

**GRIA2 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1732a****Specification****GRIA2 Antibody - Product Information**

Application	WB, FC, E
Primary Accession	<a href="#">P19491</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	98.8kDa KDa

**Description**

Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. This gene product belongs to a family of glutamate receptors that are sensitive to alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA), and function as ligand-activated cation channels. These channels are assembled from 4 related subunits, Gria1-4. The subunit encoded by this gene (Gria2) is subject to RNA editing (Q/R and R/G), which is thought to render the channels impermeable to Ca(2+), and to affect the kinetic aspects of these channels in rat brain. Alternative splicing, resulting in transcript variants encoding different isoforms (flip and flop), has been noted for this gene.

**Immunogen**

Purified recombinant fragment of human GRIA2 (AA: 652-807) expressed in E. Coli. <br /> <br />

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**GRIA2 Antibody - Additional Information**

**Gene ID** 29627

**Other Names**

Glutamate receptor 2, GluR-2, AMPA-selective glutamate receptor 2, GluR-B, GluR-K2, Glutamate receptor ionotropic, AMPA 2, GluA2, Gria2, Glur2

**Dilution**

WB~~1/500 - 1/2000

FC~~1/200 - 1/400

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**

GRIA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## GRIA2 Antibody - Protein Information

**Name** Gria2 {ECO:0000312|RGD:61862}

### 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 (PubMed:<a href="http://www.uniprot.org/citations/12015593" target="\_blank">12015593</a>, PubMed:<a href="http://www.uniprot.org/citations/12730367" target="\_blank">12730367</a>, PubMed:<a href="http://www.uniprot.org/citations/15591246" target="\_blank">15591246</a>, PubMed:<a href="http://www.uniprot.org/citations/2166337" target="\_blank">2166337</a>, PubMed:<a href="http://www.uniprot.org/citations/21846932" target="\_blank">21846932</a>, PubMed:<a href="http://www.uniprot.org/citations/9351977" target="\_blank">9351977</a>). 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 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 monovalent and divalent cations such as sodium and calcium (PubMed:<a href="http://www.uniprot.org/citations/11773314" target="\_blank">11773314</a>, PubMed:<a href="http://www.uniprot.org/citations/12501192" target="\_blank">12501192</a>, PubMed:<a href="http://www.uniprot.org/citations/12730367" target="\_blank">12730367</a>, PubMed:<a href="http://www.uniprot.org/citations/12872125" target="\_blank">12872125</a>, PubMed:<a href="http://www.uniprot.org/citations/16483599" target="\_blank">16483599</a>, PubMed:<a href="http://www.uniprot.org/citations/1653450" target="\_blank">1653450</a>, PubMed:<a href="http://www.uniprot.org/citations/17018279" target="\_blank">17018279</a>, PubMed:<a href="http://www.uniprot.org/citations/19946266" target="\_blank">19946266</a>). The receptor then desensitizes rapidly and enters in a transient inactive state, characterized by the presence of bound agonist (PubMed:<a href="http://www.uniprot.org/citations/12015593" target="\_blank">12015593</a>, PubMed:<a href="http://www.uniprot.org/citations/16192394" target="\_blank">16192394</a>, PubMed:<a href="http://www.uniprot.org/citations/17018279" target="\_blank">17018279</a>, PubMed:<a href="http://www.uniprot.org/citations/19946266" target="\_blank">19946266</a>). In the presence of CACNG4 or CACNG7 or CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of L-glutamate (PubMed:<a href="http://www.uniprot.org/citations/21172611" target="\_blank">21172611</a>). Through complex formation with NSG1, GRIP1 and STX12 controls the intracellular fate of AMPAR and the endosomal sorting of the GRIA2 subunit toward recycling and membrane targeting (PubMed:<a href="http://www.uniprot.org/citations/16037816" target="\_blank">16037816</a>).

### Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P42262}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P42262} Postsynaptic cell membrane {ECO:0000250|UniProtKB:P42262}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P42262}. Postsynaptic density membrane {ECO:0000250|UniProtKB:P23819}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P23819}. Note=Interaction with CACNG2, CNIH2 and CNIH3 promotes cell surface expression (PubMed:19265014). Displays a somatodendritic localization and is excluded from axons in neurons (By similarity). {ECO:0000250|UniProtKB:P23819, ECO:0000269|PubMed:19265014}

### Tissue Location

Detected in forebrain (PubMed:14687553). Detected in dendrites of neuronal cells (PubMed:9697855). Expressed in the pyramidal cell layers of CA1 and CA3 and in the granule cell layer of the dentate gyrus (PubMed:12657670).

