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GABAA Receptor Antibody

CATALOG NUMBER: 50-210

Western blot of rat brain lysates from wild type (Control) and alpha3-knockout (alpha3-K/O) animals showing specific immunolabeling of the ~51k alpha3-subunit of the GABAA receptor. The labeling was absent from a lysate prepared from alpha3-knockout animals.

Specifications

SPECIES REACTIVITY:	Mouse, Rat
TESTED APPLICATIONS:	IHC, WB
APPLICATIONS:	The antibody has been directly tested for reactivity in Western blots with rat and mouse tissue.
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
PREDICTED MOLECULAR WEIGHT:	51
IMMUNOGEN:	Fusion protein from N-terminal region of the a3-subunit of rat GABAA receptor.
HOST SPECIES:	Rabbit

Properties

PURIFICATION:	Affinity Purified
PHYSICAL STATE:	Liquid
BUFFER:	100 uL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug per mL BSA and 50% glycerol.
STORAGE CONDITIONS:	GABAA Receptor antibody can be stored at -20˚C and is stable at -20˚C for at least 1 year.
CLONALITY:	Polyclonal
CONJUGATE:	Unconjugated

Additional Info

ALTERNATE NAMES:	Gabra-3,
ACCESSION NO.:	P20236
PROTEIN GI NO.:	120761
OFFICIAL SYMBOL:	Gabra3

GENE ID:	24947

Background

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 alphas, four betas and four gammas, 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 alpha- and beta-subunits results in the expression of functional GABAA-Rs sensitive to GABA. However, coexpression of a gamma-subunit is required for benzodiazepine modulation. The various effects of the benzodiazepines in brain may also be mediated via different alpha-subunits of the receptor (McKernan et al., 2000; Mehta and Ticku, 1998; Ogris et al., 2004; Pöltl et al., 2003).
REFERENCES:	1) McKernan RM, et al. (2000) Sedative but not anxiolytic properties of benzodiazepines are mediated by the GABAA receptor α1-subtype. Nature Neurosci 3:587-592.
	2) 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.
	3) Ogris W, Pöltl A, Hauer B, Ernst M, Oberto A, Wulff P, Höger H, Wisden W, Sieghart W (2004) Affinity of various benzodiazepine site ligands in mice with a point mutation in the GABAA receptor γ2-subunit. Biochem Pharmacol 68:1621-1629.

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