

Datasheet for ABIN967503
anti-mGluR1 alpha antibody



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Overview

Quantity:	0.1 mg
Target:	mGluR1 alpha (mGluR1a)
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This mGluR1 alpha antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Brand:	BD Pharmingen™
Immunogen:	Recombinant Rat mGluR1 Fusion Protein
Clone:	G209-488
Isotype:	IgG1
Characteristics:	<ol style="list-style-type: none"> 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	mGluR1 alpha (mGluR1a)
Alternative Name:	mGluR1 alpha (mGluR1a Products)
Background:	<p>Glutamate is a major excitatory neurotransmitter in mammalian brain. Glutamatergic neurotransmission is mediated by a family of glutamate receptors that can be grouped into two classes, ionotropic (GluR) and metabotropic (mGluR) receptors. The metabotropic glutamate receptors consist of at least seven subtypes that can be divided into three groups on the basis of their sequence similarities, intracellular second messengers, and agonist selectivity's. These groups are 1) mGluR1 and mGluR5, 2) mGluR2 and mGluR3, and 3) mGluR4, mGluR6 and mGluR7. mGluR1 and mGluR5 are coupled to the inositol phosphate/Ca²⁺ signal transduction pathway, whereas the other five receptors are linked to the inhibition of the cAMP cascade. mRNA analysis shows that the seven receptors have different expression patterns in the central nervous system. For example, the highest level of mGluR1 mRNA expression is found in the cerebellar Purkinje cells. mGluR7 mRNA is moderately expressed in these cells, whereas the mRNA of the other five mGluRs is barely detectable. Three splice variants have been described for mGluR1, mGluR1alpha (145 kDa), mGluR1beta (97 kDa) and mGluR1c (97 kDa). G209-488 recognizes rat mGluR1alpha. It does not cross-react with the other splice variants of mGluR1, mGluR1beta and mGluR1c. Additionally G209-488 does not crossreact with mGluR5, the most closely related mGluR family member. The antibody was characterized by western blot analysis using rat brain membranes, and by immunohistochemical analysis using frozen rat brain tissue sections. A full length recombinant rat mGluR1 fusion protein was used as immunogen.</p>
Molecular Weight:	133 kDa

Application Details

Application Notes:	Applications include western blot analysis (1-2 µg/ml) and immunohistochemical staining of frozen tissue sections. Rat brain is suggested as a positive control for this application.
Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL

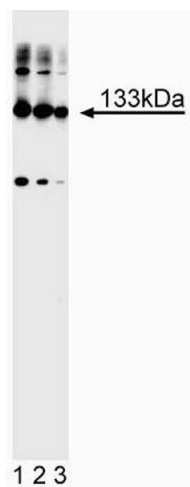
Handling

Buffer:	Aqueous buffered solution containing ≤ 0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:	<p>Shigemoto, Abe, Nomura, Nakanishi, Hirano: "Antibodies inactivating mGluR1 metabotropic glutamate receptor block long-term depression in cultured Purkinje cells." in: Neuron, Vol. 12, Issue 6, pp. 1245-55, (1994) (PubMed).</p> <p>Shigemoto, Nakanishi, Mizuno: "Distribution of the mRNA for a metabotropic glutamate receptor (mGluR1) in the central nervous system: an in situ hybridization study in adult and developing rat." in: The Journal of comparative neurology, Vol. 322, Issue 1, pp. 121-35, (1992) (PubMed).</p> <p>Masu, Tanabe, Tsuchida, Shigemoto, Nakanishi: "Sequence and expression of a metabotropic glutamate receptor." in: Nature, Vol. 349, Issue 6312, pp. 760-5, (1991) (PubMed).</p>
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Images



Western Blotting

Image 1. Western blot analysis of mGluR1alpha. Lysate from rat brain cells was probed with anti-mGluR1alpha at concentrations of 3.0 (lane 1), 1.0 (lane 2), and 0.5 $\mu\text{g/ml}$ (lane 3). mGluR1 μ is identified as a band of ~ 133 kDa.