

Technical Data Sheet

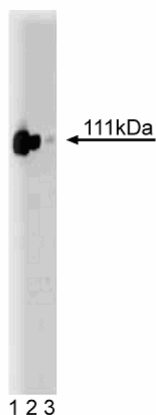
Purified Mouse Anti-GluR $\delta 2$

Product Information

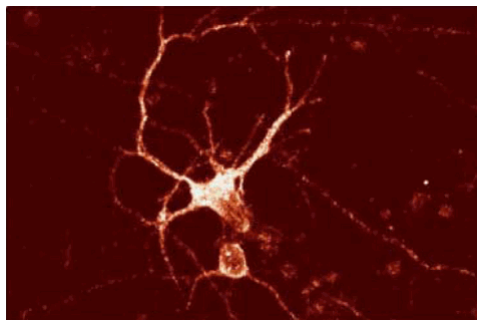
Material Number:	611006
Size:	50 μ g
Concentration:	250 μ g/ml
Clone:	48/GluR $\delta 2$
Immunogen:	Mouse GluR $\delta 2$ aa. 665-786
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse
Target MW:	111 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.

Description

Glutamate is a major excitatory neurotransmitter of the CNS. The diversity of glutamate is exemplified by two distinct groups of receptors: ionotropic and metabotropic. Ionotropic receptors are ligand-gated cation channels. They can be subdivided into two classes: NMDA and AMPA/kainate receptors. GluR $\delta 2$ exhibits only 25% amino acid identity to either ionotropic receptor type. It presents selective and abundant expression in cerebellar Purkinje cells. It is targeted to a subset of Purkinje cell spines and is coexpressed with ionotropic receptors. GluR $\delta 2$ is involved in motor coordination, Purkinje cell synapse formation, and cerebellar long-term depression (LTD). The latter is a decrease in the efficacy of the synaptic transmission between parallel fibers and Purkinje neurons and is a cellular basis of motor learning. In fact, mGluR $\delta 2$ -deficient mice lack LTD. Additionally, an amino acid substitution in transmembrane III of $\delta 2$ is responsible for the neurodegeneration seen in Lurcher mice. This substitution is a gain of function mutation that results in disruption of Purkinje membrane potential. Thus, GluR $\delta 2$ is an important regulatory component of the Purkinje GluR channel.



Western blot analysis of GluR $\delta 2$ on rat brain lysate.
Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of
GluR $\delta 2$.



Immunofluorescence staining of Rat Neurons

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C .

Application Notes

Application

Western blot	Routinely Tested
Immunohistochemistry	Tested During Development

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611463	Rat Cerebrum Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Araki K, Meguro H, Kushiya E, Takayama C, Inoue Y, Mishina M. Selective expression of the glutamate receptor channel delta 2 subunit in cerebellar Purkinje cells. *Biochem Biophys Res Commun.* 1993; 197(3):1267-1276.(Biology)

Hirano T, Kasano K, Araki K, Mishina M. Suppression of LTD in cultured Purkinje cells deficient in the glutamate receptor delta 2 subunit. *Neuroreport.* 1995; 6(3):524-526.(Biology)

Kashiwabuchi N, Ikeda K, Araki K. Impairment of motor coordination, Purkinje cell synapse formation, and cerebellar long-term depression in GluR delta 2 mutant mice. *Cell.* 1995; 81(2):245-252.(Biology)

Landsend AS, Amiry-Moghaddam M, Matsubara A. Differential localization of delta glutamate receptors in the rat cerebellum: coexpression with AMPA receptors in parallel fiber-spine synapses and absence from climbing fiber-spine synapses. *J Neurosci.* 1997; 17(2):834-842.(Biology)

Zuo J, De Jager PL, Takahashi KA, Jiang W, Linden DJ, Heintz N. Neurodegeneration in Lurcher mice caused by mutation in delta2 glutamate receptor gene. *Nature.* 1997; 388(6644):769-773.(Biology)