

Anti-GABAA Receptor, $\alpha 4$ -Subunit, N-Terminus Antibody

Product Data Sheet · P/N 74090 Rev 01 · Reissued 2026-09-19 (layout only)

Product code	Pack size
P40008-100	100 μ L
Host Species	Rabbit (Polyclonal)
Mr (kDa)	64

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 GABAA receptor (GABAA-R) subtype. GABAA-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 GABAA-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 GABAA-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).

Immunogen

Peptide from the N-terminal region of the $\alpha 4$ -subunit of rat GABAA receptor, conjugated to keyhole limpet hemocyanin (KLH).

Species Reactivity

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

Physical State

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

Purification Method

Prepared from rabbit serum by affinity purification using a column to which the peptide immunogen was coupled.

Recommended Antibody Dilutions

WB: 1:1000

IHC: 1:300

Storage/Stability

Stable at -20 °C for at least 1 year.

For long term storage -20 °C is recommended

Shipping Conditions

Domestic: Blue Ice

International: Blue Ice or Dry Ice

References

- 1) McKernan RM, et al. (2000) Nature Neurosci 3:587-592.
- 2) Mehta AK et al. (1998) Mol Brain Res 67:194-

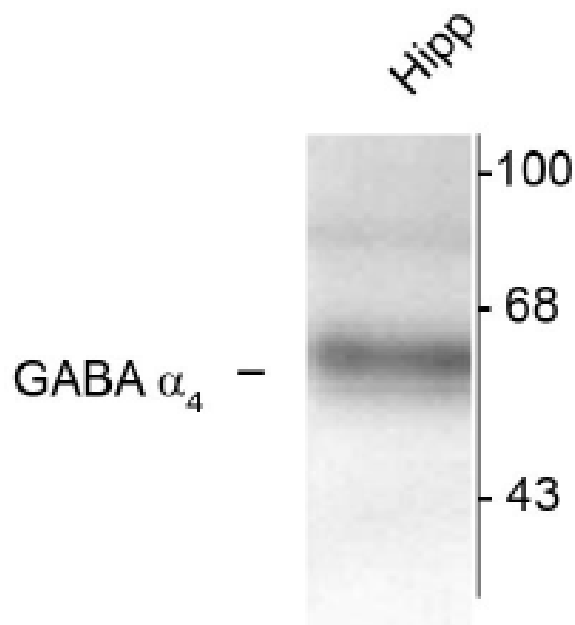
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3) Ogris W et al. (2004) Biochem Pharmacol 68:1621-1629.

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 $\alpha 4$ - subunit of the GABAA -R.

For research use or further manufacturing only. Not for use in diagnostic procedures, or for human or animal consumption.