

GABA A Receptor  $\alpha$ 3 Antibody

Catalog No: #AB21445



Package Size: #AB21445-1 50ul #AB21445-2 100ul #AB21445-4 25ul

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## Description

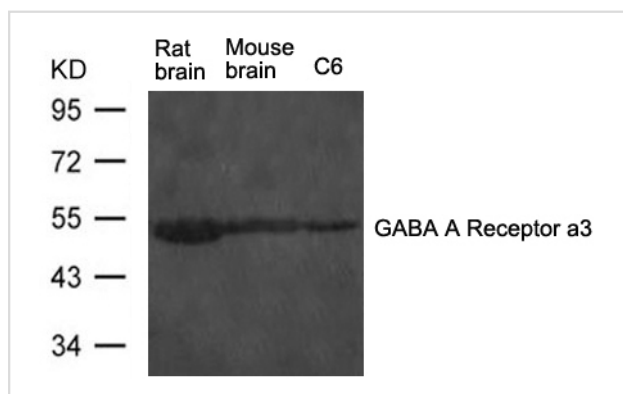
|                       |  |
|-----------------------|--|
| Product Name          | GABA A Receptor $\alpha$ 3 Antibody  |
| Host Species          | Rabbit   |
| Clonality             | Polyclonal   |
| Purification          | Antibodies were produced by immunizing rabbits with synthetic peptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific peptide |
| Applications          | WB   |
| Species Reactivity    | Hu Ms Rt   |
| Specificity           | The antibody detects endogenous level of total GABA A Receptor $\alpha$ 3 protein.   |
| Immunogen Type        | Peptide-KLH  |
| Immunogen Description | Peptide sequence around aa. 33~37(R-R-Q-E-P)derived from Rat GABA A Receptor $\alpha$ 3.   |
| Target Name           | GABA A Receptor $\alpha$ 3   |
| Other Names           | Gamma-aminobutyric acid receptor subunit alpha-3; Gabra3;  |
| Accession No.         | Swiss-Prot: P20236NCBI Protein: NP_058765.1  |
| Concentration         | 1.0mg/ml   |
| Formulation           | Supplied at 1.0mg/mL in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                 |
| Storage               | Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.  |

## Application Details

Predicted MW: 51kd

Western blotting: 1:500~1:1000

## Images



Western blot analysis of extract from rat brain and mouse brain tissue and C6 cells using GABA A Receptor  $\alpha$ 3 Antibody #AB21445

## Background

GABA (g-aminobutyric acid) is the primary inhibitory neurotransmitter in the central nervous system and interacts with three different receptors:

GABA(A), GABA(B) and GABA(C) receptor. The ionotropic GABA(A) and GABA(C) receptors are ligand-gated ion channels that produce fast inhibitory synaptic transmission. In contrast, the metabotropic GABA(B) receptor is coupled to G proteins that modulate slow inhibitory synaptic transmission (1). Functional GABA(B) receptors form heterodimers of GABA(B)R1 and GABA(B)R2 where GABA(B)R1 binds the ligand and GABA(B)R2 is the primary G protein contact site (2). Two isoforms of GABA(B)R1 have been cloned: GABA(B)R1a is a 130 kD protein and GABA(B)R1b is a 95 kD protein (3). G proteins subsequently inhibit adenylyl cyclase activity and modulate inositol phospholipid hydrolysis. GABA(B) receptors have both pre- and postsynaptic inhibitions: presynaptic GABA(B) receptors inhibit neurotransmitter release through suppression of high threshold calcium channels, while postsynaptic GABA(B) receptors inhibit through coupled activation of inwardly rectifying potassium channels. In addition to synaptic inhibition, GABA(B) receptors may also be involved in hippocampal long-term potentiation, slow wave sleep and muscle relaxation (1).

Jones, K.A. et al. (2000) Neuropsychopharmacology 23, S41-9.

Duthey, B. et al. (2002) J Biol Chem 277, 3236-41.

Kaupmann, K. et al. (1997) Nature 386, 239-46.

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Note: This product is for in vitro research use only and is not intended for use in humans or animals.