Anti-GABA\textsubscript{A} Receptor, \(\alpha_4\)-Subunit Antibody

**Catalog #:** 845-GA4C  **Size:** 100 µl

**Cite this Antibody:** PhosphoSolutions Cat# 845-GA4C, RRID:AB_2492103

<table>
<thead>
<tr>
<th>Host</th>
<th>Applications</th>
<th>Species Tested</th>
<th>Species Reactivity*</th>
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<tr>
<td>Rabbit</td>
<td>WB 1:1000</td>
<td>R</td>
<td>~64 kDa</td>
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**Product Description:** Affinity purified rabbit polyclonal antibody.

**Biological Significance:** 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\textsuperscript{−} channel associated with the GABA\textsubscript{A} receptor (GABA\textsubscript{A}-R) subtype. GABA\textsubscript{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\textsubscript{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\textsubscript{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; Pöltl et al., 2003).

**Antigen:** Fusion protein from the cytoplasmic loop of the \(\alpha_4\)-subunit of rat GABA\textsubscript{A} receptor.

**Antibody Specificity:** Specific for endogenous levels of the ~64 kDa \(\alpha_4\)-subunit of the GABA\textsubscript{A} receptor.

**Purification Method:** Prepared from rabbit serum by affinity purification using a column to which the fusion protein immunogen was coupled.

**Quality Control Tests:** Western blots performed on each lot.

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

**Storage and Stability:** Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.

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For Research Use Only
**Product Specific References:**


**General References:**


