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Goat Anti-GRIA4 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1510a

Specification

Goat Anti-GRIA4 Antibody - Product Information

Application	**WB, IHC, E**
Primary Accession	P48058
Other Accession	NP_001070712, 2893, 14802 (mouse), 29629 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**100871**

Goat Anti-GRIA4 Antibody - Additional Information

Gene ID 2893

Other Names
Glutamate receptor 4, GluR-4, GluR4, AMPA-selective glutamate receptor 4, GluR-D, Glutamate receptor ionotropic, AMPA 4, GluA4, GRIA4, GLUR4

Dilution
WB~~1:1000
IHC~~1:100~500
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

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
Goat Anti-GRIA4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-GRIA4 Antibody - Protein Information

Name GRIA4 {ECO:0000303|PubMed:29220673, ECO:0000312|HGNC:HGNC:4574}

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 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. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist (By similarity). In the presence of CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of L-glutamate (PubMed:21172611).

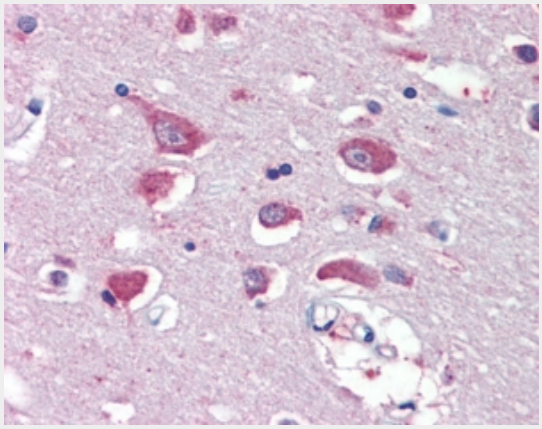
Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P19493}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19493} Postsynaptic cell membrane {ECO:0000250|UniProtKB:P19493}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19493}. Cell projection, dendrite {ECO:0000250|UniProtKB:P19493}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:P42262}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P42262}

Goat Anti-GRIA4 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 Cytomety
- Cell Culture

Goat Anti-GRIA4 Antibody - Images



AF1510a (5 µg/ml) staining of paraffin embedded Human Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

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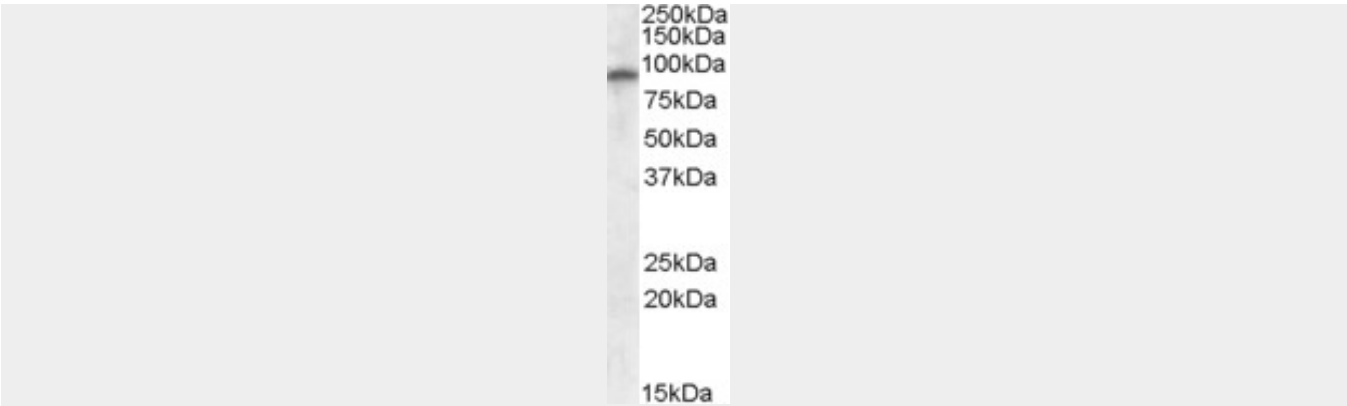

AF1510a (0.3 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-GRIA4 Antibody - Background

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 of this gene results in transcript variants encoding different isoforms, which may vary in their signal transduction properties. Some haplotypes of this gene show a positive association with schizophrenia.

Goat Anti-GRIA4 Antibody - References

Applicability of a genetic signature for enhanced iloperidone efficacy in the treatment of schizophrenia. Volpi S, et al. J Clin Psychiatry, 2009 Jun. PMID 19573479.
Synaptic AMPA receptor plasticity and behavior. Kessels HW, et al. Neuron, 2009 Feb 12. PMID 19217372.
Pharmacogenetics of antipsychotic response in the CATIE trial: a candidate gene analysis. Need AC, et al. Eur J Hum Genet, 2009 Jul. PMID 19156168.
Association analysis of the glutamic acid decarboxylase 2 and the glutamine synthetase genes (GAD2, GLUL) with schizophrenia. Arai S, et al. Psychiatr Genet, 2009 Feb. PMID 19125103.
Identification of new putative susceptibility genes for several psychiatric disorders by association analysis of regulatory and non-synonymous SNPs of 306 genes involved in neurotransmission and neurodevelopment. Gratac□s M, et al. Am J Med Genet B Neuropsychiatr Genet, 2009 Sep 5. PMID 19086053.