Mouse/Rat $GABA_A$ R β3 C-Terminus Antibody

Antigen Affinity-purified Polyclonal Rabbit IgG
Catalog Number: PPS032

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Mouse and rat ~50 - 56 kDa $GABA_A$ R β3 subunit, C-Terminus
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	Fusion protein from the cytosolic loop of $GABA_A$ R β3 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.

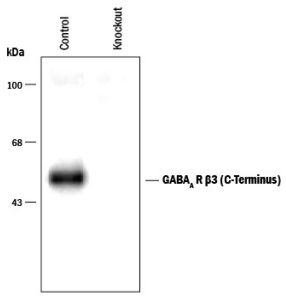
APPLICATIONS

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 β3 C-Terminus by Western Blot. Western blot of the ~50 - 56 kDa β3 subunit of the $GABA_A$ R protein in rat brain lysate (control). Immunolabeling was absent in a brain lysate prepared from animals in which the β3 subunit had been knocked out (K/O).

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 β3 isoform is a 58 kDa, 448 amino acid (aa), 4 transmembrane protein with two terminal extracellular regions. The ligand-binding region is in the N-terminus (aa 13 - 218). The β3 subunit is known to be phosphorylated on a consensus phosphorylation site (S408 of the precursor) that exists in the cytoplasmic domain between transmembrane segments 3 and 4. In contrast to β1 subunit modulation, PKCβII-induced phosphorylation appears to increase $GABA_A$ receptor activity. PKA phosphorylation on both S408 and S409 also appears to increase receptor activity.

References:

1. Darlison, M.G. et al. (2005) Cell. Mol. Neurobiol. 25:607.
2. Akabas, M.H. (2004) Int. Rev. Neurobiol. 62:1.
3. Song, M. and R.O. Messing (2005) Cell. Mol. Life Sci. 62:119.
4. Brandon, N.J. et al. (2003) Mol. Cell. Neurosci. 22:87.
5. McDonald, B.J. et al. (1998) Nat. Neurosci. 1:23.

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