



Qty: 150 µL

Rabbit anti-GluR1 [pS845]

Catalog No. 36-8300

Lot No: See product label

Exp. Date: See product label

Rabbit anti-GluR1 [pS845]

FORM

This polyclonal antibody is supplied as a 150 µL aliquot (sufficient for 10 mini-blot) in phosphate buffered saline containing 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: PS845

IMMUNOGEN

Synthetic phospho-peptide derived from the rat GluR1 protein.

SPECIFICITY

This antibody is specific for the ~100 kDa GluR1 protein, phosphorylated at Ser845, and does not react with the non-phosphorylated form of the GluR protein.

REACTIVITY

Reactivity has been confirmed in rat brain hippocampal homogenate. Each lot is tested by Western Blot

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blot: 1:1000

Dot Blot: 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-isoxazole-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 protein¹⁻⁵. 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 GluR1¹. In addition, protein kinase C specifically phosphorylates Ser831 of GluR1². The phosphorylation pattern of GluR1 by PKA and PKC is consistent with the study of AMPA-Rs in cortical neurons and GluR1 expressed in 293 cells⁵. These results suggested that the function of GluR1 can be regulated by protein phosphorylation.

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI368300

(Rev 04/10) DCC-10-1053

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

REFERENCES

1. Roche KW, et al. *Neuron* 16(6):1179-88, 1996.
2. Barria A, et al. *J Biol Chem* 272(52):32727-30, 1997.
3. Chao SZ, et al. *J Neurochem* 81(5):984-92, 2002.
4. Banke TG, et al. *J Neurosci* 20(1):89-102, 2000.
5. Blackstone C, et al. *J Neurosci* 14(12):7585-93, 1994.

RELATED PRODUCTS

Product	Clone or PAD*	Cat. No.
Rabbit anti-phospho-GluR1 (Ser831)	PS831	36-8200
Mouse anti-GluR1, 2 and 3	2D8	32-0100
Mouse anti-GluR2	6C4	32-0300
Rabbit anti-mGluR4	ZTS4	51-3100
Mouse anti-Glutamate transporter EAAC1	35-A9	32-1000
Mouse anti- α -CaM Kinase II	CB α -2	13-7300
Mouse anti- β -CaM Kinase II	CB β -1	13-9800
Mouse anti-NMDA-Receptor 1	54.1	32-0500
Mouse anti-NMDA-Receptor 2A	A3-2D10	32-0600
Mouse anti-NMDA-Receptor 2B	B3-13B11	32-0700
Rabbit anti-NMDA Receptor 2B	ZK11	71-8600
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX[™] Goat x Rabbit IgG (H+L)	ZyMAX[™] Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy [™] 3	81-6115	81-6515
Cy [™] 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

ZyMed[®] and ZyMAX[™] are trademarks of Invitrogen. Cy[™] is a trademark of Amersham Biosciences Ltd. Sepharose[®] is a registered trademark of Pharmacia LKB.

Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		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.

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI368300

(Rev 04/10) DCC-10-1053

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.