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Product Information

Anti-Glutamate Receptor 7, Metabotropic
produced in rabbit, affinity isolated antibody

Catalog Number **G1920**

Product Description

Anti-Glutamate Receptor 7, Metabotropic (mGluR7) is produced in rabbit using as immunogen a synthetic peptide conjugated to KLH. The peptide corresponds to the N terminal extracellular region of human mGluR7. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Glutamate Receptor 7, Metabotropic (mGluR7) specifically recognizes mGluR7 in human brain by immunohistochemistry with formalin-fixed, paraffin-embedded tissues. The immunizing peptide has 95% homology with mouse and 100% homology with rat gene. Other species reactivity has not been confirmed.

Glutamate is the main excitatory neurotransmitter in the brain. It acts on ligand-gated receptor channels, termed NMDA, AMPA and kainate receptors, involved in the fast excitatory synaptic transmission. Glutamate has also been shown to regulate ion channels and enzymes producing second messengers via specific receptors coupled to G-proteins, called metabotropic glutamate receptors. These receptors are important mediators of excitatory amino acid neurotransmission.[1]

The metabotropic glutamate receptors consist of eight subtypes (mGluR1-8) divided into three groups (I-III).[2,3] Group I mGluRs (mGluR1 and mGluR5) are coupled to phospholipase C and intracellular calcium mobilization, whereas both Groups II (mGluR2 and mGluR3) and III (mGluR4, -6, -7, and –8) inhibit adenyl cyclase.[3,4] The role of the metabotropic receptors in pain and pathology is being studied for therapeutic potential.[5] The mGluR1 receptors have been implicated in post-ischemic neuronal injury, and antagonists of Group I appear to have a neuroprotective effect.[2,4] In contrast, activation of Group II and Group III receptors has been shown to be neuroprotective.[2,6,7]

Reagent

Supplied as a solution of 1 mg/ml in phosphate buffered saline, containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: formalin-fixed, paraffin-embedded sections of human brain, neurons; optimal dilution to be determined by user.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

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5. Spooren, W., et al., *Behav. Pharmacol.*, **14**, 257-277 (2003).
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This product is manufactured by MBL International Corporation.

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