Qty: 150 µl

Rabbit anti-phospho-GluR1 [pS831]

Catalog No. 36-8200

Lot No.: See product label

Exp. Date: See product label

Rabbit anti-phospho-GluR1 [pS831]

FORM
This polyclonal antibody is supplied as a 150 µl aliquot (sufficient for 10 mini-blots) in 10 mM Hepes (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, and 50% glycerol. The antibody is epitope-affinity-purified from rabbit antiserum.

PAD: PS831

IMMUNOGEN
Synthetic phospho-peptide derived from the rat GluR1 protein.

SPECIFICITY
This antibody is specific for the ~100 kDa GluR1 protein, phosphorylated at Ser831, and does not react with the non-phosphorylated form of the GluR protein.

REACTIVITY
Reactivity has been confirmed in rat brain hippocampal homogenate.

DB: 1: 1000
WB: 1: 1000

STORAGE
Store at –20°C.

BACKGROUND
In the mammalian central nervous system, glutamate and its receptors (GluR) are the major excitatory neurotransmitter and receptor, respectively. Imbalances in glutamatergic function have been implicated in neuronal death following ischemia, hypoglycemia or anoxia, epilepsy, and in neurodegenerative disorders. Based on their activation by different pharmacologic agonists GluR have been classified into two major superfamilies: 1. the ligand-gated ion channel receptors referred to as ionotropic GluR (iGluR), and 2. the G-protein-coupled receptors referred to as metabotropic GluR (mGluR).

The iGluR respond to selective agonists and are thus defined as the N-methyl-D-aspartate (NMDA) receptors, the alpha-amino-3-hydroxy-5-methyl-isoxasole-4-propionate (AMPA) responsive receptors (GluR1, 2, 3 and 4) and the kainate responsive receptors (GluR5 and 6).

GluR1 is phosphorylated on multiple sites, all are located on the C-terminal of the protein[1-5]. Ligand induced phosphorylation of GluR1 seems to be site-specific. In one study, using transfected HEK cells and neurons in culture, cyclic AMP-dependent protein kinase specifically phosphorylates Ser845 of GluR1[1]. In addition, protein kinase C specifically phosphorylates Ser831 of GluR1[2]. The phosphorylation pattern of GluR1 by PKA and PKC is consistent with the study of AMPA-Rs in cortical neurins and GluR1 expressed in 293 cells[5]. These results suggested that the function of GluR1 can be regulated by protein phosphorylation.

REFERENCES

1. Roche KW, et al. *Neuron* 16(6):1179-88, 1996.
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3. Chao SZ, et al. *J Neurochem* 81(5):984-92, 2002.
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Explanation of symbols

Symbol	Description	Symbol	Description
REF	Catalogue Number	LOT	Batch code
RUO	Research Use Only	IVD	*In vitro* diagnostic medical device
	Use by		Temperature limitation
	Manufacturer	EC REP	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

For research use only. CAUTION: Not for human or animal therapeutic or diagnostic use

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