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antibody and ELISA experts

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Anti-Glutamate Receptor 1/GRIA1 Antibody Picoband™

Catalog Number: PB9204

About GRIA1

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.

Overview

Product Name	Anti-Glutamate Receptor 1/GRIA1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Glutamate Receptor 1/GRIA1 Antibody Picoband™ catalog # PB9204. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P42261

Technical Details

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.
Predicted Reactive Species	Bovine, Canine, Horse, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

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Anti-Glutamate Receptor 1/GRIA1 Antibody Picoband™ (PB9204) Images

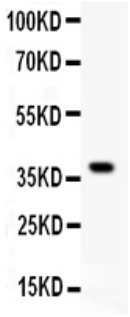

Figure 1. Western blot analysis of GRIA1 using anti-GRIA1 antibody (PB9204).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
lane 1: Recombinant Human GRIA1 Protein 0.5ng.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GRIA1 antigen affinity purified polyclonal antibody (Catalog # PB9204) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GRIA1 at approximately 40KD. The expected band size for GRIA1 is at 40KD.

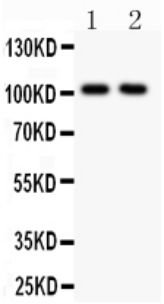

Figure 2. Western blot analysis of GRIA1 using anti-GRIA1 antibody (PB9204).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: Rat Brain Tissue Lysate,
Lane 2: Mouse Brain Tissue Lysate.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GRIA1 antigen affinity purified polyclonal antibody (Catalog # PB9204) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GRIA1 at approximately 101KD. The expected band size for GRIA1 is at 101KD.

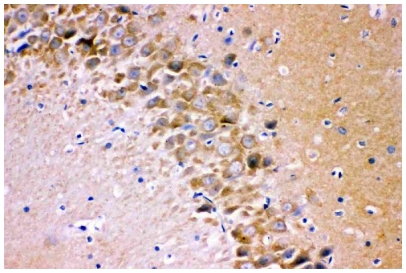

Figure 3. IHC analysis of GRIA1 using anti-GRIA1 antibody (PB9204).
GRIA1 was detected in paraffin-embedded section of Mouse Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GRIA1 Antibody (PB9204) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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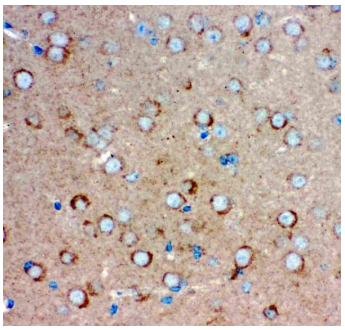

Figure 4. IHC analysis of GRIA1 using anti-GRIA1 antibody (PB9204).
GRIA1 was detected in paraffin-embedded section of Rat Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GRIA1 Antibody (PB9204) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

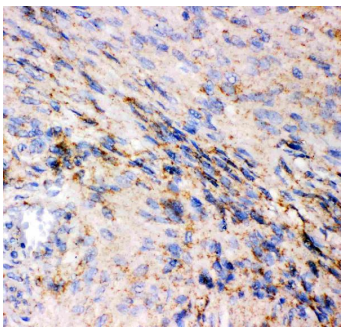

Figure 5. IHC analysis of GRIA1 using anti-GRIA1 antibody (PB9204).
GRIA1 was detected in paraffin-embedded section of Human Meningeoma Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GRIA1 Antibody (PB9204) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

3 Publications Citing This Product

1. PubMed ID: 10.1073/pnas.1608576114, Loss of the golgin GM130 causes Golgi disruption, Purkinje neuron loss, and ataxia in mice

2. PubMed ID: 10.1016/j.tox.2017.03.021, Disruption of glutamate neurotransmitter transmission is modulated by SNAP-25 in benzo[a]pyrene-induced neurotoxic effects

3. PubMed ID: 28028212, Loss of the golgin GM130 causes Golgi disruption, Purkinje neuron loss, and ataxia in mice

Visit bosterbio.com/anti-gria1-picoband-trade-antibody-pb9204-boster.html to see all 3 publications.