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Metabotropic Glutamate Receptor 1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6341a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13255
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4619
Calculated MW	132357
Antigen Region	1096-1126

Additional Information

Gene ID	2911
Other Names	Metabotropic glutamate receptor 1, mGluR1, GRM1, GPRC1A, MGLUR1
Target/Specificity	This Metabotropic Glutamate Receptor 1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1096-1126 amino acids from the C-terminal region of human Metabotropic Glutamate Receptor 1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Metabotropic Glutamate Receptor 1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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: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..

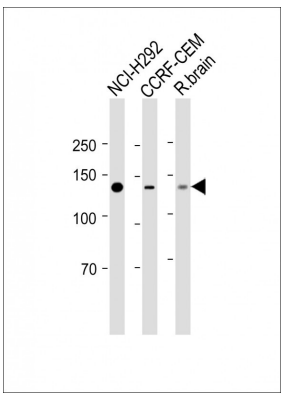
Background

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

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).

Images



All lanes: Anti-GPRC1A Antibody (Y1111) at 1:1000 dilution Lane 1: NCI-H292 whole cell lysate Lane 2: CCRF-CEM whole cell lysate Lane 3: Rat brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 132 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.