

# Affinity Purified Rabbit Anti-Phospho-GluR1 (S831) Certificate of Analysis

## ORDERING INFORMATION

**Catalog Number:** PPS007

**Lot Number:** 1474954

**Size:** 150  $\mu$ L (sufficient for 10 mini-blots)

**Storage:**  $\leq -20^{\circ}$  C

**Specificity:** Human, mouse, rat ~100 kDa  
GluR1 protein phosphorylated at  
S831

**Immunogen:** Phosphopeptide corresponding  
to amino acid residues  
surrounding the phospho-S831  
of GluR1

**Ig Type:** rabbit IgG

**Applications:** Western blot

## Description

Rat GluR1 is a 907 amino acid, 4-transmembrane protein that belongs to the glutamate-gated ion channel family. It is one of four AMPA receptor subunits that form a functional heterotetrameric glutamate receptor. GluR1 only interacts with GluR2. GluR1 has two key serine residues in the C-terminal extracellular region. Serine 831 is constitutively unphosphorylated. Upon exposure to a neurotransmitter, it is phosphorylated by CaMKII leading to a potentiation of glutamate-mediated current. Serine 845 is constitutively phosphorylated by Protein Kinase A (PKA). The presence of the phosphate insures membrane localization of the subunit. Following NMDA receptor activation, S845 is dephosphorylated with subsequent subunit internalization.

## Preparation

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

## Formulation

150  $\mu$ L in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/mL BSA and 50% glycerol.

## Storage

For long-term storage,  $\leq -20^{\circ}$  C is recommended. Product is stable at  $\leq -20^{\circ}$  C for at least 1 year.

## Specificity

Specific for the ~100 kDa GluR1 protein phosphorylated at S831 in Western blots of rat brain extracts.

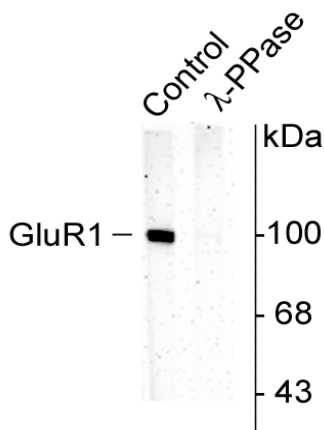
## Applications

**Western blot - 1:1000**

**Optimal dilutions should be determined by each laboratory for each application.**

## References

1. Ehlers, M.D. (2000) *Neuron* **28**:511.
2. Soderling, T.R. and V.A. Derkach (2000) *Trends Neurosci.* **23**:75.
3. Groc, L. *et al.* (2006) *Trends Neurosci.* Jan. 26 [Epub ahead of print].
4. Vinade, L. and A. Dosemeci (2000) *Cell. Mol. Neurosci.* **20**:451.



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~100 kDa GluR1 protein phosphorylated at S831 (Control). The phosphospecificity of this labeling is demonstrated by treatment with 1200 U of  $\lambda$  Phosphatase ( $\lambda$ -PPase) for 30 minutes before being exposed to the Anti-Phospho-GluR1 (S831). The immunolabeling is completely eliminated by treatment with  $\lambda$ -PPase.

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Quality & Regulatory Affairs

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