

Anti-GABAA Receptor α 2 Antibody

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

Product Information

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

Additional Information

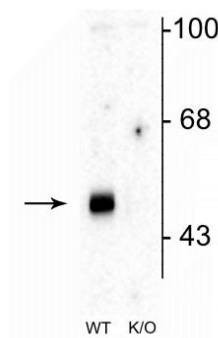
Other Names	GABA A receptor subunit α 2 antibody, GABA antibody, GABA(A) receptor subunit α 2 antibody, GABA(A) receptor subunit α -2 antibody, GABR A2 antibody, GABR α 2 antibody, GABRA2 antibody, GABRA2 protein antibody, Gamma aminobutyric acid (GABA) A receptor α 2 antibody, Gamma aminobutyric acid 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; P α tl et al., 2003).
Dilution	WB~~1:1000 ICC~~N/A
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

Shipping

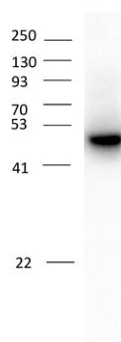
Blue Ice

Background

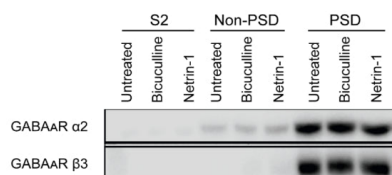
Gamma-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system, causing a hyperpolarization of the membrane through the opening of a Cl^- channel associated with the GABA-A receptor (GABA-A-R) subtype. GABA-A-Rs are important therapeutic targets for a range of 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 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; Pölzl et al., 2003).

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 GABA_A-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 GABA_A-R (1:1000). Image kindly provided by Lidong Liu, University of British Columbia, Vancouver.



Immunoblots showing GABA_A Receptor $\alpha 2$ (cat. AN1392) and GABA_A Receptor $\beta 3$ (cat. 863A-GB3C) subunit expression in the cytosolic (S2), extrasynaptic (non-PSD), and synaptic (PSD) fractions of untreated, bicuculline-pretreated (20 μM , 1h), or netrin-1 treated (250ng/ml, 1h) rat hippocampal neuronal cultures. Image from publication CC-BY-4.0. PMID: 36323250