

AP08692PU-N**Polyclonal Antibody to mGluR2/3 (C-term) - Aff - Purified****Alternate names:**

GRM2, GRM3, MGLUR2, MGLUR3, Metabotropic Glutamate Receptor 2/3

Quantity:

0.1 ml

Background:

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).

Host / Isotype:

Rabbit / IgG

Immunogen:

Peptide from the C-terminal region of Rat mGluR2 and Rat mGluR3.

Format:**State:** Liquid purified Ig fraction.**Purification:** Affinity Chromatography.**Buffer System:** 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% Glycerol.**Applications:****Dot blot:** 1/1000.**Western blot:** 1/1000.**Immunohistochemistry:** 1/500.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody recognizes the ~110k monomer and the ~220k dimer of mGluR2 and mGluR3. Immunolabeling is blocked by preadsorption of antibody with the peptide used as antigen to generate the antibody.

Species Reactivity:**Tested:** Rat.**Expected from sequence similarity:** Bovine, Canine, Human, Mouse, Zebrafish and non-Human Primates.**Storage:**

Store the antibody undiluted (in aliquots) at -20°C.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. Bhattacharya M, Babwah AV, Godin C, Anborgh PH, Dale LB, Poulter MO, et al. Ral and phospholipase D2-dependent pathway for constitutive metabotropic glutamate receptor endocytosis. *J Neurosci.* 2004 Oct 6;24(40):8752-61. PubMed PMID: 15470141.

2. Francesconi W, Cammalleri M, Sanna PP. The metabotropic glutamate receptor 5 is necessary for late-phase long-term potentiation in the hippocampal CA1 region. *Brain Res.* 2004 Oct 1;1022(1-2):12-8. PubMed PMID: 15353208.

3. Wilson RI, Nicoll RA. Endogenous cannabinoids mediate retrograde signalling at hippocampal synapses. *Nature*. 2001 Mar 29;410(6828):588-92. PubMed PMID: 11279497.

4. Yokoi M, Kobayashi K, Manabe T, Takahashi T, Sakaguchi I, Katsuura G, et al. Impairment of hippocampal mossy fiber LTD in mice lacking mGluR2. *Science*. 1996 Aug 2;273(5275):645-7. PubMed PMID: 8662555.

Pictures:

Figure 1. Western blot of 10 μ g of rat hippocampal lysate showing the specific immunolabeling of the \sim 110k monomer and the \sim 220k dimer of mGluR2 and mGluR3.

