

**PRODUCT DATA SHEET**

**Product Name:** ANTI-PHOSPHO-Tyr<sup>1336</sup> NMDA RECEPTOR, NR2B SUBUNIT ANTIBODY

**Product Code:** P40025-100

**Pack Size:** 100 µL

**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 Tyr<sup>1336</sup> is thought to potentiate NMDA receptor-dependent influx of calcium (Takasu et al., 2002) and ischemia may also increase the phosphorylation of this site (Takagi et al., 2003).

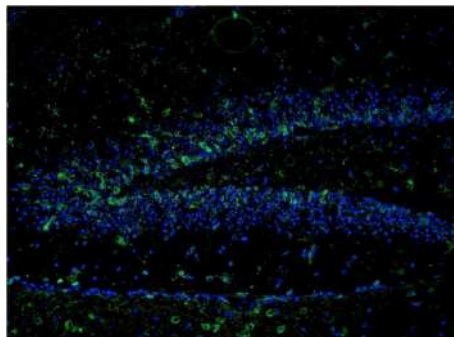
**Physical State:** Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

**Storage/Stability:** Stable at -20 °C for at least 1 year. For long term storage -20 °C is recommended

**Purification Method:** Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Shipping Conditions:** Domestic: Blue Ice  
 International: Blue Ice or Dry Ice

**Immunostaining**  
 Mouse dentate gyrus 48 hr post TMT treatment showing NR2B when phosphorylated at Tyr<sup>1336</sup> in green and nuclei in blue. Photo Courtesy of Rob Wine.



**Host Species:** Rabbit (Polyclonal)

**Mr (kDa):** 180

**Immunogen:** Phosphopeptide corresponding to amino acid residues surrounding the phospho-Tyr<sup>1336</sup> of the NR2B subunit of the rat NMDA receptor. Immunolabeling of the NMDAR NR2B subunit band is blocked by λ-phosphatase treatment.

**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 human, mouse and non-human primate tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

**Recommended Antibody Dilutions:**

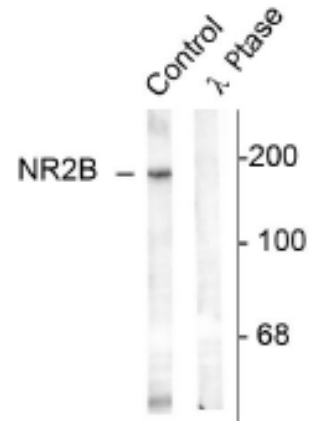
**WB:** 1:1000  
**IHC:** 1:400

**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.

**Western Blot**

Rat hippocampal lysate showing specific immunolabeling of the ~180k NR2B subunit phosphorylated at Tyr<sup>1336</sup> (Control). The immunolabeling is completely eliminated by treatment with λ-Phosphatase shown in lane 2.



**Application Key:** WB – Western Blot IF – Immunofluorescence IHC – Immunohistochemistry IP - Immunoprecipitation