## GRIA2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

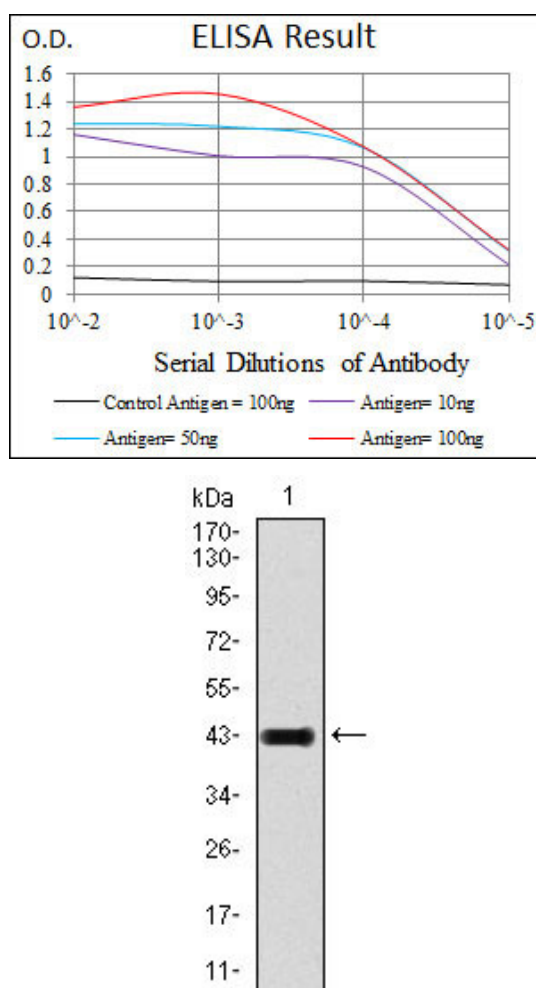


Figure 1: Western blot analysis using GRIA2 mAb against human GRIA2 recombinant protein. (Expected MW is 43 kDa)

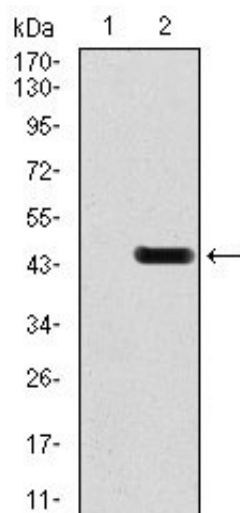


Figure 2: Western blot analysis using GRIA2 mAb against HEK293 (1) and GRIA2 (AA: 652-807)-hlgGFc transfected HEK293 (2) cell lysate.

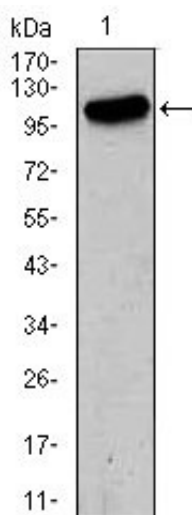


Figure 3: Western blot analysis using GRIA2 mouse mAb against HeLa (1) cell lysate.

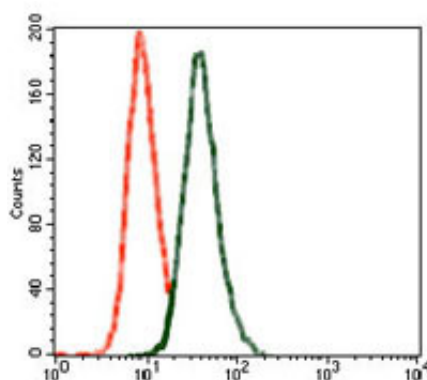


Figure 4: Flow cytometric analysis of SK-N-SH cells using GRIA2 mouse mAb (green) and negative control (red).

## GRIA2 Antibody - References

1.Lin Chung Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2010 Feb;24(4):173-6. 2.Neurosci Lett. 2011 Jun 15;497(1):42-5.