10320 Camino Santa Fe, Suite G
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Anti-GRIA1 Picoband Antibody

Catalog # ABO11895

Specification

Anti-GRIA1 Picoband Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P42261
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Glutamate receptor 1(GRIA1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GRIA1 Picoband Antibody - Additional Information

Gene ID 2890

Other Names
Glutamate receptor 1, GluR-1, AMPA-selective glutamate receptor 1, GluR-A, GluR-K1, Glutamate receptor ionotropic, AMPA 1, GluA1, GRIA1, GLUH1, GLUR1

Calculated MW
101506 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cell membrane ; Multi-pass membrane protein . Endoplasmic reticulum membrane ; Multi-pass membrane protein . Cell junction, synapse, postsynaptic cell membrane ; Multi-pass membrane protein . Cell junction, synapse, postsynaptic cell membrane, postsynaptic density . Cell projection, dendrite . Cell projection, dendritic spine . Interaction with CACNG2, CNIH2 and CNIH3 promotes cell surface expression. .

Tissue Specificity
Widely expressed in brain.

Protein Name
Glutamate receptor 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human GRIA1 recombinant protein (Position: A19-R360). Human GRIA1 shares 98% amino acid (aa) sequence identity with both mouse and rat GRIA1.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-GRIA1 Picoband Antibody - Protein Information

Name GRIA1 (HGNC:4571)

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:1311100, PubMed:20805473, PubMed:21172611, PubMed:28628100, PubMed:35675825). 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 upon entry of monovalent and divalent cations such as sodium and calcium. 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 CACNG2 or CACNG4 or CACNG7 or CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of L- glutamate (PubMed:21172611). Resensitization is blocked by CNIH2 through interaction with CACNG8 in the CACNG8-containing AMPA receptors complex (PubMed:21172611). Calcium (Ca(2+)) permeability depends on subunits composition and, heteromeric channels containing edited GRIA2 subunit are calcium-impermeable. Also permeable to other divalents cations such as strontium(2+) and magnesium(2+) and monovalent cations such as potassium(1+) and lithium(1+) (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Postsynaptic cell membrane; Multi-pass membrane protein. Postsynaptic density membrane {ECO:0000250|UniProtKB:P23818}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P23818}. Cell projection, dendrite {ECO:0000250|UniProtKB:P23818}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:P23818}. Early endosome membrane {ECO:0000250|UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Recycling endosome membrane {ECO:0000250|UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Presynapse {ECO:0000250|UniProtKB:P23818}. Synapse

{ECO:0000250|UniProtKB:P23818} Note=Interaction with CACNG2, CNIH2 and CNIH3 promotes cell surface expression. Colocalizes with PDLIM4 in early endosomes. Displays a somatodendritic localization and is excluded from axons in neurons (By similarity). Localized to cone photoreceptor pedicles (By similarity) {ECO:0000250|UniProtKB:P19490, ECO:0000250|UniProtKB:P23818}

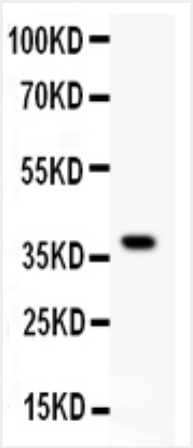
Tissue Location
Widely expressed in brain.

Anti-GRIA1 Picoband 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

Anti-GRIA1 Picoband Antibody - Images



Anti- GRIA1 antibody, ABO11895, Western blottingAll lanes: Anti GRIA1 (ABO11895) at 0.5ug/mlWB: Recombinant Human GRIA1 Protein 0.5ngPredicted bind size: 40KDObserved bind size: 40KD

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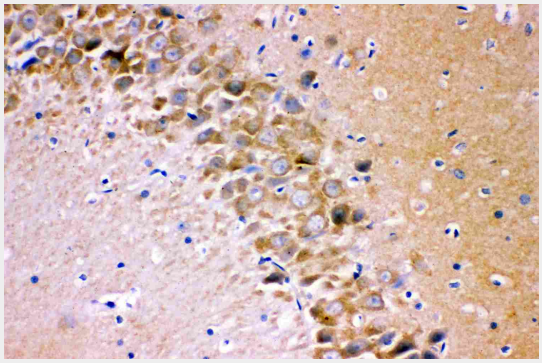
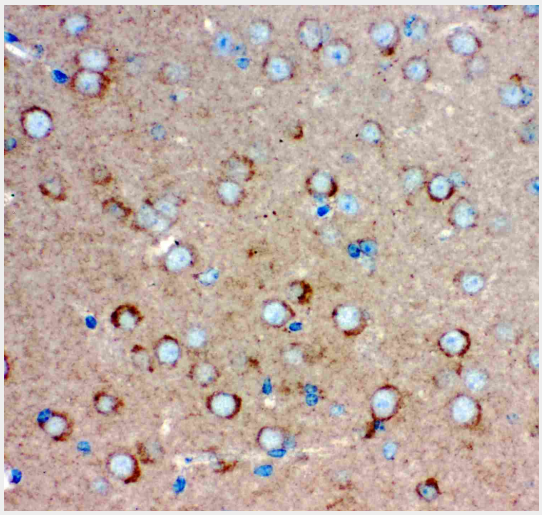
Anti- GRIA1 antibody, ABO11895, Western blottingAll lanes: Anti GRIA1 (ABO11895) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugPredicted bind size: 101KDObserved bind size: 101KD



Anti- GRIA1 antibody, ABO11895, IHC(P)IHC(P): Rat Brain Tissue



Anti- GRIA1 antibody, ABO11895, IHC(P)IHC(P): Mouse Brain Tissue

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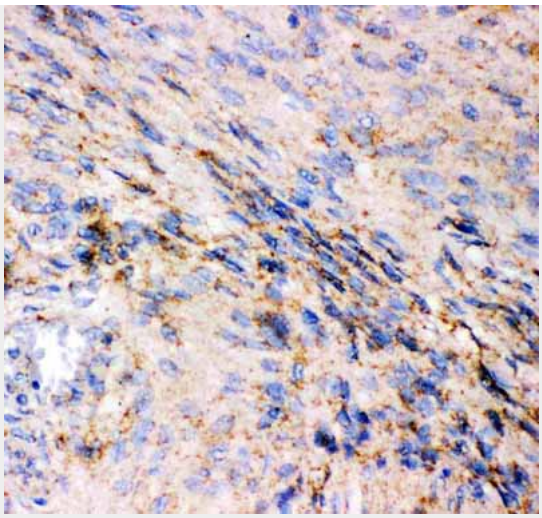

Anti- GRIA1 antibody, ABO11895, IHC(P)IHC(P): Human Meningeoma Tissue

Anti-GRIA1 Picoband Antibody - Background

GLUR1, Glutamate receptor 1, is a protein that in humans is encoded by the GLUR1 gene. GLUR1 mRNA is widely expressed in human brain. Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. The GRIA1 belongs to a family of alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA) receptors. Each of the members (GRIA1-4) include flip and flop isoforms generated by alternative RNA splicing. The receptor subunits encoded by each isoform vary in their signal transduction properties. The isoform presented here is the flop isoform. In situ hybridization experiments showed that human GRIA1 mRNA is present in granule and pyramidal cells in the hippocampal formation.