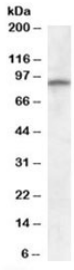
GRIA4 Antibody / Glutamate Receptor 4 Antibody (R34495)

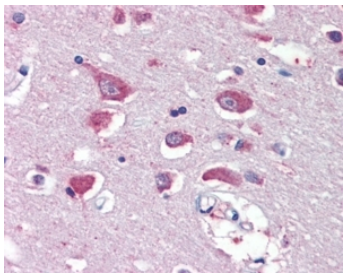
Catalog No.	Formulation	Size
R34495-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Cow
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	2893
Applications	Western blot: 0.3-1ug/ml Immunohistochemistry (FFPE): 5-10ug/ml ELISA (peptide) LOD: 1:128000
Limitations	This GRIA4 Antibody / Glutamate Receptor 4 Antibody is available for research use only.



GRIA4 Antibody Human Cerebellum WB. Western blot analysis was performed on human cerebellum lysate using GRIA4 Antibody at 0.3 ug/ml. A specific immunoreactive band is detected at approximately 97â€“101 kDa, consistent with the expected molecular weight of GRIA4. The slight difference in apparent migration is typical of large membrane-associated glutamate receptor subunits and may reflect post-translational modification or gel migration characteristics. These results demonstrate that this Glutamate Receptor 4 Antibody is suitable for Western blot detection of endogenous GRIA4 in human cerebellum tissue.



GRIA4 Antibody Human Cortex IHC. Immunohistochemistry was performed on FFPE human cerebral cortex tissue using GRIA4 Antibody at 5 ug/ml. Heat-induced epitope retrieval was carried out in pH 6 citrate buffer, and antibody binding was visualized using an alkaline phosphatase detection system. Distinct cytoplasmic staining is observed in cortical neurons, while the surrounding neuropil exhibits weaker immunoreactivity, consistent with the neuronal expression pattern of GRIA4 as an AMPA receptor subunit. These results demonstrate that this Glutamate Receptor 4 Antibody is suitable for immunohistochemical detection of GRIA4 in formalin-fixed, paraffin-embedded human brain tissue.

Description

GRIA4 Antibody recognizes glutamate receptor ionotropic AMPA 4 (GRIA4), a ligand-gated ion channel subunit that mediates fast excitatory synaptic transmission within the central nervous system. Also known as GLUR4 or GluA4, GRIA4 combines with other AMPA receptor subunits to form functional tetrameric receptors that regulate sodium and, in certain receptor assemblies, calcium influx following glutamate binding. Through its role in synaptic signaling, GRIA4 contributes to neuronal communication, information processing, and activity-dependent remodeling of neural circuits. NSJ Bioreagents supplies GRIA4 Antibody for reliable detection of this important glutamate receptor subunit in diverse neuroscience research applications.

GRIA4 is highly expressed during embryonic and early postnatal brain development, where it supports neuronal differentiation, synapse maturation, and circuit formation. Although expression becomes more restricted in adulthood, GRIA4 remains abundant in selected neuronal populations within the cerebellum, brainstem, hippocampus, and spinal cord. Dynamic trafficking of GRIA4-containing AMPA receptors between intracellular compartments and the plasma membrane enables rapid regulation of synaptic strength, making this receptor subunit an important mediator of synaptic plasticity, learning, and memory. Consequently, GRIA4 Antibody is widely used to investigate receptor localization, excitatory neurotransmission, and mechanisms governing neuronal plasticity.

Genetic and functional studies have linked GRIA4 to epilepsy, intellectual disability, neurodevelopmental disorders, ischemic brain injury, and several neurodegenerative diseases. Altered expression or trafficking of GRIA4 can influence neuronal excitability, synaptic stability, and excitotoxic signaling, making the receptor an important target in both basic and translational neuroscience research. Investigators also study GRIA4 during brain development and neural network formation to better understand how AMPA receptor composition shapes excitatory synaptic function throughout life.

A GRIA4 Antibody is a valuable reagent for investigating glutamate receptor biology, excitatory neurotransmission, synaptic plasticity, and nervous system development. By enabling reliable detection of Glutamate Receptor 4, a GRIA4 Antibody supports research into learning and memory, neuronal signaling, neurodevelopment, and neurological disease mechanisms.

For a broader overview of this receptor subunit and additional validated reagents, visit our GLUR4 Antibody / AMPA Receptor Subunit Antibody page.

Application Notes

Optimal dilution of the GRIA4 Antibody / Glutamate Receptor 4 Antibody should be determined by the researcher.

Immunogen

Amino acids KKLDQREYPGSETP were used as the immunogen for this GRIA4 antibody.

Storage

Aliquot and store the GRIA4 antibody at -20oC.

Alternate Names

GLUR4 antibody, GluA4 antibody, AMPA Receptor 4 antibody, Glutamate Ionotropic Receptor AMPA Type Subunit 4 antibody, AMPA4 antibody, Ionotropic Glutamate Receptor 4 antibody

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