10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GRM7 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16975a

Product Information

Application	WB, E
Primary Accession	Q14831
Other Accession	P35400, Q68ED2, NP_000835.1, NP_870989.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36657
Calculated MW	102251
Antigen Region	240-269

Additional Information

Gene ID	2917
Other Names	Metabotropic glutamate receptor 7, mGluR7, GRM7, GPRC1G, MGLUR7
Target/Specificity	This GRM7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 240-269 amino acids from the N-terminal region of human GRM7.
Dilution	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 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	GRM7 Antibody (N-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.

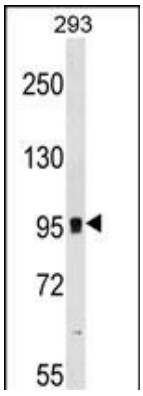
Background

L-glutamate is the major excitatory neurotransmitter in the central nervous system, and it 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 three 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. Multiple transcript variants encoding different isoforms have been found for this gene.

References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Saus, E., et al. J Psychiatr Res 44(14):971-978(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Joslyn, G., et al. Alcohol. Clin. Exp. Res. 34(5):800-812(2010)
Schulz, H.L., et al. Neurosci. Lett. 326(1):37-40(2002)

Images



GRM7 Antibody (N-term) (Cat. #AP16975a) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the GRM7 antibody detected the GRM7 protein (arrow).