

PRODUCT DATA SHEET

Product Name: ANTI-PHOSPHO-Ser⁸⁴⁵ GluR1 ANTIBODY

Product Code: P45101-150

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. Phosphorylation of Ser⁸⁴⁵ on GluR1 is thought to be mediated by PKA and phosphorylation of this site increases the conductance of the AMPAR (Roche et al., 1996; Banke et al., 2000). In addition, phosphorylation of this site has been linked to synaptic plasticity as well as learning and memory (Lee et al., 2003; Esteban et al., 2003).

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-Ser⁸⁴⁵ 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 human, mouse and non-human primate based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Recommended Antibody Dilutions:

WB: 1:1000

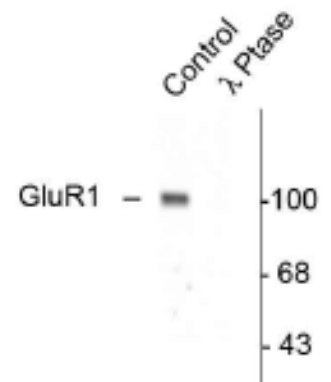
IHC: 1:1000 (frozen sections)

References:

- 1) Banke TG et al. (2000) *J Neurosci* 20:89-102.
- 2) Esteban JA et al. (2003) *Nature Neurosci* 6:136-143.
- 3) Hollmann M et al. (1994) *Annu Rev Neurosci* 17:31-108.
- 4) Keinänen K et al. (1990) *Science* 249:556-560.
- 5) Lee HK et al. (2003) *Cell* 112(5):631-643.
- 6) Roche KW et al. (1996) *Neuron* 16:1179-1188.
- 7) Sun X et al. (2008) *J. Neurosci* 28:4216-4230.

Western Blot

rat hippocampal lysate showing specific immunolabeling of the ~100k GluR1 protein phosphorylated at Ser845 (Control). The immunolabeling is completely eliminated by treatment with λ-Phosphatase, lane 2.



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