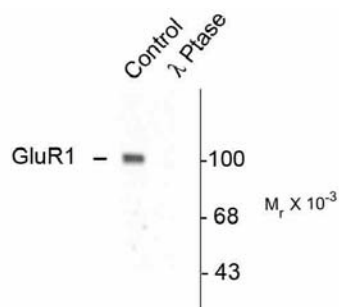


**Pel-Freeze®****Product Specifications****Anti-Phospho- GluR1****Size:** 100 µl**Product Description:** Affinity purified rabbit polyclonal antibody**Applications: WB:** 1:1000**Antigen:** Phosphopeptide corresponding to amino acid residues surrounding the of GluR1.**Species reactivity:** The antibody 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.**Biological Significance:** 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  $\alpha$ -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 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 and learning and memory (Soderling and Derkach, 2000).**Anti-Phospho GluR1****Western blot** of rat hippocampal lysate showing specific immunolabeling of the ~100k GluR1 protein phosphorylated at (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 antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

**Purification Method:** 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 in Western blots of rat brain extracts. Immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding dephosphopeptide. Immunolabeling is completely eliminated by treatment with  $\lambda$ -Ptase.

**Quality Control Tests:** Western blots performed on each lot.

**References:**

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McGlade-McCulloh E, Yamamoto H, Tan S-E, Brickey DA, Soderling TR (1993) Phosphorylation and regulation of glutamate receptors by calcium/calmodulin-dependent protein kinase II. *Nature (London)* 362:640-642. Roche KW, O'Brien RJ, Mammen AL, Bernhardt J, Huganir RL (1996) Characterization of multiple phosphorylation sites on the AMPA receptor GluR1 subunit. *Neuron* 16:1179-1188. Soderling TR, Derkach VA (2000) Postsynaptic protein phosphorylation and LTP. *Trends Neurosci* 23:75-80.