

PRODUCT DATA SHEET

Product Name: ANTI-PHOSPHO-Ser⁸³¹ GluR1 ANTIBODY

Product Code: P40013-150

Pack Size: 150 µL

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).

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

Storage/Stability: Stable at -20 °C for at least 1 year. For long term storage -20 °C is recommended

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

Shipping Conditions: Domestic: Blue Ice
International: Blue Ice or Dry Ice

Host Species: Rabbit (Polyclonal)

Mr (kDa): 100

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.

Recommended Antibody Dilutions:

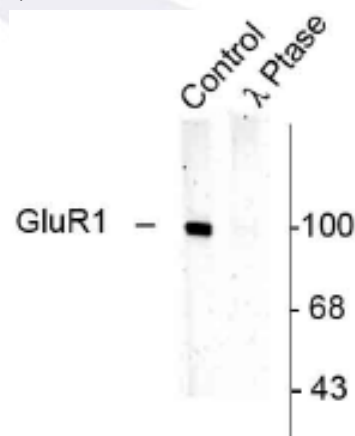
WB: 1:1000

References:

- Hollmann M et al. (1994) *Annu Rev Neurosci* 17:31-108.
- Keinänen K et al. (1990) *Science* 249:556-560.
- Mammen AL (1999) *J Biol Chem* 272:32528-32533.
- McGlade-McCulloh E (1993) *Nature* (London) 362:640-642.
- Roche KW (1996) *Neuron* 16:1179-1188.
- 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.



Application Key: WB – Western Blot IF – Immunofluorescence IHC – Immunohistochemistry IP – Immunoprecipitation

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