

PRODUCT INFORMATION



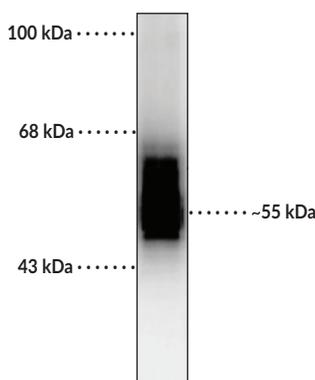
GABA_A Receptor β_2 Subunit Polyclonal Antibody

Item No. 29274

Overview and Properties

Contents:	This vial contains 100 μ l of affinity-purified rabbit polyclonal antibody.
Synonyms:	GABA _A Receptor Subunit β_2 , GABRB2, Gamma-aminobutyric Acid (GABA) A Receptor, β_2 , Gamma-aminobutyric Acid Receptor Subunit β_2
Immunogen:	Fusion protein from the cytoplasmic loop of the β_2 subunit of the rat GABA _A receptor
Molecular Weight:	~55 kDa
Species Reactivity:	(+) Mouse, rat
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 μ g/ml BSA, and 50% glycerol
Host:	Rabbit
Applications:	Western blot (WB); the recommended starting dilution for WB is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



WB of 7 μ g rat cerebellar lysate showing specific immunolabeling of the ~55 kDa β_2 subunit of the GABA_A receptor.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

GABA_A receptors are ligand-gated chloride channels that mediate the effects of the inhibitory neurotransmitter GABA in the CNS.^{1,2} They are postsynaptic heteropentameric receptors that contain protein subunits from the following isoforms: α_{1-6} , β_{1-4} , γ_{1-3} , δ , ϵ , π , θ , and ρ_{1-3} , arranged around a central pore. Phasic inhibitory synaptic transmission is regulated by $\alpha_1\beta_2\gamma_2$ subunit-containing GABA_A receptors, the major isoform found in the brain.^{2,3} The β subunit of GABA_A receptors interfaces with an α subunit to form the GABA binding site that initiates GABA-induced action potentials and forms the benzodiazepine binding site with the γ subunit. Phosphorylation of the β_2 subunit by PKC inhibits binding of the β_2 subunit with the clathrin adaptor protein AP-2 and reduces GABA_A receptor endocytosis.⁴ SNPs in *GABRB2*, which encodes the β_2 subunit isoform, have been found in patients with schizophrenia.⁵ Cayman's GABA_A Receptor β_2 Polyclonal Antibody can be used for Western blot (WB) applications. The antibody recognizes the GABA_A receptor β_2 subunit at approximately 55 kDa from mouse and rat samples.

References

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2. Hirose, S. Mutant GABA_A receptor subunits in genetic (idiopathic) epilepsy. *Prog. Brain Res.* **213**, 55-85 (2014).
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4. Vithlani, M., Moss, S.J., and Terunuma, M. The dynamic modulation of GABA_A receptor trafficking and its role in the formation of inhibitory synapses. *Physiol. Rev.* **91(3)**, 1009-1022 (2011).
5. Zhao, C., Xu, Z., Chen, J., *et al.* Two isoforms of GABA_A receptor β_2 subunit with different electrophysiological properties: Differential expression and genotypical correlations in schizophrenia. *Mol. Psychiatry* **11(12)**, 1092-1105 (2006).

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