

Anti-GABAA Receptor α 2 Antibody

Our Anti-GABAA Receptor α 2 rabbit polyclonal primary antibody from PhosphoSolutions is produced in-h
Catalog # AN1392

Specification**Anti-GABAA Receptor α 2 Antibody - Product Information**

Application	WB
Primary Accession	P23576
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51182

Anti-GABAA Receptor α 2 Antibody - Additional Information**Other Names**

GABA A receptor subunit α 2 antibody, GABA antibody, GABA(A) receptor subunit α 2 antibody, GABA(A) receptor subunit α -2 antibody, GABR A2 antibody, GABR α 2 antibody, GABRA2 antibody, GABRA2 protein antibody, Gamma aminobutyric acid (GABA) A receptor α 2 antibody, Gamma aminobutyric acid A receptor α 2 antibody, Gamma aminobutyric acid receptor α 2 subunit antibody, Gamma aminobutyric acid receptor subunit α 2 antibody, Gamma-aminobutyric acid receptor subunit α -2 antibody, GBRA2_HUMAN antibody

Target/Specificity

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 GABA-A receptor (GABA-A-R) subtype. GABA-A-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 GABA-A-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 (Olsen and Tobin, 1990; Whiting et al., 1999; Ogris et al., 2004). Injection in oocytes or mammalian cell lines of cRNA coding for α - and β -subunits results in the expression of functional GABA_A-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 (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pörtl et al., 2003).

Dilution

WB ~ 1:1000

Format

Antigen Affinity Purified from Pooled Serum

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-GABAA Receptor α 2 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

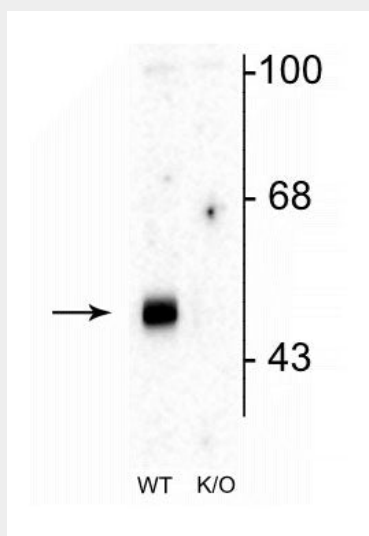
Shipping
Blue Ice

Anti-GABAA Receptor $\alpha 2$ Antibody - Protocols

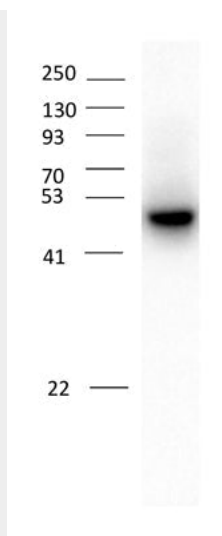
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

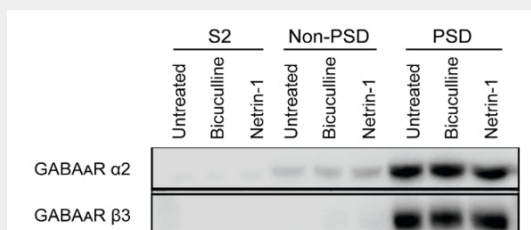
Anti-GABAA Receptor $\alpha 2$ Antibody - Images



Western blot of mouse brain lysates from wild type (WT) and $\alpha 2$ -knockout (K/O) animals showing specific immunolabeling of the ~51 kDa $\alpha 2$ -subunit of the GABAA-R. The labeling was absent from a lysate prepared from $\alpha 2$ -knockout animals.



Western blot of rat cortical neurons showing specific immunolabeling of the ~51 kDa $\alpha 2$ -subunit of the GABAA-R (1:1000). Image kindly provided by Lidong Liu, University of British Columbia, Vancouver.



Immunoblots showing GABAA Receptor $\alpha 2$ (cat. 822-GA2CL) and GABAA Receptor $\beta 3$ (cat. 863A-GB3C) subunit expression in the cytosolic (S2), extrasynaptic (non-PSD), and synaptic (PSD) fractions of untreated, bicuculline-pretreated (20 μ M, 1h), or netrin-1 treated (250ng/ml, 1h) rat hippocampal neuronal cultures. Image from publication CC-BY-4.0. PMID: 36323250

Anti-GABAA Receptor $\alpha 2$ Antibody - Background

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 GABA-A receptor (GABA-A-R) subtype. GABA-A-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 GABA-A-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 (Olsen and Tobin, 1990; Whiting et al., 1999; Ogris et al., 2004). 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 (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pölzl et al., 2003).