PRODUCT DATA SHEET

Product Name: ANTI-GABA$_A$ RECEPTOR, α$_4$-SUBUNIT, N-TERMINUS ANTIBODY

Product Code: P40008-100

Pack Size: 100 µL

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 αs, four βs and four γs, 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; Pöltl et al., 2003).

Physical State:	Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg 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)

*M*r **(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).
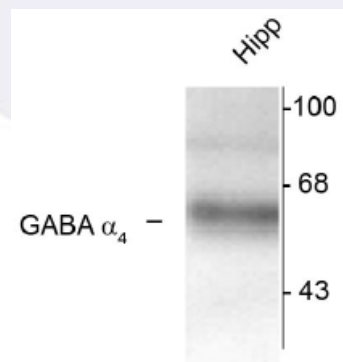
Species Reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue.

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) Pöltl 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 µg of rat brain hippocampus (Hipp) lysate showing immunolabeling of the ~64k α$_4$-subunit of the GABA$_A$ -R.

Phone:
+1 (800) 643-3426

Email:
biosales@pel-freez.com

Website:
www.pel-freez.com