**Metabotropic Glutamate Receptor 5/1a Antibody**
*Affinity purified rabbit polyclonal antibody*
*Catalog # AN1049*

## Specification

### Metabotropic Glutamate Receptor 5/1a Antibody - Product Information

| | |
|---|---|
| Application | **WB, FC** |
| Primary Accession | P31424 |
| Reactivity | **Rat** |
| Predicted | **Human, Mouse** |
| Host | **Rabbit** |
| Clonality | **polyclonal** |
| Calculated MW | **125/250 KDa** |

### Metabotropic Glutamate Receptor 5/1a Antibody - Additional Information

| | |
|---|---|
| Gene ID | **24418** |
| Gene Name | **GRM5** |

**Other Names**
Metabotropic glutamate receptor 5, mGluR5, Grm5, Gprc1e, Mglur5

**Target/Specificity**
Synthetic peptide corresponding to amino acid residues from the C-terminal region conjugated to KLH.

**Dilution**
WB~~ 1:1000
FC~~1:500

**Format**
Prepared from rabbit serum by affinity purification using a column to which the peptide immunogen was coupled

**Antibody Specificity**
Specific for the ~125k monomer and the ~250k dimers of mGluR5 and mGluR1. Immunolabeling is blocked by preadsorption of antibody with the peptide used as antigen to generate the antibody.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
Metabotropic Glutamate Receptor 5/1a Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
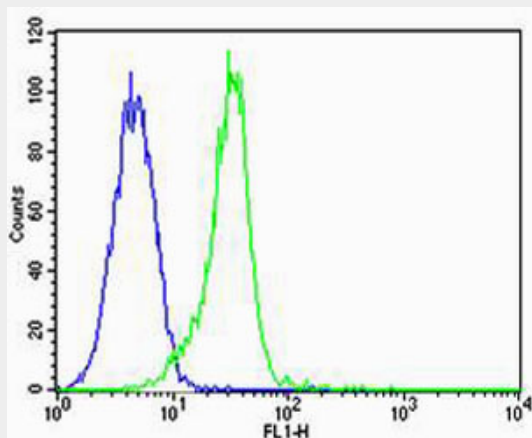
**Shipping**
Blue Ice

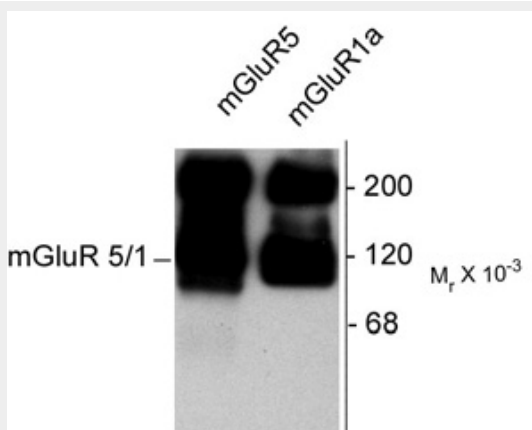**Metabotropic Glutamate Receptor 5/1a Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

**Metabotropic Glutamate Receptor 5/1a Antibody - Images**



Flow cytometric analysis of PC-12 cells using Park7 (DJ-1) Antibody(green, Cat#AN1049) compared to an isotype control of rabbit IgG(blue). AN1049 was diluted at 1:500 dilution. An Alexa Fluor® 488 goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody.



Western blot of 10 ug of HEK 293 cells expressing mGluR1a and mGluR5 showing the specific immunolabeling of the ~125k monomer and the ~250k dimers of mGluR1a and mGluR5.

**Metabotropic Glutamate Receptor 5/1a Antibody - 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 of 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).

**Metabotropic Glutamate Receptor 5/1a Antibody - 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.
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.
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.