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Datasheet for 612-401-C89

NMDA NR2B Subunit phospho Y1472 Antibody

Overview

Description:	Anti-NMDA NR2B Subunit pY1472 (RABBIT) Antibody - 612-401-C89
Item No.:	612-401-C89
Size:	100 µL
Applications:	WB
Reactivity:	Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	NMDA NR2B Subunit pY1472 antibody detects NMDA NR2B receptor protein. The ion channels activated by glutamate 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. Channels with physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits. Overexpression of the NR2B-subunit of the NMDA Receptor has been associated with increases in learning and memory while aged, memory impaired animals have deficiencies in NR2B expression. Recent work suggests that phosphorylation of Tyr1472 on NR2B may regulate the functional expression the receptor in LTP and other forms of plasticity. NMDA NR2B Subunit pY1472 antibody is ideal for investigators involved in Cell Signaling, Neuroscience, and Signal Transduction research.
Synonyms:	Glutamate [NMDA] receptor subunit epsilon-2, N-methyl D-aspartate receptor subtype 2B, NMDAR2B, NR2B, Grin2b, NR3
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Grin2b

Reactivity:	Mouse, Rat
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-NMDA NR2B Subunit pY1472 Antibody was produced by repeated immunizations with synthetic phospho-peptide corresponding to amino acid residues surrounding Tyr1472.
Purity/Specificity:	Anti-NMDA NR2B Subunit pY1472 antibody is directed against rat NMDA NR2B receptor protein. The antibody was affinity purified from monospecific antiserum by immunoaffinity purification. The antibody is specific for NMDA NR2B phosphorylated at Y1472. Immunolabeling is completely blocked by blocked by either lambda-Ptase or by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide. Reactivity is expected from the following species based on 100% sequence homology: bovine, canine, chicken, human, mouse, non-human primate and zebra fish.
Relevant Links:	• NCBI - NP_036706.1 • UniProtKB - Q00960 • GeneID - 24410

Application Details

Tested Applications:	WB
Application Note:	Anti-NMDA NR2B Subunit pY1472 (Rabbit) antibody is tested for use in Western Blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 180 kDa in size corresponding to NMDAR NR2B subunit protein phosphorylated at Tyr1472 in the appropriate cell lysate or extract. This antibody also labels proteins of approximately 65 kDa and 115 kDa in size.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
WB:	1:1000

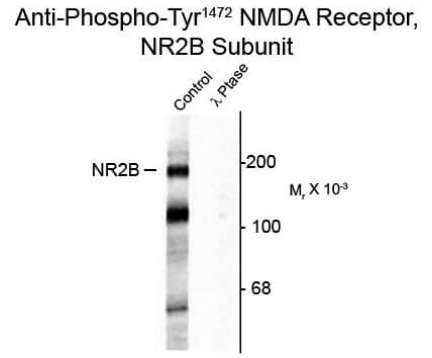
Formulation

Physical State:	Liquid
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

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	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.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western blot of rat hippocampal lysate showing phosphospecific immunolabeling of the ~180k NR2B subunit of the NMDAR phosphorylated at Tyr1472.

Western Blot
Western Blot of Rabbit anti-NMDA NR2B Subunit Tyr1472 antibody. Lane 1: rat hippocampal lysate (Control). Lane 2: phos-pep. Load: 10 µg per lane. Primary antibody: NMDA NR2B Subunit Tyr1472 antibody at 1:1,000 for overnight at 4°C. Secondary antibody: IRDye800™ 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 NR2B Subunit Tyr1472. Other band(s): NMDA NR2B Subunit Tyr1472 splice variants and isoforms.

References

- Gonda S et al. GluN2B but not GluN2A for basal dendritic growth of cortical pyramidal neurons. *Front Neuroanat.* (2020)

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