

Anti-Phospho-Tyr1252 NMDA Receptor, NR2B Subunit Antibody

Product Data Sheet · P/N 74106 Rev 01 · Reissued 2026-09-19 (layout only)

Product code	Pack size
P40024-100	100 µL
Host Species	Rabbit (Polyclonal)
Mr (kDa)	180

Description

The NMDA receptor (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 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 (Ishii et al., 1993).

Phosphorylation of Tyr1252 is thought to potentiate NMDA receptor dependent influx of calcium (Takasu et al., 2002).

Immunogen

Phosphopeptide corresponding to amino acid residues surrounding the phospho- Tyr1252 of the NR2B subunit of the rat NMDA receptor.

Immunolabeling of the NMDA NR2B subunit band is blocked by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide.

Immunolabeling is also blocked by λ -phosphatase treatment. The antibody may also show some slight reactivity with Tyr1246 of NR2A.

Species Reactivity

The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primate and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Physical State

Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

Purification Method

Prepared from rabbit serum by affinity via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Recommended Antibody Dilutions

WB: 1:1000

IHC: 1:400

Storage/Stability

Stable at -20 °C for at least 1 year.

For long term storage -20 °C is recommended

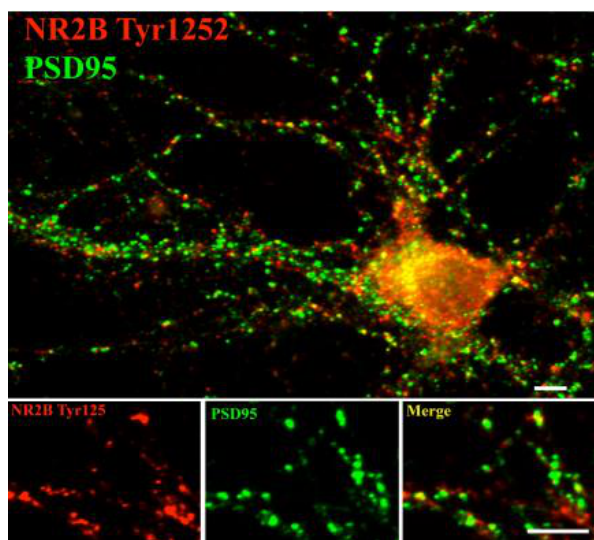
Shipping Conditions

Domestic: Blue Ice

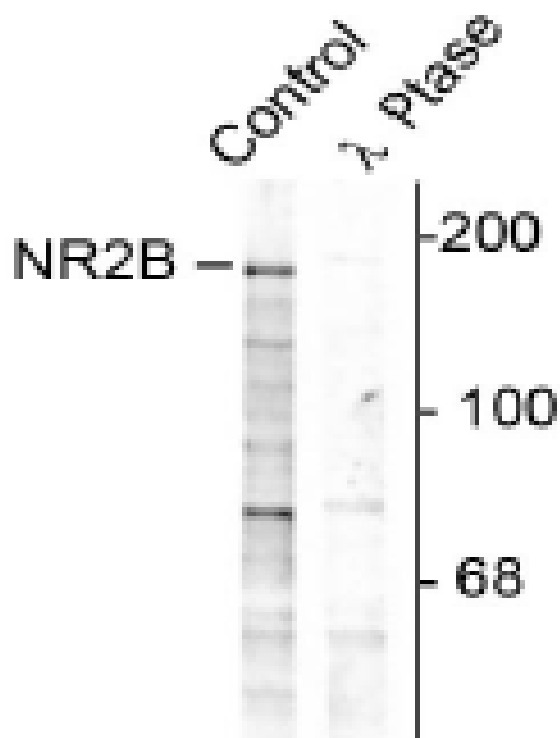
International: Blue Ice or Dry Ice

References

- 1) Carroll RC et al. (2002) Trends Neurosci 25:571-577.
- 2) Grosshans DR et al. (2002) Nat Neurosci 5:27-33.
- 3) Ishii T et al. (1993) J Biol Chem 268:2836-2843.
- 4) Takasu MA et al. (2002) Science 295:491-495.
- 9) Wenthold RJ et al. (2003) Annu Rev Pharmacol Toxicol 43:335-358.



Immunostaining 14 DIV rat cortical neurons showing NR2B phosphorylated at Tyr1252 in red and PSD95 in green. Photo courtesy of Gang Liu.



Western Blot Rat hippocampal lysate showing specific immunolabeling of the ~180k NR2B subunit phosphorylated at Tyr1252 (Control). The immunolabeling is completely eliminated by treatment with λ- Phosphatase shown in lane 2.

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