

Phospho (Tyr¹⁴⁷²) NMDA NR2B-Subunit Antibody

CATALOG #:	3616-100
AMOUNT:	100 µl
HOST:	Rabbit
IMMUNOGEN:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Tyr ¹⁴⁷² of NMDA NR2B.
SPECIES REACTIVITY:	Rat, Bovine, Canine, Chicken, Human, Mouse, non-human primate and Zebrafish
PURIFICATION:	Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.
FORMULATION:	100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
STORAGE CONDITIONS:	Store at -20°C.

DESCRIPTION:

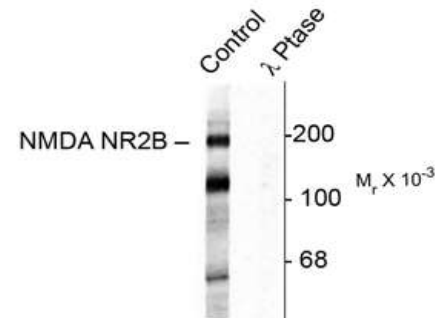
The ion channels activated by glutamate that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR). The NMDAR plays an essential role in memory, neuronal development and it has also been implicated in several disorders of the central nervous system including Alzheimer's, 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).

SPECIFICITY:

Specific for the ~180k NMDAR NR2B-subunit protein phosphorylated at Tyr¹⁴⁷² in Western blots. The antibody also labels proteins of ~65kDa and ~115kDa. Immunolabeling is completely blocked by blocked by either λ-Ptase or by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide.

APPLICATION AND USAGE: The antibody can be used for Western blotting (1:1000).

FOR RESEARCH USE ONLY! Not to be used on humans.



Anti-Phospho Tyr1472 NMDA NR2B-Subunit

Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180k NR2B subunit of the NMDAR phosphorylated at Tyr1472 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the phospho-Tyr1472 NMDA NR2B antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

RELATED PRODUCTS:

- Phospho (Ser¹⁹) Tyrosine Hydroxylase Antibody (Cat. No. 3612-100)
- Phospho (Ser³¹) Tyrosine Hydroxylase Antibody (Cat. No. 3613-100)
- Tyrosine Hydroxylase Antibody (Cat. No. 3615-100)
- Phospho (Tyr¹⁴⁷²) NMDA NR2B-Subunit Antibody (Cat. No. 3616-100)
- PTP1B Antibody (Cat. No. 3122-100)
- PTP1B Antibody (Cat. No. 3171-100)
- PTP1B Antibody (Cat. No. 3174-100)