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Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP6341a

Specification

Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q13255

Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 2911

Other Names
Metabotropic glutamate receptor 1, mGluR1, GRM1, GPRC1A, MGLUR1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6341a was selected from the C-term region of human GPRC1A. 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 1 Antibody (C-term) Blocking peptide - Protein Information

Name GRM1

Synonyms GPRC1A, MGLUR1

Function
G-protein coupled receptor for glutamate. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors. Signaling activates a phosphatidylinositol- calcium second messenger system. May participate in the central action of glutamate in the CNS, such as long-term potentiation in the hippocampus and long-term depression in the cerebellum (PubMed:24603153, PubMed:28886343, PubMed:<a

href="http://www.uniprot.org/citations/7476890" target="_blank">7476890). May function in the light response in the retina (By similarity). Induces GRID1 and GRID2 cation-channel activation via GNAQ-PLC-PKC pathway in dopaminergic neurons and cerebellar Purkinje cell, respectively (PubMed:24357660, PubMed:27276689).

Cellular Location
Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:P97772}. Note=Located in dendrioles, small dendrites that makes up a brush structure found as the terminal specialization of a dendrite of a unipolar brush cell {ECO:0000250|UniProtKB:P97772}

Tissue Location
Detected in brain..

Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide - Images

Metabotropic Glutamate Receptor 1 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 (also known as GPRC1A) and GRM5 and these receptors have been shown to activate phospholipase C. Group II includes GRM2 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 GRM1 is mediated by a G-protein that activates a phosphatidylinositol-calcium second messenger system. This protein may participate in the central action of glutamate in the CNS, such as long-term potentiation in the hippocampus and long-term depression in the cerebellum

Metabotropic Glutamate Receptor 1 Antibody (C-term) Blocking peptide - References

Hlavackova, V., et al., EMBO J. 24(3):499-509 (2005).Kammermeier, P.J., et al., J. Pharmacol. Exp. Ther. 312(2):502-508 (2005).Burgueno, J., et al., Exp. Cell Res. 300(1):23-34 (2004).Mundell, S.J., et al., Mol. Pharmacol. 65(6):1507-1516 (2004).Anneser, J.M., et al., J. Neuropathol. Exp. Neurol. 63(8):831-840 (2004).