

Product datasheet

Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free ab250709

Recombinant RabMAb

11 Images

Overview

Product name	Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free
Description	Rabbit monoclonal [EPR19522] to Glutamate Receptor 1 (AMPA subtype) - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: IP, IHC-Fr, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
General notes	ab250709 is the carrier-free version of ab183797 .

Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19522
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab250709 in the following tested applications.

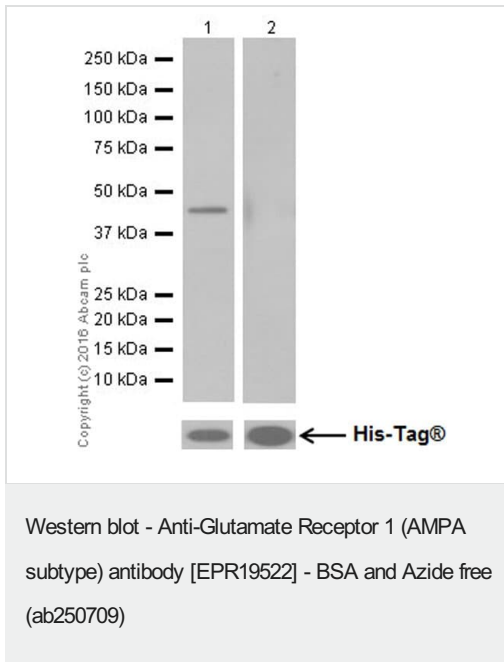
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration. Antigen retrieval: Heated citrate solution (10mM citrate pH 6.0 + 0.05% Tween-20). IHC is recommended for mouse and rat only.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. IHC is recommended for mouse and rat only.
WB		Use at an assay dependent concentration. Detects a band of approximately 102 kDa (predicted molecular weight: 102 kDa).

Target

Function	Ionotropic glutamate receptor. 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. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist.
Tissue specificity	Widely expressed in brain.
Sequence similarities	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRIA1 subfamily.
Post-translational modifications	Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-603 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-829 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis.
Cellular localization	Cell membrane. Endoplasmic reticulum membrane. Cell junction > synapse > postsynaptic cell

Images



All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] ([ab183797](#)) at 1/5000 dilution

Lane 1 : Mouse Glutamate Receptor 1 fragment recombinant protein

Lane 2 : Mouse Glutamate Receptor 2 fragment recombinant protein

Lysates/proteins at 0.01 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

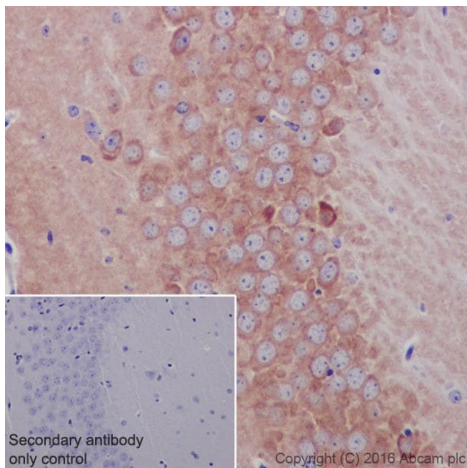
Predicted band size: 102 kDa

This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDm/TBST.

Exposure times: Lane 1: 2 seconds; Lane 2: 3 minutes.

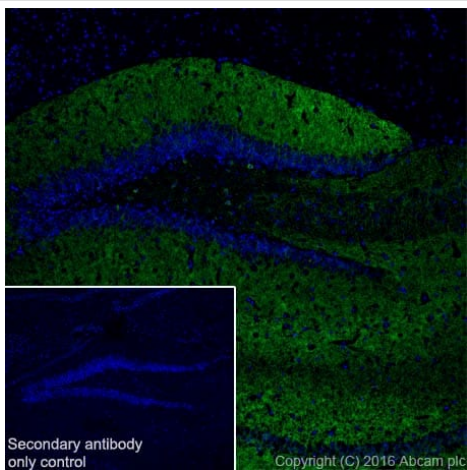
Mouse Glutamate Receptor 1 fragment recombinant protein contains aa19-184 with a GST/His-Tag[®]. Mouse Glutamate Receptor 2 fragment recombinant protein contains aa25-288 with a His-Tag[®].



