

## Anti-Ionotropic Glutamate receptor 2/GRIA2 Antibody Picoband®

Catalog Number: PB9205

### About GRIA2

Glutamate receptor 2, also known as GLUR2, is a protein that in humans is encoded by the GRIA2 gene. This gene product belongs to a family of glutamate receptors that are sensitive to alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA), and function as ligand-activated cation channels. GLUR2's cytogenetic location is 4q32.1. The crystal structures of the GLUR2 ligand-binding core in the apo state and in the presence of the antagonist DNQX, the partial agonist kainate, and the full agonists AMPA and glutamate. GLUR2 plays a major role in depression at synapses in which glutamate remains in the synaptic cleft for prolonged periods of time during normal operation of the synapse. The overexpression of GLUR2 increases dendritic spine size and density in hippocampal neurons, and more remarkably, induces spine formation in GABA-releasing interneurons that normally lack spines.

### Overview

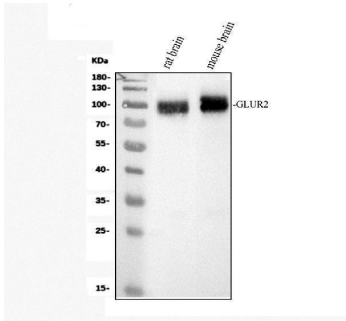
Product Name	Anti-Ionotropic Glutamate receptor 2/GRIA2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Ionotropic Glutamate receptor 2/GRIA2 Antibody Picoband® catalog # PB9205. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	P42262

### Technical Details

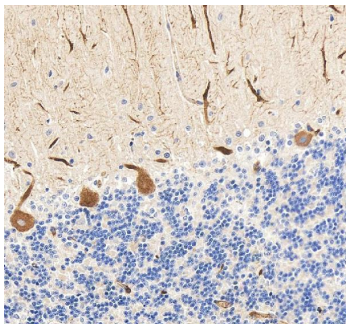
Immunogen	E.coli-derived human GRIA2 recombinant protein (Position: N25-I360). Human GRIA2 shares 99% amino acid (aa) sequence identity with both mouse and rat GRIA2.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse, Rat, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, Human Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Rat Immunocytochemistry, 0.5-1ug/ml, Human Immunofluorescence, 2ug/ml, Mouse Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells, Human

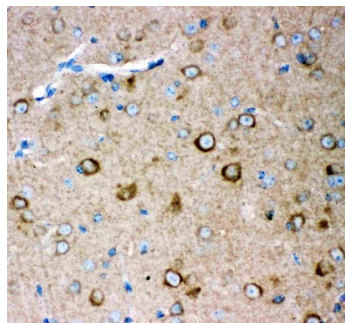
## Anti-Ionotropic Glutamate receptor 2/GRIA2 Antibody Picoband® (PB9205) Images



Western blot analysis of GRIA2 using anti-GRIA2 antibody (PB9205). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-GRIA2 antigen affinity purified polyclonal antibody (PB9205) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for GRIA2 at approximately 99 kDa. The expected band size for GRIA2 is at 99 kDa.

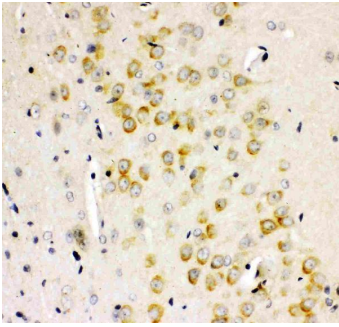


IHC analysis of Glutamate receptor 2/GRIA2 using anti-Glutamate receptor 2/GRIA2 antibody (PB9205). Glutamate receptor 2/GRIA2 was detected in a paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Glutamate receptor 2/GRIA2 Antibody (PB9205) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

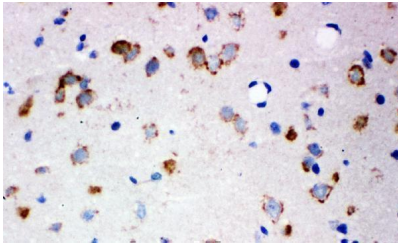


IHC analysis of GRIA2 using anti-GRIA2 antibody (PB9205). GRIA2 was detected in paraffin-embedded section of Mouse Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GRIA2 Antibody (PB9205) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

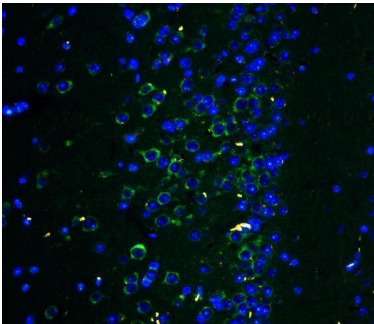
IHC analysis of GRIA2 using anti-GRIA2 antibody (PB9205). GRIA2 was detected in paraffin-embedded section of Rat Brain Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-



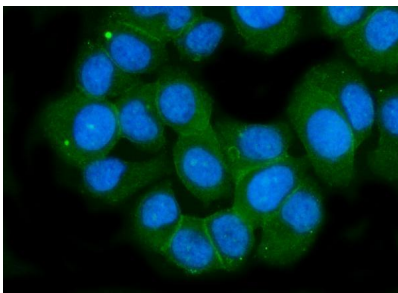
GRIA2 Antibody (PB9205) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of GRIA2 using anti-GRIA2 antibody (PB9205). GRIA2 was detected in a frozen section of rat brain tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-GRIA2 Antibody (PB9205) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

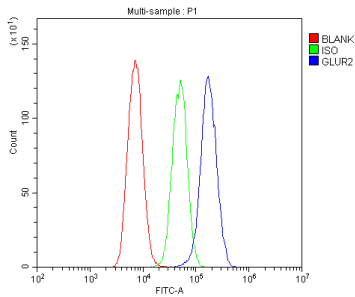


IF analysis of GRIA2 using anti-GRIA2 antibody (PB9205) GRIA2 was detected in paraffin-embedded section of mouse brain tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution ) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL rabbit anti-GRIA2 Antibody (PB9205) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of GRIA2 using anti-GRIA2 antibody (PB9205). GRIA2 was detected in an immunocytochemical section of T-47D cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1 ug/mL rabbit anti-GRIA2 Antibody (PB9205) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Flow Cytometry analysis of U-87MG cells using anti-GRIA2 antibody (PB9205). Overlay histogram showing U-87MG cells stained with PB9205 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-GRIA2 Antibody (PB9205,1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit



IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## 4 Publications Citing This Product

1. PubMed ID: 10.1016/j.bbr.2017.05.055, The paracrine effect of cobalt chloride on BMSCs during cognitive function rescue in the HIBD rat
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-gria2-picoband-trade-antibody-pb9205-boster.html](http://bosterbio.com/anti-gria2-picoband-trade-antibody-pb9205-boster.html) to see all 4 publications.

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