

# Anti-Metabotropic Glutamate Receptor 2/3 Antibody



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**Catalog #:** 2030-mGluR2/3

**Size:** 100 µl

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**Cite this antibody:** PhosphoSolutions Cat# 2030-mGluR2/3, RRID:AB\_2492151

Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:1000 IHC 1:500 (frozen sections)	R	B, C, H, M, NHP, Z	~110 kDa & ~220 kDa

**Product Description:** Affinity purified rabbit polyclonal antibody.

**Biological Significance:** The 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). Group I metabotropic glutamate receptors (consisting of mGluR1 and mGluR5) are G-protein-coupled neurotransmitter receptors that are localized in the perisynaptic region of the postsynaptic membrane. When activated, Group I mGluRs lead to stimulation of phospholipase and activation of Protein Kinase C. In contrast, activation of Group II metabotropic receptors (mGluR2 and mGluR3) leads to inhibition of adenylate cyclase. The mGluR2 subunit has been shown to be required for long-term potentiation at the mossy fiber input in the hippocampus (Yokoi et al., 1996).

**Antigen:** Peptide from the C-terminal region of rat mGluR2 and rat mGluR3.

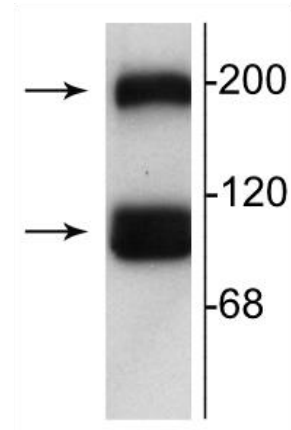
**Antibody Specificity:** Specific for endogenous levels of the ~110 kDa monomer and the ~220 kDa mGluR2 and mGluR3 dimers. Immunolabeling blocked by preadsorption of antibody with the peptide used to generate the antibody.

**Purification Method:** Prepared from pooled rabbit serum using a column to which the peptide immunogen was coupled.

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

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

**Storage and Stability:** Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of 10 µg of rat hippocampal lysate showing the specific immunolabeling of the ~110k monomer and the ~220k dimer of mGluR2 and mGluR3.

## General 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.

Yokoi M, Kobayashi K, Manabe T, Takahashi T, Sakaguchi I, Katsuura G, Shigemoto R, Ohishi H, Nomura S, Nakamura K, Nakao K, Katsuki M, Nakanishi S (1996) Impairment of hippocampal mossy fiber LTD in mice lacking mGluR2. *Science* 273:645-647.

**Application Key:** **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

**Species Reactivity Key:** **All**-All Species **A**-Avian **Amp**-Amphibian **Ar**-*Arabidopsis* **B**-Bovine **C**-Canine **Ch**-Chicken **D**-*Drosophila* **GP**-Guinea Pig **H**-Human **Ha**-Hamster **M**-Mouse **NHP**- Non-human primate **P**-Pig **R**-Rat **S**-Sheep **X**-*Xenopus* **Z**-Zebrafish

\*Species assumed based on 100% homology with sequence used as antigen

**For Research Use Only**