Anti-Phospho Ser^{862} mGluR7

Catalog Number: SY-p1230-862 **Size:** 100 µl $375.00

Product Description: Affinity purified rabbit polyclonal antibody

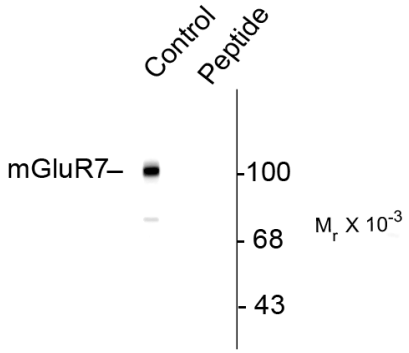
Applications: **WB**: 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding phospho-Ser^{862} of rat mGluR7.

Species reactivity: The antibody has been directly tested for reactivity in Western blots in mouse and rat tissues. It is anticipated that the antibody will also work with bovine, canine, human, non-human primate and zebrafish tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: Metabotropic glutamate receptors (mGluRs) are key receptors in the modulation of excitatory synaptic transmission in the central nervous system. They are implicated in many forms of neural plasticity as well as learning and memory and drug abuse (Bhattacharya et al., 2004; Francesconi et al., 2004; Wilson and Nicoll, 2001). The mGluRs are divided into three groups based on sequence identity and pharmacological properties: group I (mGluR1 and mGluR5) are localized in the perisynaptic region of the postsynaptic membrane, whereas group II (mGlur2 and mGluR3) and group III (mGluR4,6,7 and 8) are localized predominantly at presynaptic terminals. PKC phosphorylation of serine 862 on mGluR7 has been shown to be critical for stabilizing receptor surface expression and promoting binding to the synaptic PDZ-domain-containing protein PICK1 (Suh et al., 2008).

Anti-mGluR7 Ser^{862}



Western blot of mouse brain lysate showing the specific immunolabeling of the ~102k mGluR7 protein phosphorylated at Ser^{862}. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide) but not by the corresponding dephospho-peptide (not shown).

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

WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.
Storage and Stability. For long term storage –20°C is recommended. Stable at –20°C for at least 1 year.
Shipment: Domestic - Blue Ice; International – Dry Ice.

Antibody Specificity: Specific for the ~102k mGluR7 protein phosphorylated at Ser^{862}. Immunolabeling is blocked by preadsorption of antibody with the phospho-peptide used as antigen but not by the corresponding dephosphopeptide.

Quality Control Tests: Western blots performed on each lot.

References:

Bhattacharya M, Babwah AV, Godin C, Anborgh PH, Dale LB, Poulter MO, Ferguson SSG (2004) Ral and phospholipase D2-dependent pathway for constitutive metabotropic glutamate receptor endocytosis. J Neurosci 24:8752-8761.

Francesconi W, Cammalleri M, Sanna PP (2004) The metabotropic glutamate receptor 5 is necessary for late-phase long-term potentiation in the hippocampal CA1 region. Brain Res 1022:12-18.

Wilson RI, Nicoll RA (2001) Endogenous cannabinoids mediate retrograde signalling at hippocampal synapses. Nature (London) 410:588-592.

Suh YH, Pelkey KA, Lavezzari G, Roche PA, Huganir RL, McBain CJ, Roche KW. (2008) Corequirement of PICK1 binding and PKC phosphorylation for stable surface expression of the metabotropic glutamate receptor mGluR7. Neuron. 58(5):736-48

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