

## Anti-GABAA Receptor $\alpha$ 4, Antibody

Our Anti-GABAA Receptor  $\alpha$ 4, rabbit polyclonal primary antibody from PhosphoSolutions is produced in-  
Catalog # AN1394

### Specification

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#### Anti-GABAA Receptor $\alpha$ 4, Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P28471</a>
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	60951

#### Anti-GABAA Receptor $\alpha$ 4, Antibody - Additional Information

Gene ID **140675**

##### Other Names

GABA(A) receptor subunit  $\alpha$ 4 antibody, GABA(A) receptor subunit alpha-4 antibody, GABR A4 antibody, GABR $\alpha$ 4 antibody, Gabra4 antibody, Gamma aminobutyric acid (GABA) A receptor  $\alpha$ 4 antibody, Gamma aminobutyric acid A receptor  $\alpha$ 4 antibody, Gamma aminobutyric acid receptor  $\alpha$ 4 subunit antibody, Gamma aminobutyric acid receptor subunit  $\alpha$ 4 antibody, Gamma-aminobutyric acid receptor subunit alpha-4 antibody, GBRA4\_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<sup>-</sup> 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  $\alpha$ s, four  $\beta$ s and four  $\gamma$ 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  $\alpha$ - and  $\beta$ -subunits results in the expression of functional GABA-A-Rs sensitive to GABA. However, coexpression of a  $\gamma$ -subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different  $\alpha$ -subunits of the receptor (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pörtl et al., 2003).

##### 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  $\alpha$ 4, Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

##### Shipping

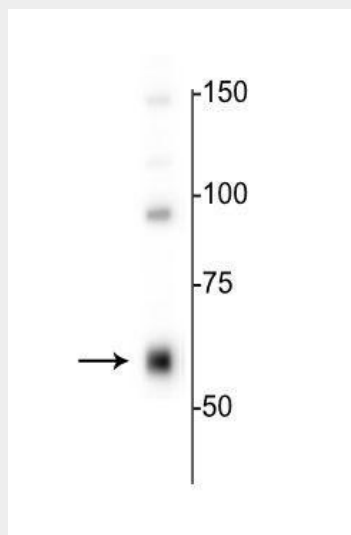
Blue Ice

### Anti-GABAA Receptor $\alpha 4$ , 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 $\alpha 4$ , Antibody - Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~64 kDa  $\alpha 4$ -subunit of the GABAA-R.

### Anti-GABAA Receptor $\alpha 4$ , 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  $\text{Cl}^-$  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  $\alpha$ s, four  $\beta$ s and four  $\gamma$ 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  $\alpha$ - and  $\beta$ -subunits results in the expression of functional GABA-A-Rs sensitive to GABA. However, coexpression of a  $\gamma$ -subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different  $\alpha$ -subunits of the receptor (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pörtl et al., 2003).