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

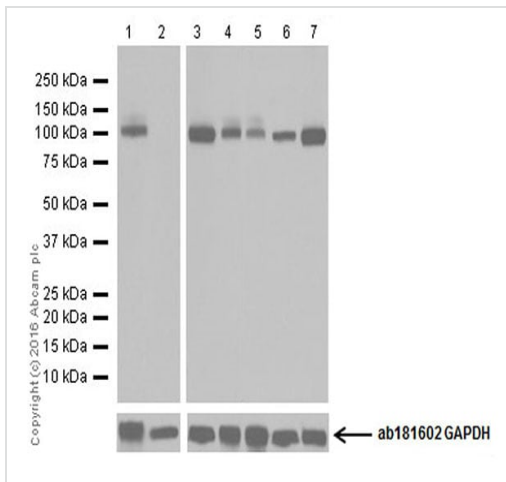
This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse hippocampus tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Cytoplasm staining on mouse hippocampus was observed [PMID: 15723058]. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Frozen sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen Mouse hippocampus tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green). Cytoplasm staining on mouse hippocampus was observed. The nuclear counterstain is DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab150077](#) secondary antibody at 1/1000 dilution.



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] ([ab183797](#)) at 1/1000 dilution

Lane 1 : Mouse brain lysate

Lane 2 : Rat liver lysate

Lane 3 : Mouse hippocampus lysate

Lane 4 : Mouse cerebellum lysate

Lane 5 : Rat brain lysate

Lane 6 : Rat cerebellum lysate

Lane 7 : Rat hippocampus lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 102 kDa

Observed band size: 102 kDa

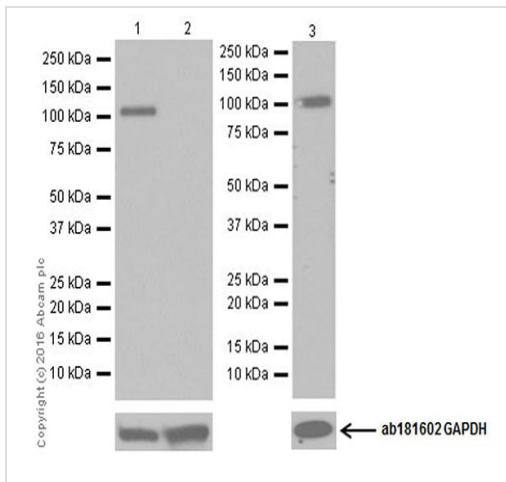
This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFD/MTBST.

Exposure times: Lanes 1-2: 30 seconds; Lanes 3-7: 15 seconds.

Rodent Glutamate Receptor 1 is widely expressed in brain and represents the predominant excitatory neurotransmitter system but not in liver.

Negative control: Rat liver (PMID: 2480522).



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

All lanes : Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (**ab183797**) at 1/1000 dilution

Lane 1 : Human cerebellum lysate

Lane 2 : Human muscle lysate

Lane 3 : Human fetal brain lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 102 kDa

Observed band size: 102 kDa

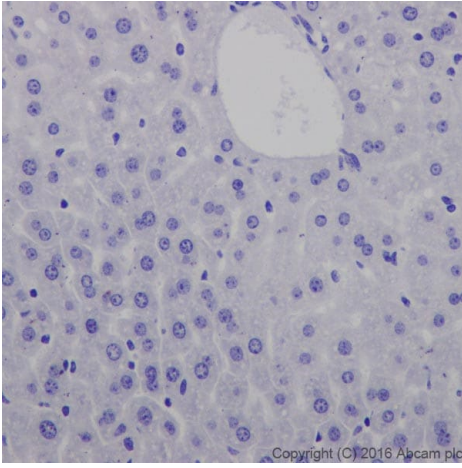
Exposure time: 3 minutes

This data was developed using **ab183797**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFD/MTBST.

Human Glutamate Receptor 1 is widely expressed in brain and represents the predominant excitatory neurotransmitter system but not in muscle.

