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Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP6342a

Specification

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q14416

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 2912

Other Names
Metabotropic glutamate receptor 2, mGluR2, GRM2, GPRC1B, MGLUR2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6342a was selected from the C-term region of human GPRC1B. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Protein Information

Name GRM2 (HGNC:4594)

Synonyms GPRC1B, MGLUR2

Function
Dimeric G protein-coupled receptor which is activated by the excitatory neurotransmitter L-glutamate (PubMed:37286794). Plays critical roles in modulating synaptic transmission and neuronal excitability. Upon activation by glutamate, inhibits presynaptic calcium channels, reducing further glutamate release and dampening excitatory signaling (By similarity). Mechanistically, ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors, such

as adenylate cyclase. May mediate suppression of neurotransmission or may be involved in synaptogenesis or synaptic stabilization.

Cellular Location
Cell membrane; Multi-pass membrane protein. Synapse. Cell projection, dendrite

Tissue Location
Detected in brain cortex (at protein level). Widely expressed in different regions of the adult brain as well as in fetal brain.

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Images

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - Background

L-glutamate is the major excitatory neurotransmitter in the central nervous system and activates both ionotropic and metabotropic glutamate receptors. Glutamatergic neurotransmission is involved in most aspects of normal brain function and can be perturbed in many neuropathologic conditions. The metabotropic glutamate receptors are a family of G protein-coupled receptors, that have been divided into 3 groups on the basis of sequence homology, putative signal transduction mechanisms, and pharmacologic properties. Group I includes GRM1 and GRM5 and these receptors have been shown to activate phospholipase C. Group II includes GRM2 (also known as GPRC1B) and GRM3 while Group III includes GRM4, GRM6, GRM7 and GRM8. Group II and III receptors are linked to the inhibition of the cyclic AMP cascade but differ in their agonist selectivities. The activity of GRM2 is mediated by a G-protein that inhibits adenylate cyclase activity. This protein may mediate suppression of neurotransmission or may be involved in synaptogenesis or synaptic stabilization.

Metabotropic Glutamate Receptor 2 Antibody (C-term) Blocking peptide - References

Anneser, J.M., et al., J. Neuropathol. Exp. Neurol. 63(8):831-840 (2004).Dietrich, D., et al., Neuropharmacology 42(3):297-305 (2002).Krampfl, K., et al., Eur. J. Neurosci. 15(1):51-62 (2002).Marti, S.B., et al., Am. J. Med. Genet. 114(1):12-14 (2002).Malherbe, P., et al., Mol. Pharmacol. 60(5):944-954 (2001).