

**MOUSE ANTI-GLUTAMATE RECEPTOR 2 (GluR2)  
MONOCLONAL ANTIBODY**

<b>CATALOG NUMBER:</b>	MAB397
<b>LOT NUMBER:</b>	
<b>QUANTITY:</b>	100 µg
<b>CONCENTRATION:</b>	1.16 mg/mL
<b>SPECIFICITY:</b>	Glutamate Receptor 2 (GluR2). No cross-reactivity observed with other AMPA/Kainate GluR subunits. Recognizes a 102 kDa protein by Western blot. Other proteins noted by Western blot at 66 kDa or lower molecular weight appear to be breakdown products of GluR2. By immunohistochemistry GluR2 is widely distributed at both the cellular and synaptic levels. MAB397 recognizes GluR2 present in a vast majority of, but not all, GABAergic interneurons.
<b>IMMUNOGEN:</b>	Recombinant fusion protein TrpE-GluR2 (putative N-terminal portion, amino acids 175-430).
<b>ISOTYPE:</b>	IgG <sub>2a</sub>
<b>APPLICATIONS:</b>	Immunohistochemistry on 50 µm, 4% paraformaldehyde fixed tissue: 1:500-1:800 Immunocytochemistry on 4% paraformaldehyde fixed cells Western blot ELISA/RIA Optimal working dilutions must be determined by end user.
<b>SPECIES REACTIVITIES:</b>	Rat, macaque monkey and canine.
<b>FORMAT:</b>	Purified immunoglobulin from culture supernatant.
<b>PRESENTATION:</b>	Liquid in PBS, no preservative.
<b>STORAGE/HANDLING:</b>	Maintain at -20°C in undiluted aliquots for up 6 months after date of receipt. Avoid repeated freeze/thaw cycles.
<b>REFERENCES:</b>	Metzler, Martina, <i>et al</i> (2007). NMDA receptor function and NMDA receptor-dependent phosphorylation of huntingtin is altered by the endocytic protein HIP1. <i>J Neurosci</i> <b>27</b> : 2298-308.  King, A E, <i>et al</i> (2006). Localization of glutamate receptors in developing cortical neurons in culture and relationship to susceptibility to excitotoxicity. <i>J Comp Neurol</i> <b>498</b> : 277-94.  Rubio, M. F. (2006). Redistribution of synaptic AMPA receptors at glutamatergic synapses in the dorsal cochlear nucleus as an early response to cochlear ablation in rats. <i>Hear Res.</i> : Epub.  Steinberg, J. P. <i>et al.</i> (2006). Targeted In Vivo Mutations of the AMPA Receptor Subunit GluR2 and Its Interacting Protein PICK1 Eliminate Cerebellar Long-Term Depression. <i>Neuron</i> <b>49(6)</b> : 845-860. <b>(Applications: Electron Microscopy; Species: Mouse)</b>  Brunelli, G. <i>et al.</i> (2005). Glutamatergic reinnervation through peripheral nerve graft dictates assembly of glutamatergic synapses at rat skeletal muscle. <i>PNAS</i> <b>102(24)</b> : 8752-8757.

(c) 2007: Millipore Corporation. All rights reserved. No part of these works may be reproduced in any form without permission in writing.

Zou, S. *et al.* (2005). Protein-Protein Coupling / Uncoupling Enables Dopamine D2 Receptor Regulation of AMPA Receptor-Mediated Excitotoxicity. *J. Neurosci.* **25**: 4385-4395.

Fukata, Masaki, *et al.* (2004). Identification of PSD-95 palmitoylating enzymes. *Neuron* **44**: 987-996.

Nagy, GG *et al.* (2004). Widespread Expression of the AMPA Receptor GluR2 Subunit at Glutamatergic Synapses in the Rat Spinal Cord and Phosphorylation of GluR1 in Response to Noxious Stimulation Revealed with an Antigen-Unmasking Method. *J Neurosci* **24(25)**: 5766-5777.

Zappone, C. A. and Sloviter, R. (2004). Translaminar disinhibition in the rat hippocampal dentate gyrus after seizure-induced degeneration of vulnerable hilar neurons. *J. Neurosci.* **24(4)**: 853-864.

Colledge M., Snyder E. M., Crozier R. A., Soderling J. A., Jin Y., Langeberg L. K., Lu H., Bear M. F., & Scott J. D. (2003). Ubiquitination Regulates PSD-95 Degradation and AMPA Receptor Surface Expression. *Neuro* **40**: 595-607.

Sans N., Vissel B., Petralia R. S., Wang Y., Chang K., Royle G. A., Wang C., O'gorman S., Heinemann S. F., & Wenthold R. J. (2003). Aberrant Formation of Glutamate Receptor Complexes in Hippocampal Neurons of Mice Lacking the GluR2 AMPA Receptor Subunit. *J. Neurosci.* **23 [28]**: 9367-9373.

Schauwecker, Paula Elyse (2003). Differences in ionotropic glutamate receptor subunit expression are not responsible for strain-dependent susceptibility to excitotoxin-induced injury. *Brain Res Mol Brain Res* **112**: 70-81.

Coussen, F. *et al.* (2002). Recruitment of the kainate receptor subunit glutamate receptor 6 by cadherin/catenin complexes. *J. Neurosci.* **22(15)**: 6426-6436.

Klocker, N. *et al.* (2002). Synaptic glutamate receptor clustering in mice lacking the SH3 and GK domains of SAP97. *Eur. J. Neurosci.* **16**: 1517-1522. (**Applications: Immunohistochemistry (tissue); Species: Mouse**)

Kumar, S., *et al.* (2002). A Developmental Switch of AMPA Receptor Subunits in Neocortical Pyramidal Neurons. *J. Neurosci* **22(8)**: 3005-3015.

Osten, P., *et al.* (1998). The AMPA receptor GluR2 C terminus can mediate a reversible, ATP-dependent interaction with NSF and alpha- and beta-SNAPs. *Neuron* **21(1)**: 99-110.

Yung, K K (1998). Localization of glutamate receptors in dorsal horn of rat spinal cord. *Neuroreport* **9**: 1639-44.

Vissavajhala P, *et al.* (1996). Synaptic distribution of AMPA-GluR2 subunit and its colocalization with calcium-binding protein in rat cerebral cortex: An immunohistochemical study using a GluR2-specific monoclonal antibody. *Experimental Neurology* **142**: 295-311.

CHEMICON has a complete listing of our affinity purified second antibodies and conjugates. CHEMICON Technical Service would be happy to assist you in selecting an appropriate antibody for your system. Call our Technical Service Department for additional information now at 1-800-437-7500.

**Important Note:** During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200  $\mu$ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.