

Phospho-Ser327 GABAA Receptor, γ2 subunit Antibody

Affinity purified rabbit polyclonal antibody Catalog # AN1162

Specification

Phospho-Ser327 GABAA Receptor, y2 subunit Antibody - Product Information

Application FC, WB
Primary Accession P18508
Reactivity Rat
Host Rabbit
Clonality polyclonal
Calculated MW 45 KDa

Phospho-Ser327 GABAA Receptor, γ2 subunit Antibody - Additional Information

Gene ID 29709
Gene Name GABRG2

Other Names

Gamma-aminobutyric acid receptor subunit gamma-2, GABA(A) receptor subunit gamma-2, Gabrg2

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser327 conjugated to KLH.

Dilution

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

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phosphoand dephospho-peptide affinity columns.

Antibody Specificity

Specific for \sim 45k GABAA receptor $\gamma 2$ subunit phosphorylated at Ser327. Immunolabeling of the GABAA band is completely blocked by λ -phosphatase treatment

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

Phospho-Ser327 GABAA Receptor, γ 2 subunit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

Blue Ice

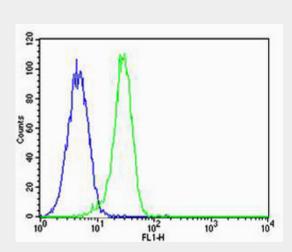


Phospho-Ser327 GABAA Receptor, y2 subunit Antibody - Protocols

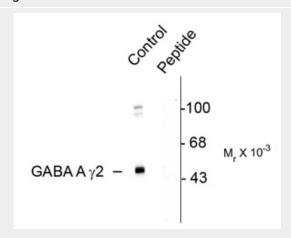
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

Phospho-Ser327 GABAA Receptor, y2 subunit Antibody - Images



Flow cytometric analysis of PC-12 cells using Park7 (DJ-1) Antibody(green, Cat#AN1162) compared to an isotype control of rabbit IgG(blue). AN1162 was diluted at 1:500 dilution. An Alexa Fluor® 488 goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody.



Western blot of rat cortex showing specific immunolabeling of the $\sim\!45k$ GABAA γ 2 protein phosphorylated at Ser327 (control). Immunolabeling is blocked by the phospho-peptide (peptide) used as antigen but not by the corresponding dephosphopeptide (not shown).

Phospho-Ser327 GABAA Receptor, γ2 subunit Antibody - Background

Gamma-aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system. There are two major classes of GABA receptors: the GABAA and the GABAB subtype of receptors. 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 sub-stance abuse. The GABAA-R is a multimeric subunit complex. To date six α s, four β s and four ys, 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 y-subunit is required for benzodiazepine modulation. It has recently been suggested that PKCE regulates the sensitivity of GABAA α1β2γ2 receptors to ethanol and benzodiazepines through phosphorylation of serine 327 in the large intracellular loop of y2 (Qi et al., 2007)

Phospho-Ser327 GABAA Receptor, y2 subunit Antibody - References

Olsen RW, Tobin AJ (1990) Molecular biology of GABAA receptors. FASEB 4:1469-1480. 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 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 y2-subunit. Biochem Pharmacol 68:1621-1629.

Qi ZH, Song M, Wallace MJ, Wang D, Newton PM, McMahon T, Chou WH, Zhang C, Shokat KM, Messing RO (2007) Protein kinase Cε regulates γ-aminobutyrate type A receptor sensitivity to ethanol and benzodiazepines through phosphorylation of y2 subunits. J Biol Chem 282(45):33052-63.