

***Affinity-Purified Rabbit  
Anti-Phospho-NMDA Receptor NR2B Subunit (Y1472)  
Certificate of Analysis***

**ORDERING INFORMATION**

**Catalog Number:** PPS014

**Lot Numbers:** 1459282

**Size:** 100 µL (sufficient for 10 mini blots)

**Storage:** ≤ -20 °C

**Specificity:** Human, mouse, rat ~180 kDa  
NMDAR NR2B-subunit protein  
phosphorylated at Y1472

**Immunogen:** Phosphopeptide corresponding  
to amino acid residues  
surrounding the phospho-Y1472

**Ig Type:** rabbit IgG

**Applications:** Western Blot

***Description***

Rat NMDA receptor subunit 2B (NR2B) is a 1456 amino acid, 180 kDa, 3-transmembrane member of the glutamate-gated ion channel family. NMDA are heteromultimers of at least two NR1 subunits and two NR2 or two (presumably) NR3 subunits. Upon ligand binding, NMDA receptors open and allow cation transit. The NR1 subunits bind glycine and are essential for the physical formation of the ion channel. NR2 subunits apparently bind glutamate and impart pharmacological properties to the receptor complex. Fully functional receptors require the presence of both glycine and glutamate. The NR1-NR2B complex has the highest affinity for glutamate. Both NR1 and NR2B subunits can be phosphorylated by PKC. On NR1, PKC phosphorylates on serine at 890; on NR2B, PKC phosphorylates on tyrosine at 1472. Phosphorylation is considered to promote ion transit and impact NR2B interaction with downstream signaling molecules.

***Preparation***

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

***Formulation***

100 µL in 150 mM NaCl, 10 mM HEPES, 100 µg/mL BSA and 50% glycerol, pH 7.5.

***Storage***

For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

***Specificity***

Specific for the ~180 kDa NMDAR NR2B-subunit protein phosphorylated at Y1472 in Western blots of rat brain extracts. The antibody also labels proteins of ~65 kDa and ~115 kDa.

***Applications***

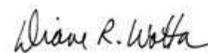
**Western blot - 1:1000**

**Optimal dilutions should be determined by each laboratory for each application.**

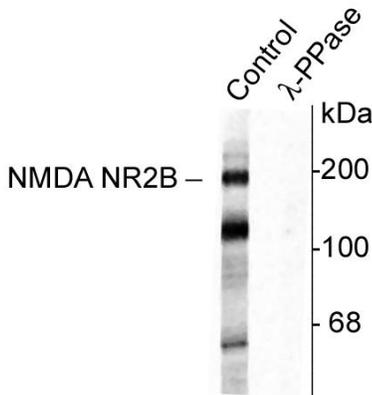
***References***

1. Grosshans, D.R. and M.D. Browning (2001) J. Neurochem. **76**:737.
2. Cheung, H. *et al.* (2003) J. Neurochem. **86**:1441.
3. Gibb, A.J. (2004) Trends Neurosci. **27**:7.
4. Liu, Y. and J. Zhang (2000) Chin. Med. J. **113**:948.

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Quality & Regulatory Affairs



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180 kDa NR2B subunit of the NMDAR (Control). The phosphospecificity of this labeling is demonstrated by treatment with 1200 U of λ. Phosphatase (λ-PPase) for 30 minutes before being exposed to the Anti-Phospho-NMDA NR2B subunit (Y1472). The immunolabeling is completely eliminated by treatment with λ-PPase.

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