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

mGluR2

Cat.No. 191-1P; 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 TBS. 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 837 to 853 from rat mGluR2 (UniProt Id: P31421)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	191 103
Remarks	This control peptide consists of the synthetic peptide (aa 837-853) 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

Glutamate is the main excitatory neurotransmitter in the vertebrate nervous system and regulates a number of cellular signaling pathways. In addition to the ionotropic glutamate receptors of the NMDA, AMPA and kainate type, eight metabotropic receptors (mGluR1 - 8) have been described so far. This receptor family can be subdivided into three groups: Group I receptors (**mGluR1**, mGluR5) are activated by dihydroxyphenylglycine (DHPG), group II receptors (**mGluR2**, mGluR3) by dicarboxycyclopropylglycine (DCG-IV), and group III receptors (mGluR4, mGluR6, mGluR7, mGluR8) by aminophosphonobutyrate (L-AP4).

Selected General References

Depression of GABAergic input to identified hippocampal neurons by group III metabotropic glutamate receptors in the rat.
Kogo N, Dalezios Y, Capogna M, Ferraguti F, Shigemoto R, Somogyi P
The European journal of neuroscience (2004) 19(10): 2727-40.

Long-term potentiation of mGluR1 activity by depolarization-induced Homer1a in mouse cerebellar Purkinje neurons.
Minami I, Kengaku M, Smitt PS, Shigemoto R, Hirano T
The European journal of neuroscience (2003) 17(5): 1023-32.

Differential distribution of group I metabotropic glutamate receptors during rat cortical development.
López-Bendito G, Shigemoto R, Fairén A, Luján R
Cerebral cortex (New York, N.Y. : 1991) (2002) 12(6): 625-38.

Increased seizure susceptibility in mice lacking metabotropic glutamate receptor 7.
Sansig G, Bushell TJ, Clarke VR, Rozov A, Burnashev N, Portet C, Gasparini F, Schmutz M, Klebs K, Shigemoto R, Flor PJ, et al.
The Journal of neuroscience : the official journal of the Society for Neuroscience (2001) 21(22): 8734-45.

Differential plasma membrane distribution of metabotropic glutamate receptors mGluR1 alpha, mGluR2 and mGluR5, relative to neurotransmitter release sites.
Luján R, Roberts JD, Shigemoto R, Ohishi H, Somogyi P
Journal of chemical neuroanatomy (1997) 13(4): 219-41.

Developmentally regulated postsynaptic localization of a metabotropic glutamate receptor in rat rod bipolar cells.
Nomura A, Shigemoto R, Nakamura Y, Okamoto N, Mizuno N, Nakanishi S
Cell (1994) 77(3): 361-9.

The metabotropic glutamate receptor (mGluR1 alpha) is concentrated at perisynaptic membrane of neuronal subpopulations as detected by immunogold reaction.
Baude A, Nusser Z, Roberts JD, Mulvihill E, McIlhinney RA, Somogyi P
Neuron (1993) 11(4): 771-87.

Depolarization- and agonist-regulated expression of neuronal metabotropic glutamate receptor 1 (mGluR1).
Favaron M, Rimland JM, Manev H
Life sciences (1992) 50(22): PL189-94.

Distribution of the mRNA for a metabotropic glutamate receptor (mGluR1) in the central nervous system: an in situ hybridization study in adult and developing rat.
Shigemoto R, Nakanishi S, Mizuno N
The Journal of comparative neurology (1992) 322(1): 121-35.