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Product Datasheet

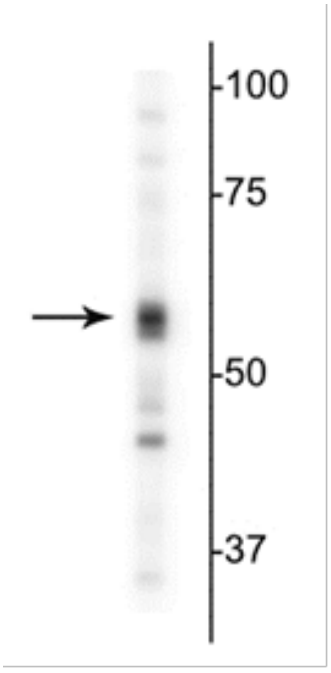
Anti-GABA$_A$ Receptor α5

Pooled Serum

Overview

Catalog #	846A-GA5C
Host Species	Rabbit Polyclonal
Format	Antigen Affinity Purified Pooled Serum
Applications	WB 1:1000 IHC Not listed
Species Tested	Mouse, Rat
Expected Reactivity	Bovine, Canine, Chicken, Human, Non-Human Primate, Zebrafish
Immunogen	Fusion protein from the cytoplasmic loop of the α5 subunit of rat GABA$_A$ receptor.
Molecular Weight	55 kDa
Cite this Antibody	PhosphoSolutions Cat# 846A-GA5C, RRID:AB_2797145

Images



Western blot of mouse whole brain showing specific immunolabeling of the ~55 kDa α_5-subunit of the GABA$_A$-R.

Details

Target 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 $GABA_A$ receptor ($GABA_A$-R) subtype. $GABA_A$-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 $GABA_A$-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 $GABA_A$-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; Pöltl et al., 2003).
Specificity	Specific for endogenous levels of the ~55 kDa α5-subunit of the $GABA_A$ receptor.
Production/Purification	Prepared from pooled rabbit serum by affinity purification using a column to which the fusion protein immunogen was coupled.
Quality Control	Western blots performed on each lot.
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

***Yu, J., Wang, D.S., Bonin, R.P., Penna, A., Alavian-Ghavanini, A., Zurek, A.A., Rauw, G., Baker, G.B. and Orser, B.A., 2019. Gabapentin increases expression of δ subunit-containing GABAA receptors. *EBioMedicine*, pii: S2352-3964(19)30148-3.

***Engin, E., Zarnowska, E. D., Benke, D., Tsvetkov, E., Sigal, M., Keist, R., Bolshakov, V.Y., Pearce, R.A., & Rudolph, U. (2015). Tonic Inhibitory Control of Dentate Gyrus Granule Cells by α5-Containing GABAA Receptors Reduces Memory Interference. The Journal of Neuroscience, 35(40), 13698-13712.

***Centanni, S. W., Teppen, T., Risher, M. L., Fleming, R. L., Moss, J. L., Acheson, S. K., Mulholland, P.J., Pandey, S.C., Chandler, L.J., & Swartzwelder, H. S. (2014). Adolescent alcohol exposure alters GABAA receptor subunit expression in adult hippocampus. Alcoholism: Clinical and Experimental Research, 38(11), 2800-2808.

****Product specific references for previous product # 846-GA5C which has been depleted and replaced with our product # 846A-GA5C which was produced by the same methods, using the same fusion protein antigen in new animals.*

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As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience **Antibodies that Work™**.