

Phospho (Tyr1472) NMDA NR2B Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10461**Specification**

Phospho (Tyr1472) NMDA NR2B Antibody - Product Information

Application	WB
Primary Accession	Q13224
Reactivity	Human, Mouse, Rat, Zebrafish, Chicken, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	166367

Phospho (Tyr1472) NMDA NR2B Antibody - Additional Information**Gene ID 2904**

Application & Usage	The antibody can be used for Western blotting (1:1000), Immunofluorescence (1:1000) and Immunohistochemistry (1:1000). However, the optimal conditions should be determined individually.
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Other Names

Glutamate receptor ionotropic, NMDA 2B, GluN2B, Glutamate [NMDA] receptor subunit epsilon-2, N-methyl D-aspartate receptor subtype 2B, NMDAR2B, NR2B, N-methyl-D-aspartate receptor subunit 3, NR3, hNR3, GRIN2B, NMDAR2B

Target/Specificity

Phospho (Tyr1472) NMDA NR2B

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

Phospho (Tyr1472) NMDA NR2B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho (Tyr1472) NMDA NR2B Antibody - Protein Information

Name GRIN2B

Synonyms NMDAR2B

Function

Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:8768735, PubMed:26919761, PubMed:26875626, PubMed:28126851). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:8768735, PubMed:26875626). In concert with DAPK1 at extrasynaptic sites, acts as a central mediator for stroke damage. Its phosphorylation at Ser-1303 by DAPK1 enhances synaptic NMDA receptor channel activity inducing injurious Ca²⁺ influx through them, resulting in an irreversible neuronal death. Contributes to neural pattern formation in the developing brain. Plays a role in long-term depression (LTD) of hippocampus membrane currents and in synaptic plasticity (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q00960}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q00960}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q00960}. Late endosome {ECO:0000250|UniProtKB:Q01097}. Lysosome {ECO:0000250|UniProtKB:Q01097}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q01097}. Note=Co-localizes with the motor protein KIF17 along microtubules. {ECO:0000250|UniProtKB:Q01097}

Tissue Location

Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia.

Phospho (Tyr1472) NMDA NR2B Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho (Tyr1472) NMDA NR2B Antibody - Images**Phospho (Tyr1472) NMDA NR2B Antibody - Background**

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 (Grosshans et al., 2002; Wenthold et al., 2003; Carroll and Zukin, 2002). The NMDA receptor is also one of the principal molecular targets for alcohol in the CNS (Lovinger et al., 1989; Alvestad et al., 2003; Snell et al., 1996). Channels with physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits (Ishii et al., 1993). 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 (Clayton et al., 2002a; Clayton et al., 2002b). Recent work suggests that phosphorylation of Tyr1472 on NR2B may regulate the functional expression the receptor in LTP and other forms of plasticity (Nakazawa et al., 2001; Roche et al., 2001).