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Metabotropic Glutamate Receptor 7 (GPRC1G) Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1640a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q14831
Other Accession	P35400, Q68ED2, NP_870989
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4635
Calculated MW	102251
Antigen Region	857-887

Additional Information

Gene ID	2917
Other Names	Metabotropic glutamate receptor 7, mGluR7, GRM7, GPRC1G, MGLUR7
Target/Specificity	This Metabotropic Glutamate Receptor 7 (GPRC1G) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 857-887 amino acids from the C-terminal region of human Metabotropic Glutamate Receptor 7 (GPRC1G).
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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 7 (GPRC1G) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRM7

Synonyms	GPRC1G, MGLUR7
Function	G-protein coupled receptor activated by glutamate that regulates axon outgrowth through the MAPK-cAMP-PKA signaling pathway during neuronal development (PubMed:33500274). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide- binding proteins (G proteins) and modulates the activity of downstream effectors, such as adenylate cyclase that it inhibits (PubMed:9473604).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in many areas of the brain, especially in the cerebral cortex, hippocampus, and cerebellum. Expression of GRM7 isoforms in non-neuronal tissues appears to be restricted to isoform 3 and isoform 4.

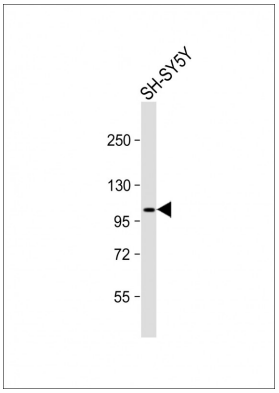
Background

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 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. Alternative splice variants of GRM8 have been described but their full-length nature has not been determined.

References

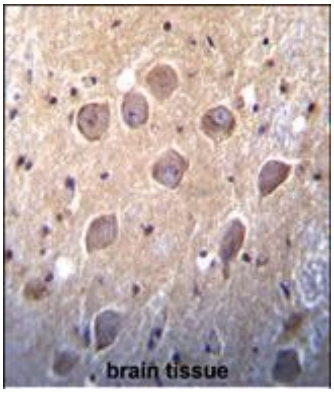
Schulz, H.L., et al., Neurosci. Lett. 326(1):37-40 (2002).
Flor, P.J., et al., Neuropharmacology 36(2):153-159 (1997).
Makoff, A., et al., Brain Res. Mol. Brain Res. 40(1):165-170 (1996).
Scherer, S.W., et al., Genomics 31(2):230-233 (1996).
Okamoto, N., et al., J. Biol. Chem. 269(2):1231-1236 (1994).

Images



Anti-GPRC1G Antibody (C-term) at 1:1000 dilution + SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 102 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Metabotropic Glutamate Receptor 7 (GPRC1G) Antibody (C-term) (Cat. #AP1640a)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data



demonstrates the use of Metabotropic Glutamate Receptor 7 (GPRC1G) Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.