$GABA_A$ R α4 C-Terminus Antibody

Antigen Affinity-purified Polyclonal Rabbit IgG
Catalog Number: PPS025

DESCRIPTION

Species Reactivity	Human/Mouse/Rat/Bovine/Canine/Primate/Zebrafish
Specificity	Human, mouse, rat, and bovine ~64 kDa $GABA_A$ R α4 subunit, C-Terminus
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	Fusion protein from the cytosolic loop of rat $GABA_A$ R α4 subunit, C-Terminus
Formulation	100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50% glycerol. See Certificate of Analysis for details.

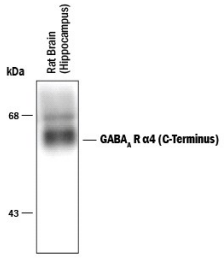
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1:1000 dilution	See Below

DATA

Western Blot



Detection of $GABA_A$ R α4 C-Terminus by Western Blot. Western blot of rat brain (hippocampal) lysates using approximately 5 - 7 µg of tissue. Blots were incubated overnight at 2 - 8° C with anti-$GABA_A$ R, α4 subunit, C-Terminus diluted 1:1000. The antibody labelled the ~64 kDa α4 subunit of the $GABA_A$ R.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

BACKGROUND

$GABA_A$ (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 α, β and γ subunits. The rat α4 isoform is a 67 kDa, 517 amino acid (aa), 4 transmembrane protein with two terminal extracellular regions. The ligand-binding region is in the N-terminus (aa 14 - 221). The α4 subunit is unusual in that it does not seem to preferentially form channel complexes with the γ subunit. In hippocampal neurons, α4 subunits apparently form GABA receptors that do not cluster, but exist in diffuse networks in nonsynaptic membrane.

References:

1. Darlison, M.G. et al. (2005) Cell. Mol. Neurobiol. 25:607.
2. Akabas, M.H. (2004) Int. Rev. Neurobiol. 62:1.
3. Wisden, W. et al. (1991) FEBS Lett. 289:227.
4. Bencsits, E. et al. (1999) J. Biol. Chem. 274:19613.
5. Mangan, P.S. et al. (2005) Mol. Pharmacol. 67:775.

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