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Datasheet for 612-401-D51

GABA(A) Receptor beta 3 phospho S408/phospho S409 Antibody

Overview

Description:	Anti-GABA(A) Receptor beta 3 pS408/pS409 (RABBIT) Antibody - 612-401-D51
Item No.:	612-401-D51
Size:	100 µL
Applications:	WB
Reactivity:	Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	Anti-GABA(A) Receptor beta 3 pS408/pS409 Antibody detects GABA(A) Receptor beta 3. Gamma-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system. There are two major classes of GABA receptors: the GABAA and the GABAB subtype of receptors. 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. Phosphorylation of serine 408 and serine 409 within the beta3 subunit have been shown to be critical for the functional modulation of beta3 containing recombinant receptors. GABA(A) Receptor beta 3 pS408/pS409 antibody is ideal for investigators involved in Neuroscience.
Synonyms:	Gamma-aminobutyric acid receptor subunit beta-3, GABA(A) receptor subunit beta-3, Gabrb3, GABA(A) receptor subunit ß-3
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Gabrb3

Reactivity:	Mouse, Rat
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-GABA(A) Receptor beta 3 pS408/pS409 Antibody was produced by repeated immunizations with synthetic phospho-peptide corresponding to amino acid residues surrounding Ser408/Ser409 of rat GABAA.
Purity/Specificity:	Anti-GABA(A) Receptor beta 3 pS408/pS409 Antibody is directed against phosphorylated rat GABA(A) Receptor beta 3 at residues pS408/pS409. The antibody was affinity purified from monospecific antiserum by immunoaffinity purification. Immunolabeling of the GABAA band is completely blocked by the phospho-peptide used as antigen but not by the corresponding dephospho-peptide. Reactivity is expected from the following species based on 100% sequence homology: bovine, canine, chicken, human, mouse, non-human primates, Xenopus and zebra fish.
Relevant Links:	• NCBI - NP_058761.1 • GeneID - 24922 • UniProtKB - P63079.1

Application Details

Tested Applications:	WB
Application Note:	Anti-GABA(A) Receptor beta 3 pS408/pS409 (Rabbit) antibody is tested for use in Western Blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 53 kDa in size corresponding to GABA(A) receptor beta 3 subunit phosphorylated at Ser408/Ser409 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

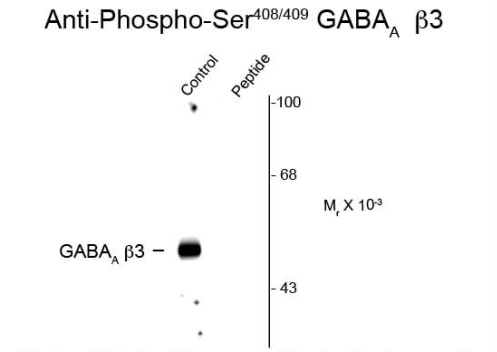
Formulation

Physical State:	Liquid
Concentration:	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. For extended storage, aliquot contents and freeze at -80° 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 of rat hippocampal lysate showing specific immunolabeling of the ~53k $GABA_A$ β3 protein phosphorylated at $Ser^{408/409}$ (control). Immunolabeling is blocked by the phospho-peptide (peptide) used as antigen.

Western Blot
Western Blot of Rabbit anti-GABA(A) Receptor beta 3 pS408/pS409 antibody. Lane 1: rat hippocampal lysate. Lane 2: rat hippocampal lysate blocked by the phospho-peptide. Load: 10 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 GABAA β3 protein phosphorylated at Ser408/409. Other band(s): none.

References

- Garcia JD et al. Distinct mechanisms drive sequential internalization and degradation of GABAARs during global ischemia and reperfusion injury. *iScience.* (2023)
- Pribiag H et al. TNF-α downregulates inhibitory neurotransmission through protein phosphatase 1-dependent trafficking of GABAA receptors. *J Neurosci.* (2013)

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