

PRODUCT DATA SHEET

Product Name: ANTI-GABA_A RECEPTOR, α_4 -SUBUNIT, N-TERMINUS ANTIBODY

Product Code: P40008-100

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).

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 peptide immunogen was coupled.

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

Host Species: Rabbit (Polyclonal)

Mr (kDa): 64

Immunogen: Peptide from the N-terminal region of the α_4 -subunit of rat GABA_A receptor, conjugated to keyhole limpet hemocyanin (KLH).

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

Recommended Antibody Dilutions:

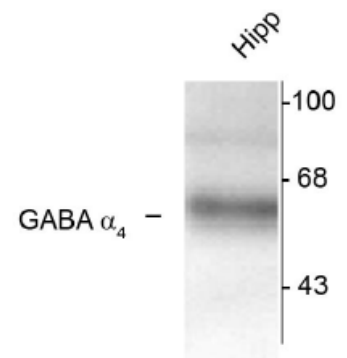
WB: 1:1000
IHC: 1:300

References:

- 1) McKernan RM, et al. (2000) *Nature Neurosci* 3:587-592.
- 2) Mehta AK et al. (1998) *Mol Brain Res* 67:194-199.
- 3) Ogris W et al. (2004) *Biochem Pharmacol* 68:1621-1629.
- 4) Olsen RW et al. (1990) *FASEB* 4:1469-1480.
- 5) Pörtl A et al. (2003) *J Neurochem* 87:1444-1455.
- 6) Whiting PJ et al. (1999) *Ann NY Acad Sci* 868:645-653.

Western Blot

10 μ g of rat brain hippocampus (Hipp) lysate showing immunolabeling of the ~64k α_4 -subunit of the GABA_A-R.



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