

Product datasheet

Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] α b109450

Recombinant RabMAb

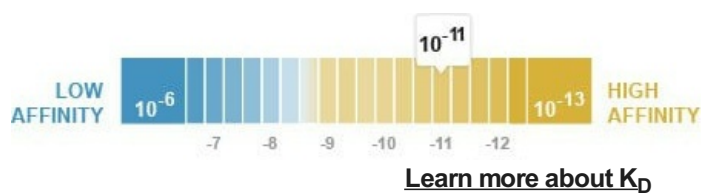
★★★★★ [2 Abreviews](#) [50 References](#) [5 Images](#)

Overview

Product name	Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479]
Description	Rabbit monoclonal [EPR5479] to Glutamate Receptor 1 (AMPA subtype)
Host species	Rabbit
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as ab219618)
Positive control	WB: Human, Mouse and Rat brain lysates. IP: Mouse brain 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. Stable for 12 months at -20°C.
Dissociation constant (K_D)	K _D = 1.94 x 10 ⁻¹¹ M



Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR5479
Isotype	IgG

Applications

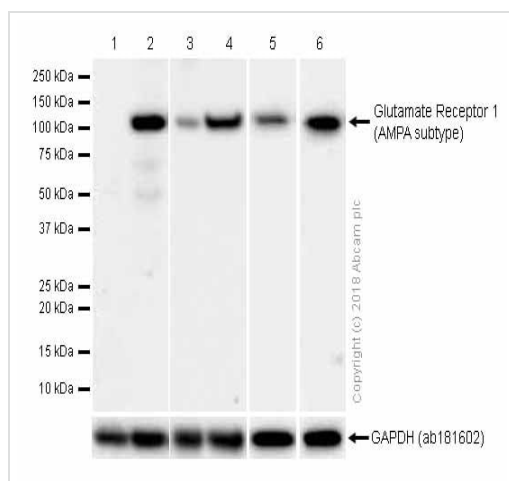
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109450 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/2000. Detects a band of approximately 106 kDa (predicted molecular weight: 102 kDa). Can be blocked with <u>Glutamate Receptor 1 (AMPA subtype) peptide (ab219618)</u> . For unpurified use at 1/10000 - 1/50000. We recommend to use 1%SDS Hot lysis prepare method to get desired Western Blot results.
IP	★★★★★ (1)	1/10 - 1/100.

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



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

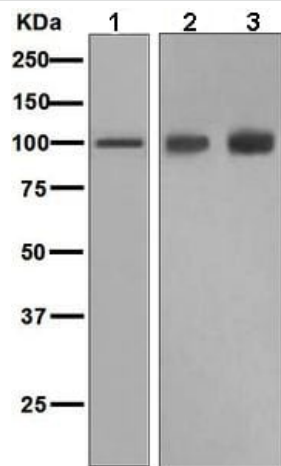
Exposure times:

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

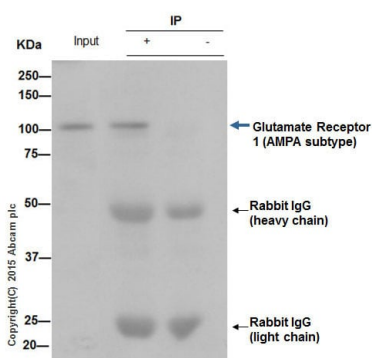
Lane 2 : Mouse brain lysate

Lane 3 : Rat brain lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 102 kDa

Observed band size: 106 kDa

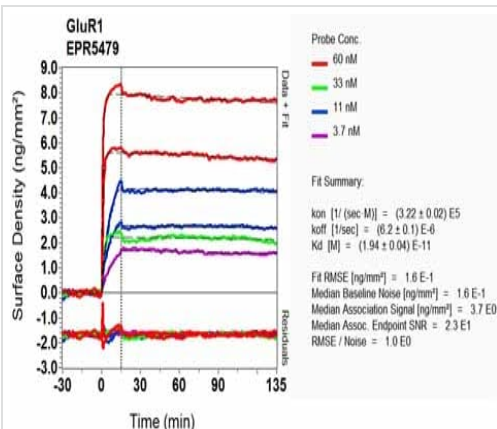


Immunoprecipitation - Anti-Glutamate Receptor 1 (AMPA subtype) antibody [EPR5479] (ab109450)

ab109450 (purified) at 1/20 immunoprecipitating Glutamate Receptor 1 in Mouse Brain whole cell lysate. 10 µg 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.



OI-RD Scanning - 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\$](#)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

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

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