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# GRM7 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16975a

## Product Information

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

## Additional Information

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| **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

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| **Name** | GRM7 |
| **Synonyms** | GPRC1G, MGLUR7 |
| **Function** | G protein-coupled receptor activated by glutamate that regulates axon |

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| | 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. |

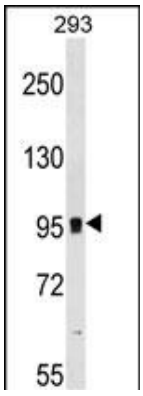
## Background

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).


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