

Anti-Phospho-Ser831 GluR1 Antibody

Product Data Sheet · P/N 74095 Rev 01 · Reissued 2026-09-19 (layout only)

Product code	Pack size
P40013-150	150 µL
Host Species	Rabbit (Polyclonal)
Mr (kDa)	100

Description

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).

Immunogen

Phosphopeptide corresponding to amino acid residues surrounding the phospho- Ser831 of GluR1. Immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding dephosphopeptide. Immunolabeling is completely eliminated by λ -phosphatase treatment.

Species Reactivity

The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with canine, chicken, human and mouse based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Physical State

Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

Purification Method

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

Recommended Antibody Dilutions

WB: 1:1000

Storage/Stability

Stable at -20 °C for at least 1 year.

For long term storage -20 °C is recommended

Shipping Conditions

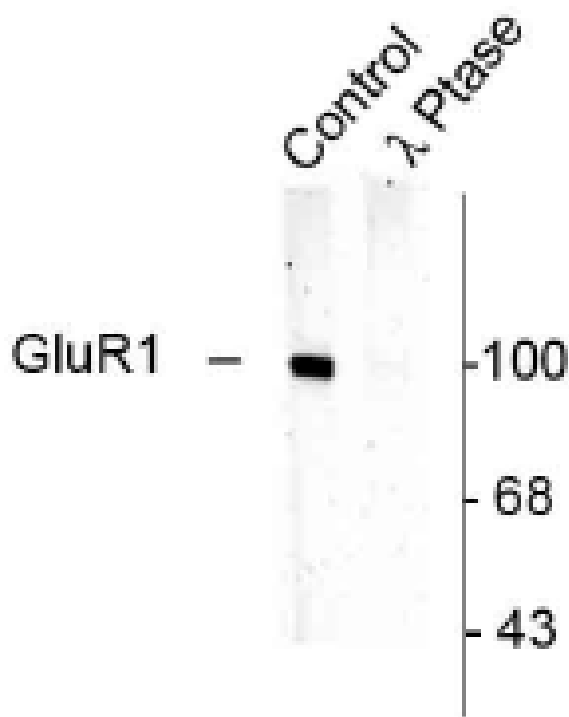
Domestic: Blue Ice

International: Blue Ice or Dry Ice

References

1) Hollmann M et al. (1994) Annu Rev Neurosci 17:31-108.

- 2) Keinänen K et al. (1990) Science 249:556-560.
- 3) Mammen AL (1999) J Biol Chem 272:32528-32533.
- 4) McGlade-McCulloh E (1993) Nature (London) 362:640-642.
- 5) Roche KW (1996) Neuron 16:1179-1188.
- 6) Soderling TR (2000) Trends Neurosci 23:75-80.



Western Blot Rat hippocampal lysate showing specific immunolabeling of the ~100k GluR1 protein phosphorylated at Ser831 (Control). The immunolabeling is completely eliminated by treatment with λ- Phosphatase, lane 2.

For research use or further manufacturing only. Not for use in diagnostic procedures, or for human or animal consumption.