Anti-Phospho-Tyr[1472] NMDA Receptor, NR2B-Subunit Antibody

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Catalog #: p1516-1472 **Size:** 100 µl

Cite this Antibody: PhosphoSolutions Cat# p1516-1472, RRID:AB_2492182

Host	Applications	Species Tested	Species Reactivity*	Molecular Weight
Rabbit	WB 1:1000 ICC 1:100	M, R, H	B, C, Ch, NHP, Z	~180 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: 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 Tyr[1472] on NR2B may regulate the functional expression the receptor in LTP and other forms of plasticity (Nakazawa et al., 2001; Roche et al., 2001).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Tyr[1472] of rat NMDA NR2B.

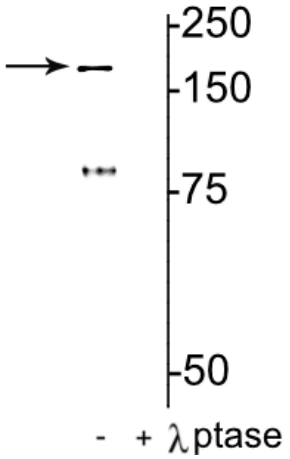
Antibody Specificity: Specific for endogenous levels of the ~180 kDa NMDAR NR2B-subunit protein phosphorylated at Tyr[1472]. Immunolabeling is completely eliminated by treatment with λ-Ptase.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

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

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180 kDa NR2B subunit of the NMDAR phosphorylated at Tyr[1472] in the first lane (-). Phosphospecificity is shown in the second lane (+) where immunolabeling is completely eliminated by lysate treatment with *lambda* phosphatase (400 units/100uL lysate for 30 min).

Application Key: **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
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Product Specific References:

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