

Affinity-Purified Rabbit Anti-NMDA Receptor NR2B Subunit Certificate of Analysis

ORDERING INFORMATION

Catalog Number: PPS013

Lot Numbers: 1681913

Size: 10 µg (sufficient for 10 mini-blots)

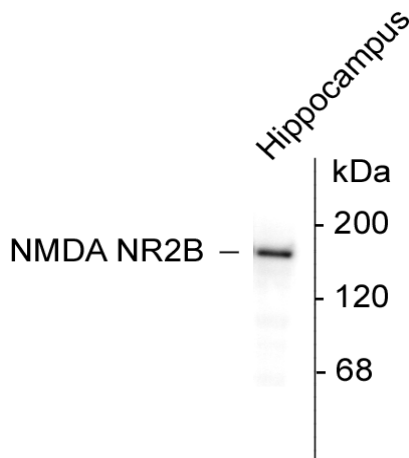
Storage: ≤ -20° C

Specificity: Human, mouse, rat ~180 kDa
NR2B-subunit of the NMDA
Receptor

Immunogen: Fusion protein from the
C-terminus of the NR2B-subunit
of rat NMDA Receptor

Ig Type: rabbit IgG

Applications: Western blot
Immunohistochemistry
Immunoprecipitation



Western blot of 10 µg of rat brain hippocampus lysate showing specific immunolabeling of the ~180 kDa NR2B subunit of the NMDA Receptor. The labeling by the antibody was blocked by the C-terminal fusion protein of the NR2B subunit of the NMDA Receptor used as immunogen (not shown).

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 receptors 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 protein kinase C (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 using a fusion protein immunogen-coupled column.

Formulation

10 µg antibody per vial; lyophilized in 5 mM ammonium bicarbonate.

Reconstitution

This antibody should be reconstituted in 50 µL phosphate buffered saline (137 mM NaCl, 7.5 mM Na₂HPO₄, 2.7 mM KCl, 1.5 mM KH₂PO₄, pH 7.4) before use.

Storage

The lyophilized product is stable at ≤ -20° C for at least 1 year. After reconstitution the antibody should be aliquoted and stored at ≤ -20° C.

Specificity

Specific for the ~180 kDa NR2B subunit of the NMDA Receptor in Western blots of human, mouse and rat brain extracts. There is no reactivity towards the NR2A and NR2C subunits. Immunolabeling is blocked by pre-adsorption of the antibody with the fusion protein used to generate the antibody.

Applications

Western blot - 1:1000

Immunohistochemistry - Frozen sections; unpublished observations: 1:1000 to 1:2000

Immunoprecipitation - 3 µL per 200 µg lysate

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.

Diane R Wotta

Quality & Regulatory Affairs

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