

AP05200PU-N**Polyclonal Antibody to mGluR5/1a - Aff - Purified****Alternate names:**

GPRC1E, GRM5, MGLUR5A, MGLUR5B, Metabotropic glutamate receptor 5/1

Quantity:

10 Blots

Concentration:

Lot specific

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 mGluR1 receptor may also be critically involved in limiting the deleterious effects on excitotoxicity (Blaabjerg et al., 2003). In contrast, the mGluR5 receptor appears to be essential for late phase LTP in area CA1 of the hippocampus (Francesconi et al., 2004).

Host / Isotype:

Rabbit / IgG

Immunogen:

Synthetic peptide derived from the C-terminal region of the mGluR5 and mGluR1a proteins.

Format:**State:** Liquid purified Ig**Buffer System:** HEPES (pH 7.5) solution containing 150 mM NaCl, 100 µg per ml BSA and 50% glycerol**Applications:**

Western Blot: 1:1000.

Immunohistochemistry on frozen sections: 1:500.

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

Specificity:

This antibody reacts to Metabotropic Glutamate Receptor 5/1a (mGluR5/1a).

Species: Rat.

Other species not tested.

Storage:

Ship on dry ice. Store (in aliquots) at -20°C to -70°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, Ferguson SSG (2004)

Ral and phospholipase D2-dependent pathway for constitutive metabotropic glutamate receptor endocytosis. *J Neurosci* 24:8752 - 8761.2. Blaabjerg M, Fang LW, Zimmer J, Baskys A (2003) Neuroprotection against NMDA excitotoxicity by group I metabotropic glutamate receptors is associated with reduction of NMDA stimulated currents. *Exp Neurol* 183:573 -580.

3. 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.

4. Wilson RI, Nicoll RA (2001) Endogenous cannabinoids mediate retrograde signalling at hippocampal synapses. *Nature (London)* 410:588 - 592.

Pictures:

Western blot analysis using mGluR5/1a receptor antibody on HEK -293 cell lysate.

