

## Product datasheet

# Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] ab109464

Recombinant RabMAb

[23 References](#) [5 Images](#)

### Overview

<b>Product name</b>	Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887]
<b>Description</b>	Rabbit monoclonal [EPR1887] to Glutamate Receptor 1 (AMPA subtype) (phospho S831)
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab109464 only detects Glutamate Receptor 1 phosphorylated at Serine 831.
<b>Tested applications</b>	<b>Suitable for:</b> WB, Dot blot <b>Unsuitable for:</b> Flow Cyt, ICC/IF or IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	Rat brain lysates
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>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>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

**Clone number**                      EPR1887  
**Isotype**                                IgG

## Applications

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**The Abpromise guarantee**        Our **Abpromise guarantee** covers the use of ab109464 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
<b>WB</b>		1/1000 - 1/10000. Detects a band of approximately 106 kDa (predicted molecular weight: 102 kDa).
<b>Dot blot</b>		Use at an assay dependent concentration.

**Application notes**                    Is unsuitable for Flow Cyt, ICC/IF or IHC-P.

## Target

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**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.

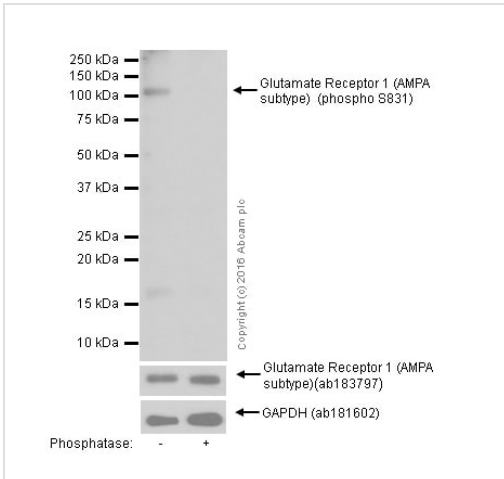
**Post-translational modifications**    Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-603 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-829 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis.

**Cellular localization**                Cell membrane. Endoplasmic reticulum membrane. Cell junction > synapse > postsynaptic cell membrane. Interaction with CACNG2 promotes cell surface expression.

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## Images

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Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464)

**All lanes :** Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464) at 1/1000 dilution

**Lane 1 :** Mouse hippocampus tissue lysate

**Lane 2 :** Mouse hippocampus tissue lysate, membrane incubated with phosphatase

Lysates/proteins at 15 µg per lane.

**Secondary**

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

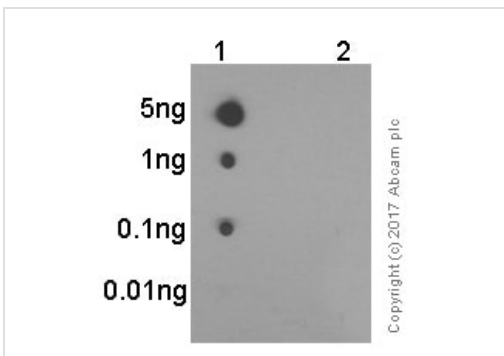
**Predicted band size:** 102 kDa

**Observed band size:** 106 kDa

**Exposure time:** 5 seconds

Blocking buffer 5% NFDm/TBST

Diluting buffer 5% NFDm/TBST

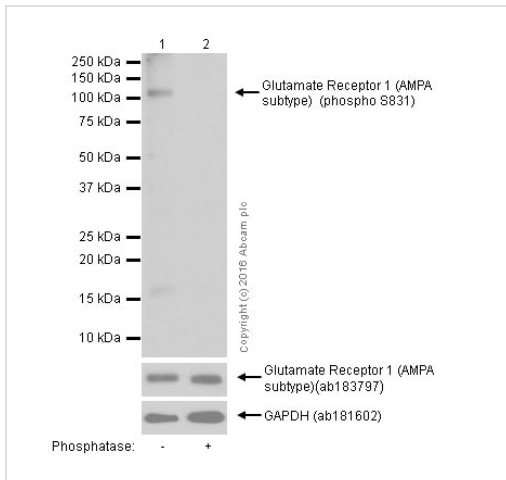


Dot Blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464)

Dot blot analysis of Glutamate Receptor 1 (AMPA subtype) with ab109464 at 1/1000 exposed for 3 minutes. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) (1/100,000) was used as the secondary antibody. Blocking buffer 5% NFDm/TBST. Diluting buffer 5% NFDm/TBST.

**Lane 1:** Glutamate Receptor 1 (AMPA subtype) (pS831) phospho peptide

**Lane 2:** Glutamate Receptor 1 (AMPA subtype) non-phospho peptide



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464)

**All lanes :** Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464) at 1/1000 dilution

**Lane 1 :** Human cerebellum whole cell lysates

**Lane 2 :** Human cerebellum whole cell lysates, the membrane was incubated with phosphatase.

Lysates/proteins at 15 µg per lane.

**Secondary**

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

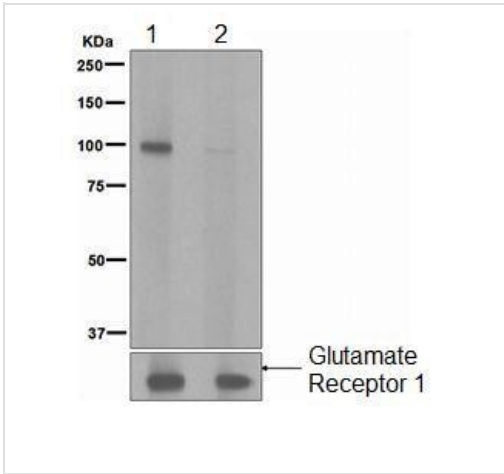
**Predicted band size:** 102 kDa

**Observed band size:** 106 kDa

**Exposure time:** 10 seconds

Blocking buffer 5% NFDm/TBST

Diluting buffer 5% NFDm/TBST



Western blot - Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464)

**All lanes :** Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464) at 1/1000 dilution

**Lane 1 :** Rat brain lysates, untreated

**Lane 2 :** Rat brain lysates treated with Lambda Phosphatase

Lysates/proteins at 10 µg per lane.

**Secondary**





**All lanes :** HRP-labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 102 kDa

**Observed band size:** 106 kDa

The lower panel shows Glutamate Receptor 1 detected with an alternative anti-Glutamate Receptor 1 antibody which is not dependent upon antigen phosphorylation.

Why choose a recombinant antibody?

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

Anti-Glutamate Receptor 1 (AMPA subtype) (phospho S831) antibody [EPR1887] (ab109464)

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

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