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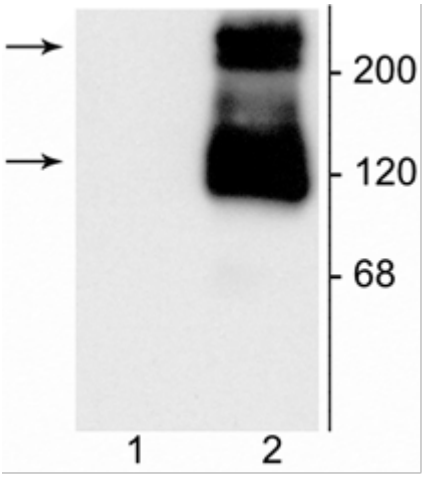
Product Datasheet

Anti-Metabotropic Glutamate Receptor 1a

Overview

Catalog #	2031-mGluR1a
Host Species	Rabbit Polyclonal
Format	Antigen Affinity Purified
Applications	WB 1:1000 IHC 1:500
Species Tested	Mouse, Rat
Immunogen	Synthetic peptide corresponding to amino acid residues from the C-terminal region of rat mGluR1a, conjugated to keyhole limpet hemocyanin (KLH).
Molecular Weight	125/250 kDa
Cite this Antibody	PhosphoSolutions Cat# 2031-mGluR1a, RRID: AB_2492150

Images



Western blot of 10 µg of HEK 293 cells expressing: 1) mGluR5 and 2) mGluR1a. Specific immunolabeling of the ~125 kDa monomer and the ~250 kDa dimer of mGluR1a is shown in the second lane (2). Specificity is confirmed in the first lane (1), as the mGluR1a antibody shows no reactivity toward mGluR5.

Details

Target Description	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).
Specificity	Specific for endogenous levels of the ~125 kDa monomer and the ~250 kDa mGluR1a dimer. Immunolabeling blocked by preadsorption of antibody with the peptide used to generate the antibody.
Production/Purification	Prepared from pooled rabbit serum using a column to which the peptide immunogen was coupled.
Quality Control	Western blots performed on each lot.
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

Gobin, C., Shallcross, J. and Schwendt, M., 2019. Neurobiological substrates of persistent working memory deficits and cocaine-seeking in the prelimbic cortex of rats with a history of extended access to cocaine self-administration. *Neurobiology of Learning and Memory*, *161*, pp.92-105.

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