody. Lane 1: mouse cerebellum lysates from wild type. Lane 2: mouse cerebellum lysates from β3 knockout (β3 K/O). Load: 5-7 µg 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: ~53kDa/~53kDa for β3-subunit of the GABAA-R in the wild type. 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)

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