

PRODUCT DATA SHEET

Product Name: ANTI-GABA_A RECEPTOR, δ -SUBUNIT, N-TERMINUS ANTIBODY

Product Code: P40010-100

Pack Size: 100 μ L

Description: *Gamma*-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system, causing a hyperpolarization of the membrane through the opening of a Cl⁻ channel associated with the GABA_A receptor (GABA_A-R) subtype. GABA_A-Rs are important therapeutic targets for a range of sedative, anxiolytic, and hypnotic agents and are implicated in several diseases including epilepsy, anxiety, depression, and substance abuse. The GABA_A-R is a multimeric subunit complex. To date six α s, four β s and four γ s, plus alternative splicing variants of some of these subunits, have been identified (Olsen and Tobin, 1990; Whiting et al., 1999; Ogris et al., 2004). Injection in oocytes or mammalian cell lines of cRNA coding for α - and β -subunits results in the expression of functional GABA_A-Rs sensitive to GABA. However, coexpression of a γ -subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different α -subunits of the receptor (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pörtl et al., 2003). More recently there have been a number of studies demonstrating that the δ -subunit of the receptor may affect subunit assembly (Korpi et al., 2002) and may also confer differential sensitivity to neurosteroids and to ethanol (Wallner et al., 2003; Wohlfarth et al., 2002).

Physical State: Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per mL BSA and 50% glycerol

Storage/Stability: Stable at -20 °C for at least 1 year. For long term storage -20 °C is recommended

Purification Method: Prepared from rabbit serum by affinity purification using a column to which the fusion protein immunogen was coupled.

Shipping Conditions: Domestic: Blue Ice
 International: Blue Ice or Dry Ice

Host Species: Rabbit (Polyclonal)

Mr (kDa): 52

Immunogen: Fusion protein from the N-terminus of the δ -subunit of rat GABA_A receptor.

Species Reactivity: The antibody has been directly tested for reactivity in Western blots with rat and mouse tissue.

Recommended Antibody Dilutions:

WB: 1:1000

IHC: 1:250

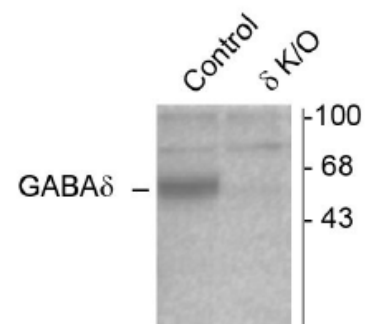
IP: 10 μ L per 50 μ g lysate

References:

- 1) Korpi ER et al. (2002) *Neurosci* 109:733-743.
- 2) McKernan RM, et al. (2000) *Nature Neurosci* 3:587-592.
- 3) Mehta AK et al. (1998) *Mol Brain Res* 67:194-199.
- 4) Ogris W et al. (2004) *Biochem Pharmacol* 68:1621-1629.
- 5) Olsen RW et al. (1990) *FASEB* 4:1469-1480.
- 6) Pörtl A et al. (2003) *J Neurochem* 87:1444-1455.
- 7) Wallner M et al. (2003) *Proc Natl Acad Sci (USA)* 100:15218-15223.
- 8) Whiting PJ et al. (1999) *Ann NY Acad Sci* 868:645-653.
- 9) Wohlfarth KM et al. (2002) *J Neurosci* 22:1541-1549.

Western Blot

Mouse cerebellar lysates from wild type (Control) and δ -knockout (δ -K/O) animals showing specific immunolabeling of the ~52k δ -subunit of the GABA_A-R. The labeling was absent from a lysate prepared from δ -knockout animals.



Application Key: WB – Western Blot IF – Immunofluorescence IHC – Immunohistochemistry IP - Immunoprecipitation