

Product datasheet

Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] α b183797

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [18 References](#) [11 Images](#)

Overview

Product name	Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522]
Description	Rabbit monoclonal [EPR19522] to Glutamate Receptor 1 (AMPA subtype)
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, IP, IHC-Fr Unsuitable for: ICC
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse Glutamate Receptor 1 fragment recombinant protein; Mouse brain, hippocampus and cerebellum lysates; Rat brain, cerebellum and hippocampus lysates; Human cerebellum and fetal brain lysates. IHC-P: Mouse and rat hippocampus tissues. IHC-Fr: Mouse hippocampus tissue. IP: Mouse brain whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR19522
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab183797 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

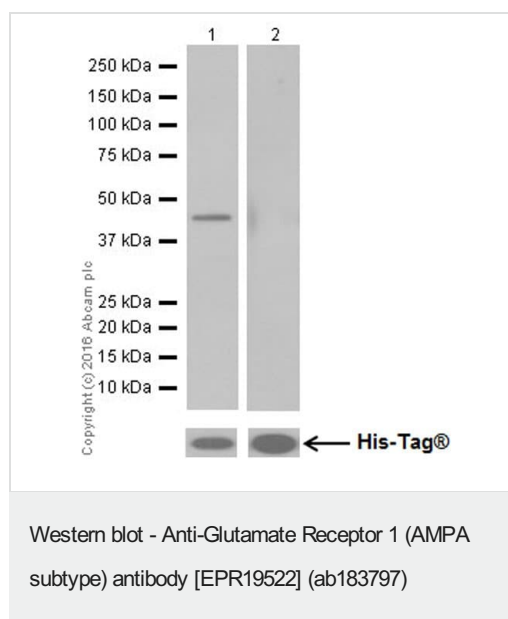
Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000. Detects a band of approximately 102 kDa (predicted molecular weight: 102 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. IHC is recommended for mouse and rat only.
IP		1/30.
IHC-Fr		1/100. Antigen retrieval: Heated citrate solution (10mM citrate PH 6.0 + 0.05% Tween-20) IHC is recommended for mouse and rat only

Application notes Is unsuitable for ICC.

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 membrane. Interaction with CACNG2 promotes cell surface expression.

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

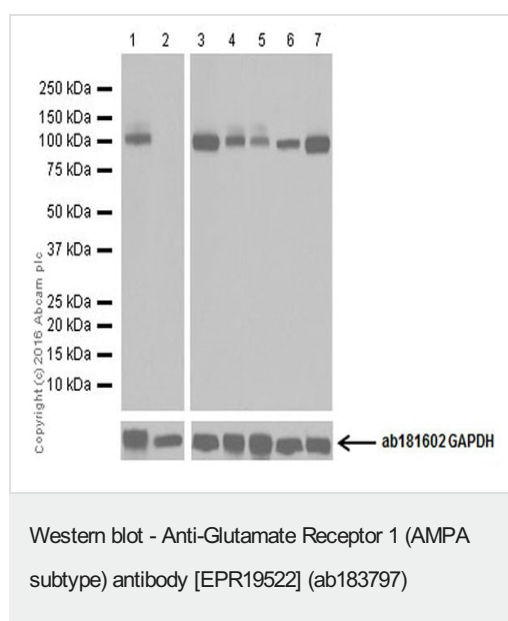
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 102 kDa

Blocking/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®.



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

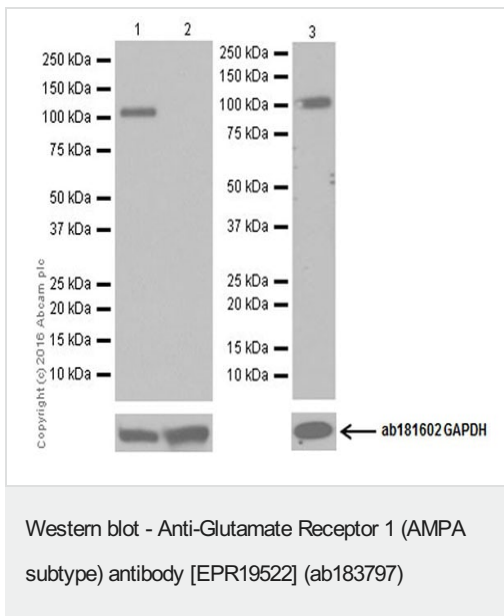
Observed band size: 102 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1 and 2: 30 seconds; Lane 3, 4, 5, 6 and 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).



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

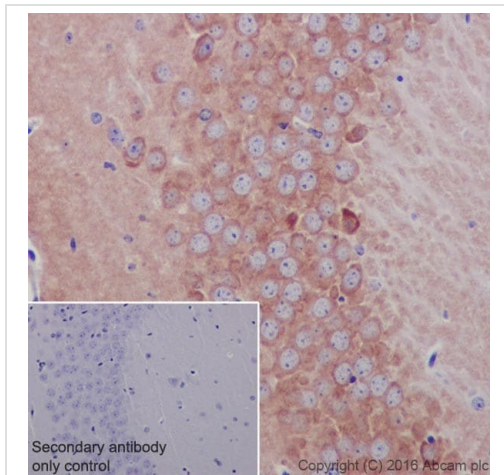
Observed band size: 102 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

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).