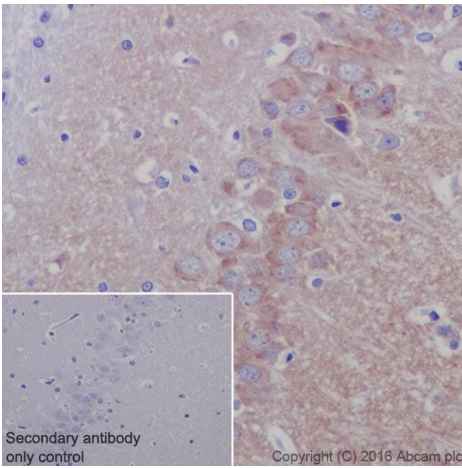
Negative control: human muscle (PMID: 1652753).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

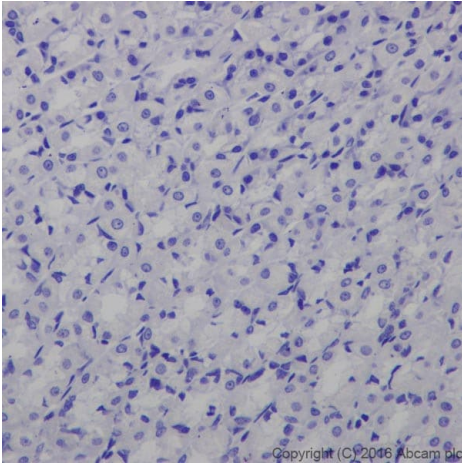
This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. No staining on mouse liver is observed. Counter stained with Hematoxylin. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



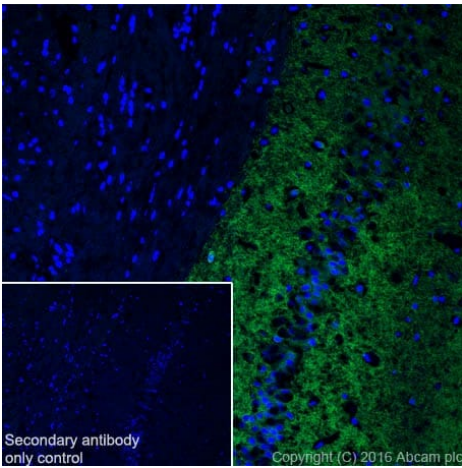
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Rat hippocampus tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Cytoplasm staining on rat hippocampus is observed [PMID: 15723058]. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



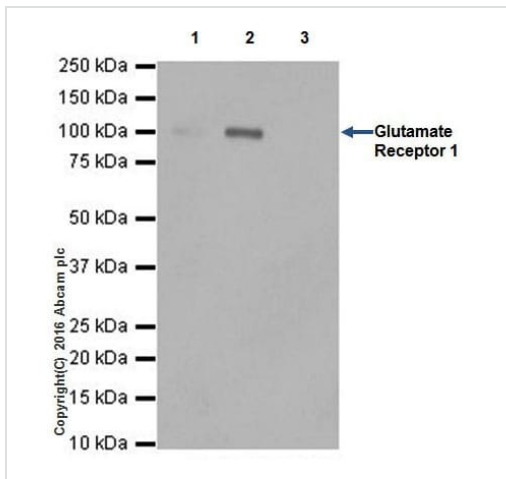
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. No staining on rat stomach is observed. Counter stained with Hematoxylin. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Frozen sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)





This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen Mouse hippocampus tissue labeling Glutamate Receptor 1 (AMPA subtype) with [ab183797](#) at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green). Cytoplasm staining on mouse hippocampus was observed. The nuclear counterstain is DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab150077](#) at 1/1000 dilution.



Immunoprecipitation - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

This data was developed using [ab183797](#), the same antibody clone in a different buffer formulation. Glutamate Receptor 1 (AMPA subtype) was immunoprecipitated from 0.35 mg of Mouse brain whole cell lysate with [ab183797](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab183797](#) at 1/1000 dilution. VeriBlot for IP Detection Reaction (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution. Lane 1: Mouse brain whole cell lysate, 10ug (Input). Lane 2: [ab183797](#) IP in Mouse brain whole cell lysate. Lane 3: Rabbit IgG, monoclonal [EPR25A]-Isotype Control ([ab172730](#)) instead of [ab183797](#) in Mouse brain whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDm/TBST. Exposure time: 3 minutes.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] - BSA and Azide free (ab250709)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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