

Datasheet for 600-401-D45

GABA(A) Receptor alpha 2 Antibody

Overview

Description:	Anti-GABA(A) Receptor alpha 2 (RABBIT) Antibody - 600-401-D45
Item No.:	600-401-D45
Size:	100 µL
Applications:	WB, IF
Reactivity:	Mouse, Rat
Host Species:	Rabbit

Product Details

Background:

GABA(A) Receptor alpha 2 Antibody detects GABA(A) receptor alpha 2 protein. 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 α s, four β s and four γ s, 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 alpha 2 antibody is ideal for investigators involved in Neuroscience.

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

Target Details

Gene Name:	Gabra2
Reactivity:	Mouse, Rat

Immunogen Type:	Recombinant Protein
Immunogen:	Anti-GABA(A) Receptor alpha 2 Antibody was produced in rabbit by repeated immunizations with a fusion protein from the cytoplasmic loop of the rat receptor alpha 2 subunit.
Purity/Specificity:	Anti-GABA(A) Receptor alpha 2 antibody is directed against rat GABA(A) receptor alpha 2 protein. The antibody was affinity purified from monospecific antiserum by immunoaffinity purification. Labeling is absent in $\alpha 2$ -subunit knockout animals. Reactivity is expected from bovine, canine, human, non-human primate, Zebrafish. Cross reactivity to GABA(A) from other species has not been determined.
Relevant Links:	• UniProtKB - P23576 • GenelD - 61856 • NCBI - NP_001129251.1

Application Details

Tested Applications:	WB
Suggested Applications:	IF (Based on references)
Application Note:	Anti-GABA(A) Receptor alpha 2 (Rabbit) Antibody is tested for use in Western Blot and ICC. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 51 kDa in size corresponding to the alpha 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.
WB:	1:1000

Formulation

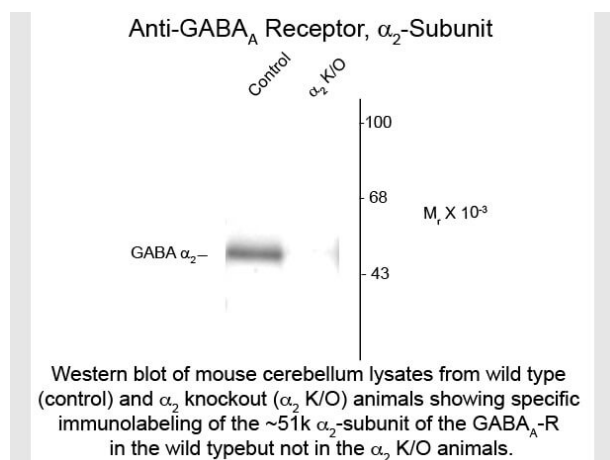
Physical State:	Liquid
Concentration:	Titred value sufficient to run approximately 10 mini blots.
Buffer:	0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5
Stabilizer:	0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Dry Ice
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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



Western Blot

Western Blot of Anti-GABA(A) Receptor alpha 2 (Rabbit) Antibody. Lane 1: mouse brain lysates from wild type. Lane 2: mouse brain lysates from α_2 -knockout (α_2 -K/O). 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: ~51kDa/~51kDa for α_2 -subunit of the GABAA-R. Other band(s): none.

References

- Kreye J et al. Encephalitis patient derived monoclonal GABAA receptor antibodies cause catatonia and epileptic seizures. *J Exp Med.* (2021)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.