

**Phospho-Ser831 GluR1 Antibody**  
Affinity purified rabbit polyclonal antibody  
Catalog # AN1013

## Specification

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### Phospho-Ser831 GluR1 Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P19490</a>
Reactivity	Rat
Predicted	Chicken, Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	100 KDa

### Phospho-Ser831 GluR1 Antibody - Additional Information

Gene ID	50592
Gene Name	GRIA1

#### Other Names

Glutamate receptor 1, GluR-1, AMPA-selective glutamate receptor 1, GluR-A, GluR-K1, Glutamate receptor ionotropic, AMPA 1, GluA1, Gria1, Glur1

#### Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser831 conjugated to KLH.

#### Dilution

WB~~ 1:1000

#### Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

#### Antibody Specificity

Specific for the ~100k GluR1 protein phosphorylated at Ser831. Immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding dephosphopeptide. Immunolabeling is completely eliminated by  $\lambda$ -phosphatase treatment.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Phospho-Ser831 GluR1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Shipping

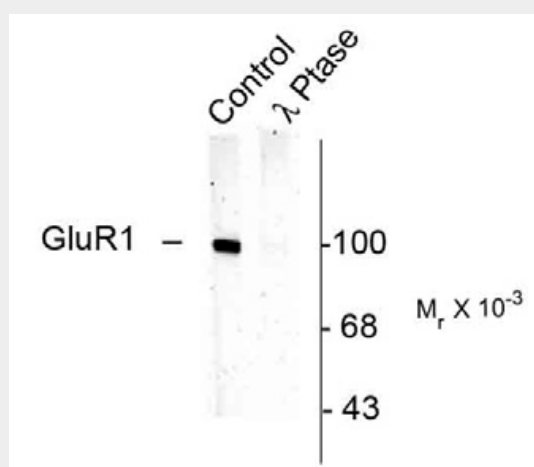
Blue Ice

## Phospho-Ser831 GluR1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Phospho-Ser831 GluR1 Antibody - Images



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~100k GluR1 protein phosphorylated at Ser831 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the GluR1 Ser831 antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

## Phospho-Ser831 GluR1 Antibody - Background

The ion channels activated by glutamate are typically divided into two classes. Those that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR) while those activated by α-amino-3-hydroxy-5-methyl-4-isoxalone propionic acid (AMPA) are known as AMPA receptors (AMPA). The AMPAR are comprised of four distinct glutamate receptor subunits designated (GluR1-4) and they play key roles in virtually all excitatory neurotransmission in the brain (Keinänen et al., 1990; Hollmann and Heinemann, 1994). The GluR1 subunit is widely expressed throughout the nervous system. GluR1 is potentiated by phosphorylation at Ser831 which has been shown to be mediated by either PKC or CaM kinase II (McGlade-McCulloh et al., 1993; Mammen et al., 1999; Roche et al., 1996). In addition, phosphorylation of this site has been linked to synaptic plasticity as well as learning and memory (Soderling and Derkach, 2000).

## Phospho-Ser831 GluR1 Antibody - References

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