**Description:**
Polyclonal Antibody against GABA\textsubscript{A} Receptor α1-Subunit C-Terminus

**Also Known As:**
gamma-aminobutyric acid receptor subunit alpha-1; GABA(A) receptor subunit alpha-1

**Form:**
Affinity Purified Antibody in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50% glycerol.

**Host:**
Rabbit

**Species Reactivity:**
Bovine, Human, Mouse, Rat

**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\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 αs, four βs and four γs, plus alternative splicing variants of some of these subunits, have been identified. Injection in oocytes or mammalian cell lines of cRNA coding for α and β subunits results in the expression of functional GABA\textsubscript{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. Lastly, phosphorylation of β subunits of the receptor has been shown to modulate GABA\textsubscript{A}-R function.

This antibody was raised against a fusion protein from the cytoplasmic loop of the rat GABA\textsubscript{A}-R α1-subunit. It was subsequently affinity purified on a column made with the α1-fusion protein. PRB-564P is specific for the 51k band of GABA\textsubscript{A}-R α1-subunit in rat brain membrane fractions.

**Uses:**
This antibody is effective in immunoblotting; other applications not yet determined.

**Suggested Working Dilution:**
The optimal working dilution should be determined for each specific assay condition. This antibody is sold for laboratory research use only, not for human or in-vivo use. Covance antibodies may not be resold or modified for resale without prior written approval.

- Western blot: 1:500-1:1,000*
- Dot blot: 1:500-1:1,000

**Notes:**
*Predicted MW = 51kD

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**Western blot analysis of forebrain lysates from wildtype and alpha-1 knockout animals, using approximately 5-7 µg of tissue per slot. Blots were incubated with anti-GABA\textsubscript{A}-R alpha-1 (Cat. No. PRB-564P) diluted 1:1000 overnight at 4°C.**
Storage:
Store at -20°C. Upon initial thawing, apportion into working aliquots and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody. Long term storage should be at -80°C. This shelf-life of this product is approximately 1 year.

References:


Warranty/Conditions:
Covance products may not be resold or modified for resale without prior written approval. All sales are subject to Covance Antibody Products Terms and Conditions of Sale.

Datasheet Revision Date:
11/6/2011

Related Products:
- GABA A Receptor α1 Subunit N-Terminus Polyclonal Antibody Catalog Number PRB-563P