10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GABAA Receptor, α6-Subunit Antibody
Rabbit polyclonal antibody
Catalog # AN1041

Specification

GABAA Receptor, α6-Subunit Antibody - Product Information

Application	**WB, FC**
Primary Accession	P30191
Reactivity	**Mouse, Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**57 KDa**

GABAA Receptor, α6-Subunit Antibody - Additional Information

Gene ID	**29708**
Gene Name	**GABRA6**

Other Names
Gamma-aminobutyric acid receptor subunit alpha-6, GABA(A) receptor subunit alpha-6, Gabra6, Gabra-6

Target/Specificity
Synthetic peptide corresponding to amino acid residues specific to the alpha 6 subunit conjugated to KLH.

Dilution
WB~~ 1:1000
FC~~1:500

Format
Unpurified neat serum.

Antibody Specificity
Labels the ~57k α6-subunit of the GABAA receptor in Western blots of rat brain extracts.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GABAA Receptor, α6-Subunit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

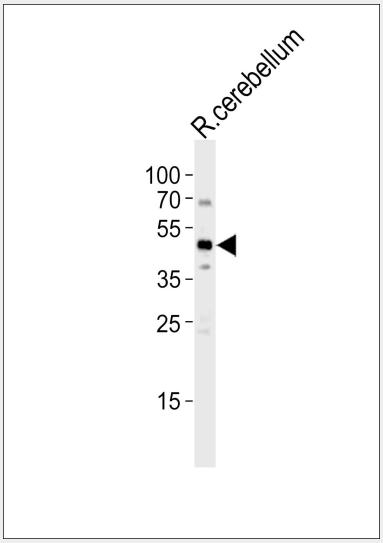
GABAA Receptor, α6-Subunit Antibody - Protocols

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

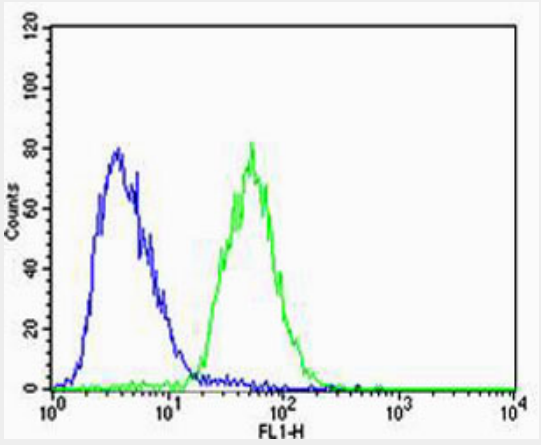
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GABAA Receptor, α6-Subunit Antibody - Images

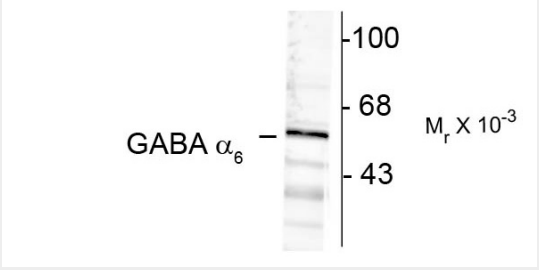


Western blot analysis of lysate from rat cerebellum tissue lysate, using Gabra6 Antibody(Cat. #AN1041). AN1041 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



Flow cytometric analysis of SH-SY5Y cells using Park7 (DJ-1) Antibody(green, Cat#AN1041) compared to an isotype control of rabbit IgG(blue). AN1041 was diluted at 1:500 dilution. An Alexa Fluor® 488 goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western blot of rat cortex lysate showing immunolabeling of the ~57k α6-subunit of the GABAA-R.

GABAA Receptor, α6-Subunit Antibody - 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 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 GABAA-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). Lastly, phosphorylation of β-subunits of the receptor has been shown to modulate GABAA-R function (Brandon et al., 2003).

GABAA Receptor, α6-Subunit Antibody - References

Brandon NJ, Jovanovic JN, Colledge M, Kittler JT, Brandon JM, Scott JD, Moss SJ (2003) A kinase anchoring protein 79/150 facilitates the phosphorylation of GABAA receptors by cAMP-dependent protein kinase via selective interaction with receptor β-subunits. Mol Cell Neurosci 22:87-97.
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.
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.
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.
Olsen RW, Tobin AJ (1990) Molecular biology of GABAA receptors. FASEB 4:1469-1480.
Pöltl A, Hauer B, Fuchs K, Tretter V, Sieghart W (2003) Subunit composition and quantitative importance of GABAA receptor subtypes in the cerebellum of mouse and rat. J Neurochem 87:1444-1455.
Whiting PJ, Bonnert TP, McKernan RM, Farrar S, Le Bourdellès B, Heavens RP, Smith DW, Hewson L, Rigby MR, Sirinathsinghji DJS, Thompson SA, Wafford KA (1999) Molecular and functional diversity of the expanding GABAA receptor gene family. Ann NY Acad Sci 868:645-653.