SANTA CRUZ BIOTECHNOLOGY, INC.

p-$GABA_B$ R1 (Ser 923): sc-135694

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

In the central nervous system (CNS), γ-aminobutyric acid (GABA) is the main inhibitory neurotransmitter that functions to regulate neuronal firing. GABA exerts its effects through two different kinds of receptors: ionotropic receptors ($GABA_A$ R and $GABA_C$ R), which produce fast inhibitory signals, and metabotropic receptors ($GABA_B$ R), which produce slow inhibitory signals. The $GABA_B$ R receptor is a heterodimer that consists of two multi-pass membrane proteins, designated $GABA_B$ R1 and $GABA_B$ R2, both of which belong to the G protein-coupled receptor family and are highly expressed in brain tissue. Together, $GABA_B$ R1 and $GABA_B$ R2 play a crucial role in the fine-tuning of inhibitory synaptic transmissions and are implicated in slow wave sleep, muscle relaxation, hippocampal long-term potentiation and antinociception events. Both $GABA_B$ R1 and $GABA_B$ R2 are regulated by G proteins that have a variety of functions, including activation of potassium channels, inhibition of adenylyl cyclase (A cyclase) activity and modulation of inositol phospholipid hydrolysis. Mouse, rat and human $GABA_B$ R1 are subject to phosphorylation on Ser 923.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GABBR1 (human) mapping to 6p22.1; Gabbr1 (mouse) mapping to 17 B1.

SOURCE

p-$GABA_B$ R1 (Ser 923) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 923 of $GABA_B$ R1 isoform 1A of rat origin.

PRODUCT

Each vial contains IgG in 100 µl of 10 mM HEPES with 150 mM NaCl, 50% glycerol and < 0.1% BSA.

APPLICATIONS

p-$GABA_B$ R1 (Ser 923) is recommended for detection of Ser 923 phosphorylated $GABA_B$ R1 isoform 1A of rat origin, correspondingly Ser 954 phosphorylated $GABA_B$ R1 isoform 1E of rat origin, correspondingly Ser 924 phosphorylated $GABA_B$ R1 of human origin and correspondingly Ser 923 phosphorylated $GABA_B$ R1 of mouse origin of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for $GABA_B$ R1 siRNA (h): sc-42459, $GABA_B$ R1 siRNA (m): sc-42460, $GABA_B$ R1 shRNA Plasmid (h): sc-42459-SH, $GABA_B$ R1 shRNA Plasmid (m): sc-42460-SH, $GABA_B$ R1 shRNA (h) Lentiviral Particles: sc-42459-V and $GABA_B$ R1 shRNA (m) Lentiviral Particles: sc-42460-V.

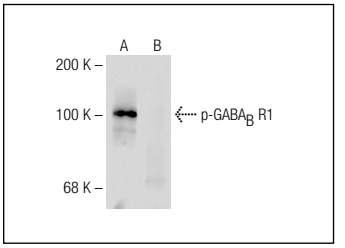
Molecular Weight of p-$GABA_B$ R1: 130 kDa.

Positive Controls: rat synaptic membrane tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-$GABA_B$ R1 (Ser 923): sc-135694. Western blot analysis of $GABA_B$ R1 phosphorylation in untreated (**A**) and lambda protein phosphatase-treated (**B**) rat synaptic membrane tissue extracts.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

For research use only, not for use in diagnostic procedures.