Overview

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>845A-GA4C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Species</td>
<td>Rabbit Polyclonal</td>
</tr>
<tr>
<td>Format</td>
<td>Antigen Affinity Purified from Pooled Serum</td>
</tr>
<tr>
<td>Applications</td>
<td>WB 1:1000 IHC 1:300</td>
</tr>
<tr>
<td>Species Tested</td>
<td>Mouse, Rat</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Fusion protein from the cytoplasmic loop of the α4 subunit of rat GABA&lt;sub&gt;A&lt;/sub&gt; receptor.</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>64 kDa</td>
</tr>
<tr>
<td>Cite this Antibody</td>
<td>PhosphoSolutions Cat# 845A-GA4C, RRID:AB_2800407</td>
</tr>
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Images

Western blot of rat hippocampal lysate showing specific immunolabeling of the ~64 kDa α4-subunit of the GABA<sub>A</sub>-R.
**Target Description**

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<sub>A</sub> receptor (GABA<sub>A</sub>-R) subtype. GABA<sub>A</sub>-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<sub>A</sub>-R is a multimeric subunit complex. To date six αs, four βs and four γs, 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<sub>A</sub>-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; Pöltl et al., 2003).

**Specificity**

Specific for endogenous levels of the ~ 64 kDa α4-subunit of the GABA<sub>A</sub> receptor.

**Production/Purification**

Prepared from pooled rabbit serum by affinity purification using a column to which the fusion protein immunogen was coupled.

**Quality Control**

Western blots performed on each lot.

**Buffer**

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

**Storage**

Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol.

**Stability**

After date of receipt, stable for at least 1 year at -20°C.

**Significant Citations**


***Product specific references for previous product # 845-GA4C which has been depleted and replaced with our product # 845A-GA4C which was produced by the same methods, using the same fusion protein antigen in new animals.

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