Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

GABA-A receptor α2

Cat.No. 224-1P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 29 to 37 from rat GABA-A receptor α2 (UniProt Id: P23576)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	224 102, 224 103, 224 104, 224 111
Remarks	This control peptide consists of the synthetic peptide (aa 29 - 37 of rat GABA-A receptor α2 precursor protein) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Gamma-**a**mino**b**utyric **a**cid type **A** (**GABA-A**) receptors mediate the majority of inhibitory neurotransmission in the brain. These receptor proteins are ligand gated chloride ion channels and consist of a pentameric combination of different subunits (**alpha**, beta, gamma, delta, epsilon and rho). The resulting heterogenous population of GABA-A receptor subtypes are expressed throughout the brain with specific cellular and subcellular expression patterns.

Selected General References

The distribution of thirteen GABAA receptor subunit mRNAs in the rat brain. III. Embryonic and postnatal development.
Laurie DJ, Wisden W, Seeburg PH
The Journal of neuroscience : the official journal of the Society for Neuroscience (1992) 12(11): 4151-72.

GABA receptor heterogeneity modulates dendrodendritic inhibition.
Sassoè-Pognetto M, Panzanelli P, Lagier S, Fritschy JM, Lledo PM
Annals of the New York Academy of Sciences (2009) 1170: 259-63.

Synaptogenesis in the cerebellar cortex: differential regulation of gephyrin and GABAA receptors at somatic and dendritic synapses of Purkinje cells.
Viltono L, Patrizi A, Fritschy JM, Sassoè-Pognetto M
The Journal of comparative neurology (2008) 508(4): 579-91.

Compensatory alteration of inhibitory synaptic circuits in cerebellum and thalamus of gamma-aminobutyric acid type A receptor alpha1 subunit knockout mice.
Kralic JE, Sidler C, Parpan F, Homanics GE, Morrow AL, Fritschy JM
The Journal of comparative neurology (2006) 495(4): 408-21.

Postsynaptic clustering of major GABAA receptor subtypes requires the gamma 2 subunit and gephyrin.
Essrich C, Lorez M, Benson JA, Fritschy JM, Lüscher B
Nature neuroscience (1998) 1(7): 563-71.

GABAA-receptor heterogeneity in the adult rat brain: differential regional and cellular distribution of seven major subunits.
Fritschy JM, Mohler H
The Journal of comparative neurology (1995) 359(1): 154-94.

Distribution, prevalence, and drug binding profile of gamma-aminobutyric acid type A receptor subtypes differing in the beta-subunit variant.
Benke D, Fritschy JM, Trzeciak A, Bannwarth W, Mohler H
The Journal of biological chemistry (1994) 269(43): 27100-7.

The distribution of 13 GABAA receptor subunit mRNAs in the rat brain. II. Olfactory bulb and cerebellum.
Laurie DJ, Seeburg PH, Wisden W
The Journal of neuroscience : the official journal of the Society for Neuroscience (1992) 12(3): 1063-76.

The distribution of 13 GABAA receptor subunit mRNAs in the rat brain. I. Telencephalon, diencephalon, mesencephalon.
Wisden W, Laurie DJ, Monyer H, Seeburg PH
The Journal of neuroscience : the official journal of the Society for Neuroscience (1992) 12(3): 1040-62.

Five subtypes of type A gamma-aminobutyric acid receptors identified in neurons by double and triple immunofluorescence staining with subunit-specific antibodies.
Fritschy JM, Benke D, Mertens S, Oertel WH, Bachi T, Möhler H
Proceedings of the National Academy of Sciences of the United States of America (1992) 89(15): 6726-30.

Cerebellar GABAA receptor selective for a behavioural alcohol antagonist.
Lüddens H, Pritchett DB, Köhler M, Killisch I, Keinänen K, Monyer H, Sprengel R, Seeburg PH
Nature (1990) 346(6285): 648-51.