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Product Information

Anti-GABA_A Receptor (γ2 subunit) (extracellular)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **G0545**

Product Description

Anti-GABA_A Receptor (γ2 subunit) (extracellular) is developed in rabbit using a synthetic peptide QKSDDDYEDYASNKT(C), corresponding to residues 39-53 of rat GABA_Aγ2 as the immunogen. The homology with other species is: human, mouse, bovine-identical; Chick - 13/15 residues identical. The antibody was affinity isolated on immobilized immunogen.

Anti-GABA_A Receptor (γ2 subunit) (extracellular) specifically detects the GABA_A Receptor (γ2 subunit) protein in rat brain membrane extracts by immunoblotting and in rat brain formalin-fixed frozen sections by immunohistochemistry.

The inhibitory neurotransmitter GABA (γ-aminobutyric acid) interacts with three types of receptors: ionotropic GABA_A (GABA_AR), GABA_C (GABA_CR) and a metabotropic GABA_B receptor. Over the past decade, a family of GABA_A receptor subtypes has been delineated. These subtypes are generated by the co-assembly of five polypeptides selected from the α1-α6, β1-β3, γ1-γ3, δ, ε, π, and θ subunits.¹⁻³ The native GABA_AR in the mammalian central nervous system is predominantly composed of 2 α1, 2 β2 and a single γ2.⁴

The gene transcripts and the polypeptides have distinct patterns of spatial expression such that the GABA_A receptor subtypes have defined localizations that are presumed to reflect their physiological function. Mutations in the genes encoding this receptor can lead to several diseases. Recently, a mutation in the γ2 subunit has been linked to familial epilepsy syndrome.⁵

Reagent

The antibody is supplied lyophilized from phosphate buffered saline, pH 7.4, with 1% bovine serum albumin, and 0.05 % sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the

attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water, depending on the package size purchased. Antibody dilutions should be made in buffer containing 1% bovine serum albumin. Centrifuge all antibody preparations before use (10000 x g 5 min).

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. Once reconstituted, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:200 for immunoblotting.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

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3. Whiting, P.J. et al., Ann. N.Y. Acad. Sci., **868**, 645-653 (1999).
4. Fritschy, J.M., and Br?nig, I., Pharmacol. Ther., **98**, 299-323 (2003).
5. Baulac, S., et al., Nat. Genet., **28**, 46-48 (2001).

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