

## Product datasheet

# Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] ab109450

Recombinant RabMAb

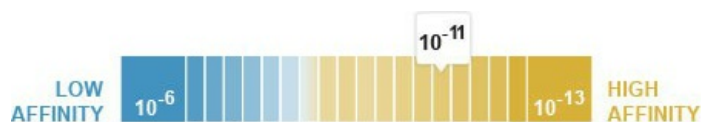
★★★★★ 2 Abreviews 16 References 4 Images

### Overview

<b>Product name</b>	Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479]
<b>Description</b>	Rabbit monoclonal [EPR5479] to Glutamate Receptor 1 (AMPA subtype)
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-Fr, WB, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide within Human Glutamate Receptor 1 (AMPA subtype) aa 850 to the C-terminus (C terminal). The exact sequence is proprietary. Database link: <a href="#">P42261</a> (Peptide available as <a href="#">ab219618</a> )
<b>Positive control</b>	WB: Human, Mouse and Rat brain lysates.
<b>General notes</b>	Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .  <b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</b>  This product is a <a href="#">recombinant rabbit monoclonal antibody</a> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 1.94 x 10 <sup>-11</sup> M



<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR5479
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab109450** in the following tested applications.

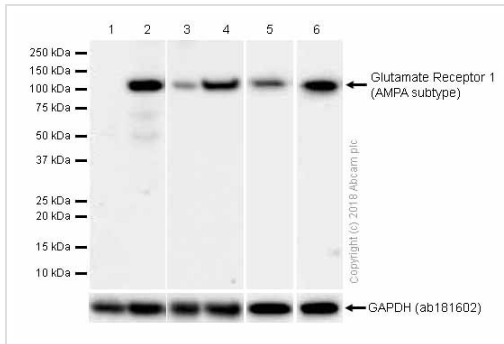
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★☆	Use at an assay dependent concentration.
WB		1/2000. Detects a band of approximately 106 kDa (predicted molecular weight: 102 kDa). Can be blocked with <a href="#">Glutamate Receptor 1 (AMPA subtype) peptide (ab219618)</a> . <b>For unpurified use at 1/10000 - 1/50000.</b> We recommend to use 1%SDS Hot lysis prepare method to get desired Western Blot results. For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or <a href="#">here (downloadable copy)</a> .
IP	★★★★★	1/10 - 1/100.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Widely expressed in brain.
<b>Sequence similarities</b>	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRIA1 subfamily.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	Cell membrane. Endoplasmic reticulum membrane. Cell junction > synapse > postsynaptic cell membrane. Interaction with CACNG2 promotes cell surface expression.

## Images



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450)

**All lanes :** Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450) at 1/2000 dilution

**Lane 1 :** Human brain lysates prepared in RIPA lysis method

**Lane 2 :** Human brain lysates prepared in 1%SDS Hot lysis method

**Lane 3 :** Rat brain lysates prepared in RIPA lysis method

**Lane 4 :** Rat brain lysates prepared in 1%SDS Hot lysis method

**Lane 5 :** Mouse brain lysates prepared in RIPA lysis method

**Lane 6 :** Mouse brain lysates prepared in 1%SDS Hot lysis method

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

**Predicted band size:** 102 kDa

**Observed band size:** 102 kDa

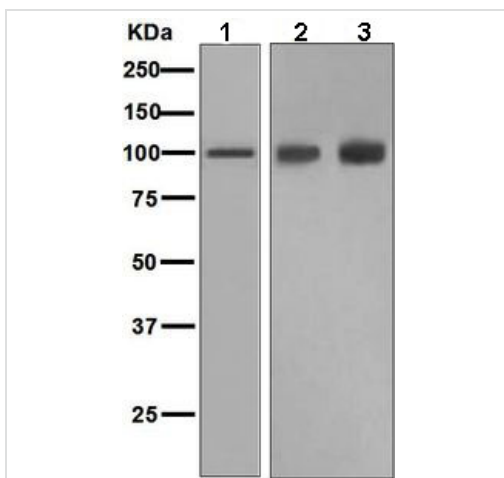
### Exposure times:

**Lanes 1 and 2:** 180 seconds

**Lanes 3 and 4:** 50 seconds

**Lanes 5 and 6:** 60 seconds

We recommend to use 1%SDS Hot lysis prepare method to get desired Western Blot results.



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450)

**All lanes :** Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450) at 1/1000 dilution (unpurified)

**Lane 1 :** Human brain lysate

**Lane 2 :** Mouse brain lysate

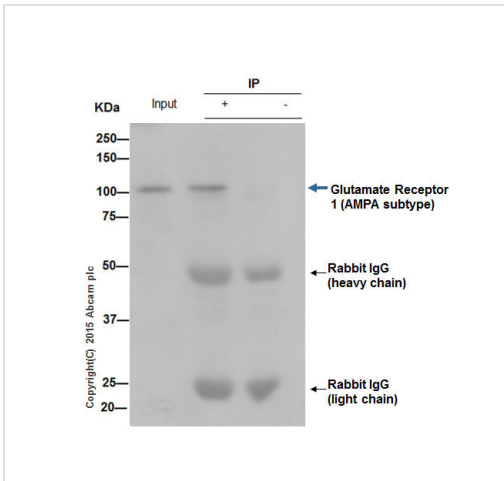
**Lane 3 :** Rat brain lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 102 kDa

**Observed band size:** 106 kDa

[why is the actual band size different from the predicted?](#)

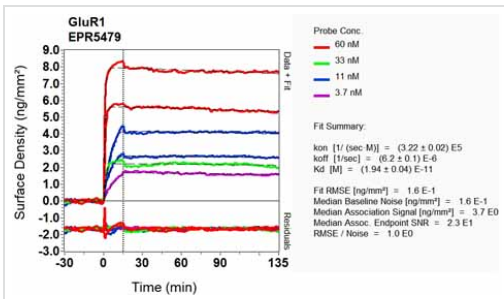


Immunoprecipitation - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450)

ab109450 (purified) at 1/20 immunoprecipitating Glutamate Receptor 1 in Mouse Brain whole cell lysate. 10 ug of cell lysate was present in the input. For western blotting, a HRP-conjugated Veriblot for IP Detection Reagent ([ab131366](#)) (1/1,500) was used for detection. A rabbit monoclonal IgG ([ab172730](#)) was used instead of [ab128913](#) as a negative control (Lane 3).

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Other - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450)

Equilibrium dissociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

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