

GRIA3 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1583a

Product Information

Application	WB, IHC, E
Primary Accession	P42263
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1D2
Isotype	IgG1
Calculated MW	101157
Description	Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. These receptors are heteromeric protein complexes composed of multiple subunits, arranged to form ligand-gated ion channels. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. The subunit encoded by this gene belongs to a family of AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate)-sensitive glutamate receptors, and is subject to RNA editing (AGA->GGA; R->G). Alternative splicing at this locus results in different isoforms, which may vary in their signal transduction properties.
Immunogen	Purified recombinant fragment of human GRIA3 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2892
Other Names	Glutamate receptor 3, GluR-3, AMPA-selective glutamate receptor 3, GluR-C, GluR-K3, Glutamate receptor ionotropic, AMPA 3, GluA3, GRIA3, GLUR3, GLURC
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GRIA3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRIA3 (HGNC:4573)
Synonyms	GluA3, GLUR3, GLURC
Function	Ionotropic glutamate receptor that functions as a ligand- gated cation channel, gated by L-glutamate and glutamatergic agonists such as alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), quisqualic acid, and kainic acid (By similarity). L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system and plays an important role in fast excitatory synaptic transmission by inducing long-term potentiation (By similarity). Binding of the excitatory neurotransmitter L-glutamate induces a conformation change, leading to the opening of the cation channel, and thereby converts the chemical signal to an electrical impulse upon entry of calcium (PubMed:17989220). The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist (PubMed:17989220). In the presence of CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of glutamate (PubMed:21172611).
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250 UniProtKB:P19492} Postsynaptic cell membrane {ECO:0000250 UniProtKB:P19492}; Multi-pass membrane protein {ECO:0000250 UniProtKB:P19492}. Postsynaptic density membrane {ECO:0000250 UniProtKB:P19492}

References

1. Am J Med Genet B Neuropsychiatr Genet. 2010 Mar 5;153B(2):468-76. 2. Am J Med Genet A. 2009 Jun;149A(6):1280-9.

Images

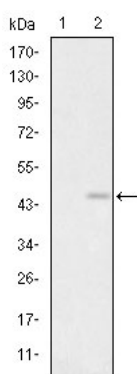


Figure 1: Western blot analysis using GRIA3 mAb against HEK293 (1) and GRIA3(AA: 683-824)-hIgGFc transfected HEK293 (2) cell lysate.

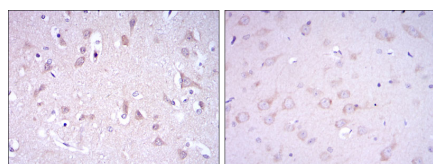


Figure 2: Immunohistochemical analysis of paraffin-embedded human brain tissues (left) and rat brain tissues (right) using GRIA3 mouse mAb with DAB staining.

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