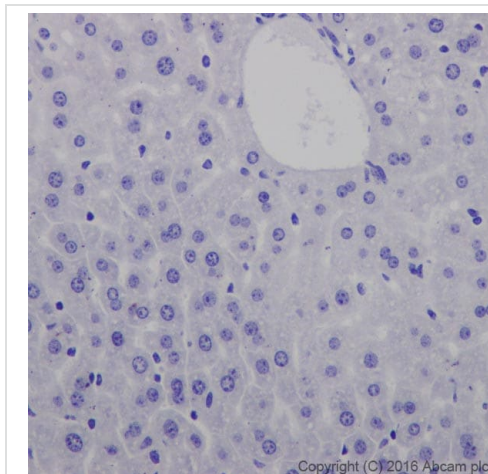


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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.

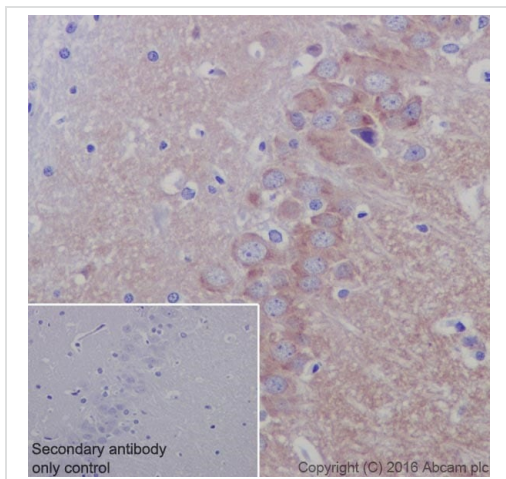
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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.

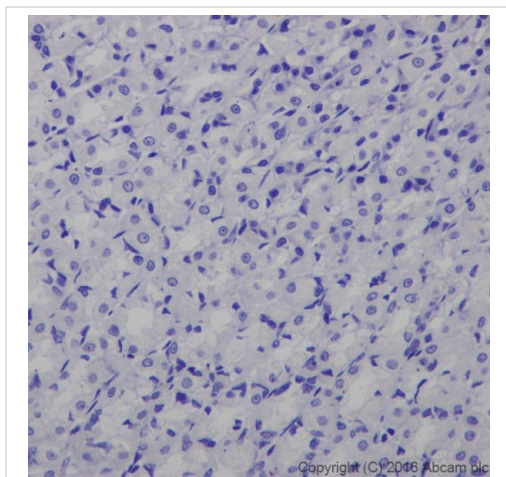


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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.

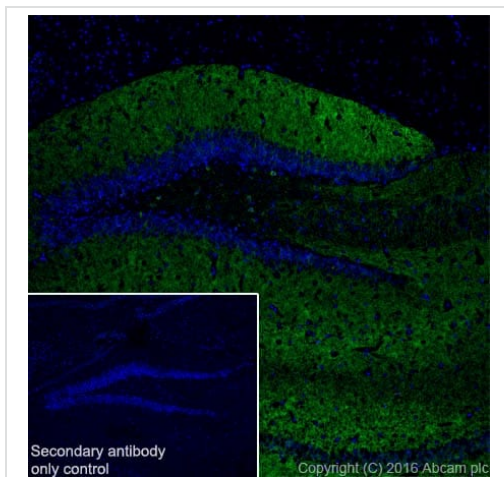
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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.

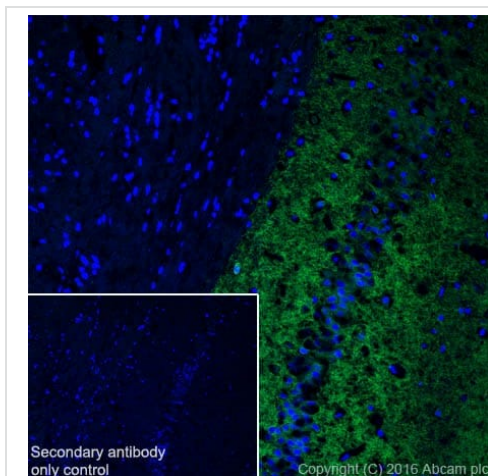
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Frozen sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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).

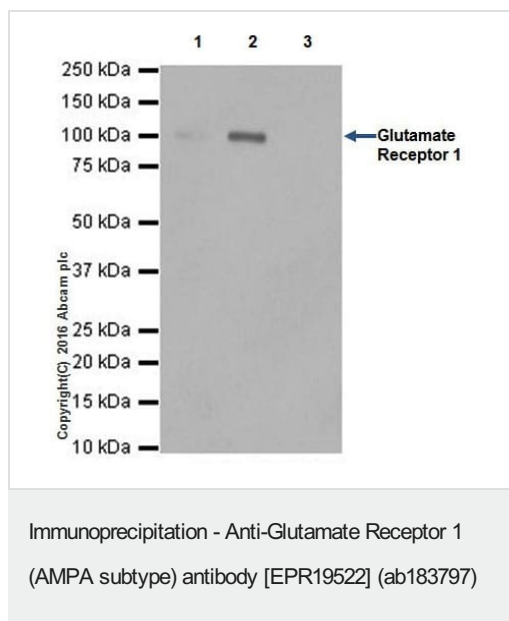
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab150077** secondary antibody at 1/1000 dilution.



Immunohistochemistry (Frozen sections) - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR19522] (ab183797)

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.



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] (ab183797)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors