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

GRIA2 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI16208

Product Information

Application	WB, IHC
Primary Accession	P42262
Other Accession	NM_000826, NP_000817
Reactivity	Human, Mouse, Rat, Rabbit, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Chicken, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	98821

Additional Information

Gene ID	2891
Alias Symbol	GLUR2, GLURB, GluA2, HBGR2, GluR-K2
Other Names	Glutamate receptor 2, GluR-2, AMPA-selective glutamate receptor 2, GluR-B, GluR-K2, Glutamate receptor ionotropic, AMPA 2, GluA2, GRIA2, GLUR2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-GRIA2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	GRIA2 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRIA2 (HGNC:4572)
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:20614889, PubMed:31300657, PubMed:8003671). 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 (PubMed:14687553). 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:20614889, PubMed:8003671). The receptor then desensitizes rapidly and enters in a transient inactive state, characterized by the presence of bound agonist (By similarity). 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 (By similarity). 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 (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane; Multi-pass membrane protein. 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 (By similarity). Displays a somatodendritic localization and is excluded from axons in neurons (By similarity). {ECO:0000250|UniProtKB:P19491, ECO:0000250|UniProtKB:P23819}

Background

Receptor for glutamate that functions as ligand-gated ion channel in the central nervous system and plays an important role in excitatory synaptic transmission. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. 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. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist. 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 glutamate.

References

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Hillier L.W.,et al.Nature 434:724-731(2005).
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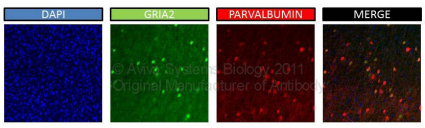
Kolleker A.,et al.Neuron 40:1199-1212(2003).
Dev K.K.,et al.J. Biol. Chem. 279:41393-41397(2004).

Images



Primary AntibodiesBrain slices were incubated overnight in a solution of PBST (0.2%) + 10% Normal GOAT serum + a monoclonal mouse anti-Parvalbumin antibody (1:2000)+ rabbit anti-GRIA2 (Aviva systems Biology, 1ug/mL)and gently shaken overnight at 4 C. Secondary AntibodiesSamples were washed 6x in PBS (10 min each at RT) and exposed to the following secondary antibodies o/n at 4 C: PBST (0.3%) + 10% normal goat serum + anti-mouse Alexa 488 (1:1000) + Anti-rabbit Alexa 555 (1:1000) for two hours. Samples were washed 6x in PBST mounted. Images acquired with a confocal microscope at 63X.

WB Suggested Anti-GRIA2 Antibody Titration: 2.5µg/ml

ELISA Titer: 1:1562500
Positive Control: HepG2 cell lysate