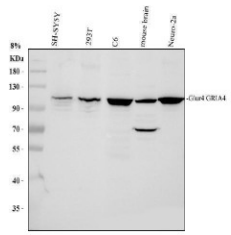
GLUR4 Antibody / AMPA Receptor Subunit Antibody (R31620)

Catalog No.	Formulation	Size
R31620	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
Gene ID	2893
Applications	Western blot: 0.5-1ug/ml
Limitations	This GLUR4 Antibody / AMPA Receptor Subunit Antibody is available for research use only.



GLUR4 Antibody Human, Rat and Mouse WB. Western blot analysis was performed using GLUR4 Antibody. Lane 1: human SH-SY5Y whole cell lysate; lane 2: human 293T whole cell lysate; lane 3: rat C6 whole cell lysate; lane 4: mouse brain tissue lysate; lane 5: mouse Neuro-2a whole cell lysate. Proteins were separated on an 8% SDS-PAGE gel, transferred to a nitrocellulose membrane, and incubated with the primary antibody at 0.5 ug/ml overnight at 4Â°C. A specific immunoreactive band is detected at approximately 101 kDa in all tested samples, consistent with the expected molecular weight of GLUR4 (GRIA4). These results demonstrate that this AMPA Receptor Subunit Antibody is suitable for Western blot detection of GLUR4 across human and rodent neural tissues and cell lines.

Description

GLUR4 Antibody recognizes glutamate receptor 4 (GLUR4), also known as GRIA4 or GluA4, a subunit of the alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) class of ionotropic glutamate receptors. AMPA receptors mediate the majority of fast excitatory synaptic transmission within the central nervous system by forming ligand-gated ion channels that rapidly respond to glutamate release. GLUR4 assembles as homo- or heterotetramers with other AMPA receptor subunits to regulate ion permeability, receptor trafficking, and synaptic strength. NSJ Bioreagents supplies

GLUR4 Antibody for reliable detection of this important excitatory neurotransmitter receptor in a variety of neuroscience research applications.

GLUR4 is highly expressed during nervous system development and remains abundant in selected neuronal populations of the mature brain, including the cerebellum, brainstem, hippocampus, and spinal cord. The receptor contributes to synapse formation, dendritic maturation, motor circuit development, and activity-dependent synaptic plasticity. Like other AMPA receptor subunits, GLUR4 undergoes dynamic trafficking between intracellular compartments and the plasma membrane, allowing neurons to rapidly adjust synaptic efficacy in response to neuronal activity. Consequently, GLUR4 Antibody is widely used to investigate excitatory neurotransmission, receptor trafficking, and mechanisms underlying synaptic plasticity.

Alterations in GLUR4 expression or regulation have been associated with epilepsy, neurodevelopmental disorders, ischemic brain injury, neurodegenerative disease, and several psychiatric conditions. Because AMPA receptor composition directly influences neuronal excitability, calcium permeability, and long-term synaptic remodeling, GLUR4 has become an important target for studies of learning, memory, motor control, and excitotoxicity. Researchers also investigate GLUR4 during neuronal differentiation and central nervous system development to better understand how excitatory circuits are established and maintained.

A GLUR4 Antibody is a valuable reagent for investigating AMPA receptor biology, excitatory neurotransmission, synaptic plasticity, and neuronal development. By enabling reliable detection of glutamate receptor 4, a GLUR4 Antibody supports research into neurobiology, synaptic signaling, learning and memory, neurodevelopment, and neurological disease mechanisms.

Explore additional reagents involved in neuronal signaling and synaptic function on our Neuroscience Antibodies page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the GLUR4 Antibody / AMPA Receptor Subunit Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 176-350) was used as the immunogen for this GLUR4 antibody.

Storage

After reconstitution, the GLUR4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

GRIA4 antibody, Glutamate Receptor 4 antibody, AMPA Receptor 4 antibody, Glutamate Ionotropic Receptor AMPA Type Subunit 4 antibody, GluA4 antibody, AMPA4 antibody

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