Datasheet for ABIN6658269

anti-NMDAR2A antibody (N-Term)

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Overview

Quantity:	100 µL
Target:	NMDAR2A (GRIN2A)
Binding Specificity:	N-Term
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This NMDAR2A antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Purpose:	NMDA R2A Antibody
Immunogen:	Anti-NMDA R2A Antibody was produced by repeated immunizations with a synthetic peptide corresponding to amino acid residues from the N-terminal region of the NR2A subunit.
Isotype:	IgG
Cross-Reactivity (Details):	Anti-NMDA R2A antibody is directed against NMDA R2A protein.
Purification:	The antibody was affinity purified from monospecific antiserum by immunoaffinity purification.

Target Details

Target:	NMDAR2A (GRIN2A)
Alternative Name:	NMDA R2A (GRIN2A Products)

Target Details

Background:	Synonyms: Glutamate [NMDA] receptor subunit epsilon-1, N-methyl D-aspartate receptor subtype 2A, NMDAR2A, NR2A, Grin2a Background: NMDA R2A Antibody detects NMDA R2A protein. The ion channels activated by glutamate are typically divided into two classes. Glutamate receptors that are activated by kainate and α-amino-3-hydroxy-5-methyl-4-isoxalone propionic acid (AMPA) are known as kainate/AMPA receptors (K/AMPAR). Those that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR). The NMDAR plays an essential role in memory, neuronal development and it has also been implicated in several disorders of the central nervous system including Alzheimer's, epilepsy and ischemic neuronal cell death. The NMDA receptor is also one of the principal molecular targets for alcohol in the CNS. The NMDAR is also potentiated by protein phosphorylation. The rat NMDAR1 (NR1) was the first subunit of the NMDAR to be cloned. The NR1 protein can form NMDA activated channels when expressed in Xenopus oocytes but the currents in such channels are much smaller than those seen in situ. Channels with more physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits. Anti-NMDA R2A Antibody is ideal for investigators involved in Neuroscience, Cell Signaling, and Signal Transduction research. Gene Name: GRIN2A
Gene ID:	24409
UniProt:	Q00959
Pathways:	Synaptic Membrane, Regulation of long-term Neuronal Synaptic Plasticity

Application Details

Application Notes:	Immunohistochemistry_Dilution: 1:500 Western_Blot_Dilution: 1:1000 Other: User Optimized
Comment:	Suggested Applications: IF Anti-NMDA R2A Antibody is tested for use in Western Blotting and ICC. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 180 kDa in size corresponding to the NR2A subunit of the NMDA receptor in the appropriate cell lysate or extract.
Restrictions:	For Research Use only

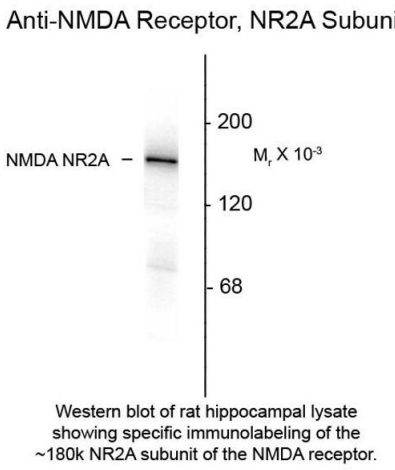
Handling

Format:	Liquid
Buffer:	Buffer: 0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5 Stabilizer: 0.1 mg/mL Bovine Serum Albumin (BSA) - IgG and Protease free, 50 % (v/v) Glycerol
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	Niu, Dai, Liu, Zhang, Yang, Guo, Li, Xu, Huang, Wang, Shi, Liu: "Ablation of SNX6 leads to defects in synaptic function of CA1 pyramidal neurons and spatial memory." in: **eLife**, Vol. 6, (2018) (PubMed). Wang, Sanchez-Mendoza, Doeppner, Hermann: "Post-acute delivery of memantine promotes post-ischemic neurological recovery, peri-infarct tissue remodeling, and contralesional brain plasticity." in: **Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism**, Vol. 37, Issue 3, pp. 980-993, (2017) (PubMed).

Images

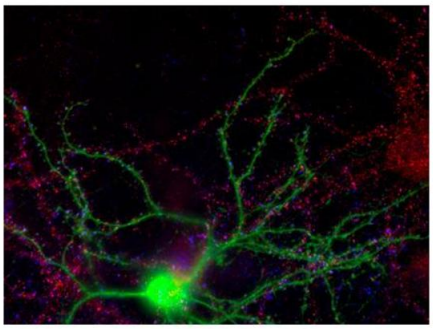


Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180k NR2A subunit of the NMDA receptor.

Western Blotting

Image 1. Western blot of Anti-NMDA R2A (Rabbit) Antibody - 612-401-D89 Western Blot of Rabbit anti-NMDA R2A antibody. Lane 1: rat hippocampal lysate. Lane 2: none. Load: 10 µg per lane. Primary antibody: NMDA R2A antibody at 1:1,000 for overnight at 4°C. Secondary antibody: rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 180 kDa for NMDA R2A. Other band(s): NMDA R2A splice variants and isoforms.

Anti-NMDA Receptor, NR2A Subunit



IHC staining of 21 DIV mouse striatal neurons (green) co-cultured with cortical neurons showing nice punctuate labeling (red) of the N-terminal NMDA NR2A subunit. Photo courtesy of Dr. A.J.Milnerwood, Dr. Lynn Raymond Lab, UBC.

Immunohistochemistry

Image 2. Immunohistochemical staining of Anti-NMDA R2A (Rabbit) Antibody - 612-401-D89 Immunohistochemistry of Rabbit anti-NMDA R2A antibody. Tissue: striatal and cortical neurons. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: NMDA R2A antibody at 1:500 for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: NMDA R2A is located in the neurons. Staining: NMDA R2A labeled red.