Rabbit Anti-GABA$_A$ Receptor (α_1 Subunit)
Certificate of Analysis

ORDERING INFORMATION

Catalog Number: PPS070

Lot Number: 1154355

Size: 50 µL (sufficient for 10 mini-blots)

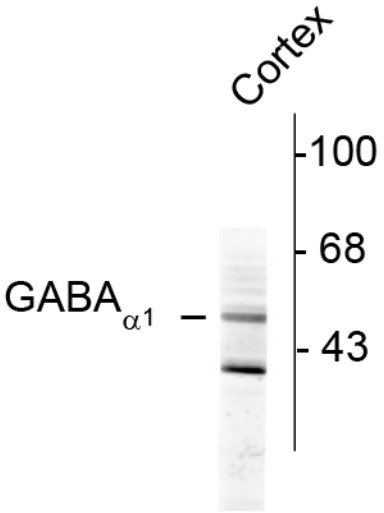
Storage: ≤ -20° C

Specificity: Bovine, human, mouse, and rat ~51 kDa α_1-subunit of the GABA$_A$ Receptor

Immunogen: α_1-subunit of the GABA$_A$ Receptor specific peptide

Ig Type: rabbit serum

Applications: Western blot



Western blot of rat brain lysate showing specific immunolabeling of the approximately 51 kDa α_1 subunit of the GABA$_A$ R.

Description
GABA$_A$ (γ-aminobutyric acid-type A) receptors are members of the cysteine-loop family of neurotransmitter-gated ion channels. GABA binding to A-type receptors induces anion-selective ion channel opening. These receptors are the principal fast inhibitory neurotransmitter receptors in the CNS. GABA$_A$ receptors are heteropentamer combinations of seven subunit types; α, β, γ, δ, ε, θ, and π. Three subunits, α, β, and γ, have at least three separate gene products in mammals, and typical GABA$_A$ receptors have some combination of an α, β and γ subunit. The rat α_1 isoform is a 50 - 52 kDa, 428 amino acid, 4 transmembrane protein with two terminal extracellular regions. The ligand-binding region is in the N-terminus (aa 15 - 222). As with many receptors, phosphorylation is used as a regulatory mechanism. CaM kinase II is known to phosphorylate the α_1 subunit and regulate benzodiazepine binding. α_1 subunits are particularly abundant in cerebellum and may contribute to GABA receptor distribution. In the hippocampus and amygdala, the α_1 subunit may contribute to amnesia.

Formulation
50 µL of unpurified rabbit serum.

Storage
For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

Specificity
This antibody is specific for the ~51 kDa α_1 subunit of the GABA$_A$ Receptor in Western blots of rat brain lysates.

Applications
Western blot - 1:1000

Optimal dilutions should be determined by each laboratory for each application.

References

1. Darlison, M.G. *et al.* (2005) Cell. Mol. Neurobiol. **25**:607.
2. Akabas, M.H. (2004) Int. Rev. Neurobiol. **62**:1.
3. Churn, S.B. *et al.* (2002) J. Neurochem. **82**:1065.
4. Kralic, J.E. *et al.* (2006) J. Comp. Neurol. **495**:408.
5. Sonner, J.M. *et al.* (2006) Mol. Pharmacol. **68**:61.

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