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GABAA Receptor, α4-Subunit Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1039

Specification

GABAA Receptor, α4-Subunit Antibody - Product Information

Application	**WB**
Primary Accession	P28471
Reactivity	**Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**64 KDa**

GABAA Receptor, α4-Subunit Antibody - Additional Information

Gene ID	**140675**
Gene Name	**GABRA4**

Other Names
Gamma-aminobutyric acid receptor subunit alpha-4, GABA(A) receptor subunit alpha-4, Gabra4

Target/Specificity
Fusion protein from the cytoplasmic loop of the alpha 4 subunit.

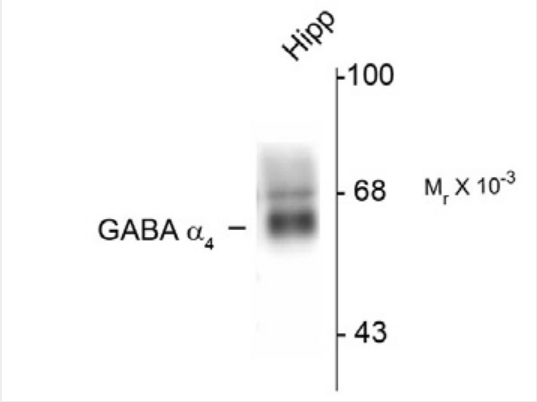
Dilution
WB~~ 1:1000

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

Antibody Specificity
Specific for the ~64k α4-subunit of the GABAA receptor in Western blots.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GABAA Receptor, α4-Subunit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.



Western blot of rat hippocampal (Hipp) lysate showing specific immunolabeling of the ~64k α4-subunit of the GABAA-R.

GABAA Receptor, α4-Subunit Antibody - Background

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 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 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

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GABAA Receptor, α4-Subunit Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Ticku, 1998; Ogris et al., 2004; Pöltl et al., 2003).

GABAA Receptor, α4-Subunit Antibody - References

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Mehta AK, Ticku MK (1998) Prevalence of the GABAA receptor assemblies containing α1-subunit in the rat cerebellum and cerebral cortex as determined by immunoprecipitation: Lack of modulation by chronic ethanol administration. Mol Brain Res 67:194-199.
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Pöltl A, Hauer B, Fuchs K, Tretter V, Sieghart W (2003) Subunit composition and quantitative importance of GABAA receptor subtypes in the cerebellum of mouse and rat. J Neurochem 87:1444-1455.
Whiting PJ, Bonnert TP, McKernan RM, Farrar S, Le Bourdellès B, Heavens RP, Smith DW, Hewson L, Rigby MR, Sirinathsinghji DJS, Thompson SA, Wafford KA (1999) Molecular and functional diversity of the expanding GABAA receptor gene family. Ann NY Acad Sci 868:645-653.