



PhosphoSolutions®
Antibodies that work™

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Anti-Phospho-Ser⁷⁸³ GABA_B R2

Catalog Number: p1148-783

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

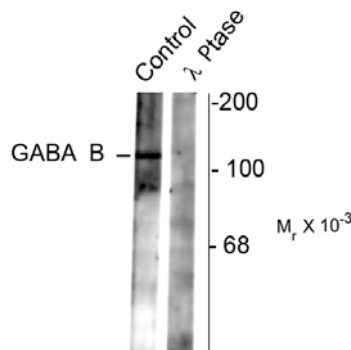
Applications: **WB:** 1:1000 **IF:** 1:500 (Kuramoto et al., 2007)

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser⁷⁸³ of GABA_B R2.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with mouse, human, non-human primate, chicken, bovine and Xenopus tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: Gamma-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system. There are two major classes of GABA receptors: the GABA_A and the GABA_B subtype of receptors. GABA_B receptors are heterodimeric G protein-coupled receptors that mediate slow synaptic inhibition in the central nervous system. It has recently been demonstrated that AMPK binds directly to GABA_B receptors and phosphorylates S783 in the cytoplasmic tail of the R2 subunit and that S783 plays a critical role in enhancing neuronal survival after ischemia as phosphorylation of S783 is evident in many brain regions and is increased dramatically after ischemic injury to the brain (Kuramoto et al., 2007).

Anti-Phospho-Ser⁷⁸³ GABA_B R2



Western blot of rat synaptic membrane showing specific immunolabeling of the ~102 k GABA_B R2 protein phosphorylated at Ser⁷⁸³ (control). The phosphospecificity of this labeling is shown in the second lane (*lambda*-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the phospho-Ser⁷⁸³ GABA_B antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability: Store at -20°C; stable for at least one year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephospho-peptide affinity columns.

Antibody Specificity: Specific for ~102k GABA_B R2 phosphorylated at Ser⁷⁸³. Immunolabeling of the GABA_B R2 band is completely blocked by λ-phosphatase treatment.

Quality Control Tests: Western blots performed on each lot.

References:

Kuramoto N, Wilkins ME, Fairfax BP, Revilla-Sanchez R, Terunuma M, Tamaki K, Iemata M, Warren N, Couve A, Calver A, Horvath Z, Freeman K, Carling D, Huang L, Gonzales C, Cooper E, Smart TG, Pangalos MN, Moss SJ (2007) Phospho-dependent functional modulation of GABA(B) receptors by the metabolic sensor AMP-dependent protein kinase. *Neuron* 53:233-247.

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