

Product Information

Anti-Glutamate Receptor NMDAR2A (NR2A)

produced in rabbit, affinity isolated antibody

Catalog Number **M264**

Product Description

Anti-Glutamate Receptor NMDAR2A (NR2A) is produced in rabbit using the C-terminal portion of NR2A as immunogen (amino acids 1253-1391).

Anti-Glutamate Receptor NMDAR2A can be used for labeling of the 180 kDa NR2A subunit of the NMDA receptor in immunoblotting. This labeling is blocked by the preadsorption of the antibody with the immunogen. The antibody does not cross-react with the NR2B or NR2C subunits. It reacts with rat, mouse and human tissues.

The N-Methyl-D-Aspartate (NMDA) receptor complex is comprised of 2 types of subunits, NR1 and NR2. Only one type of NR1 subunits has yet been identified while four distinct subunits have been identified for the NR2 receptor, NR2A, NR2B, NR2C, and NR2D. While the NR2 subunits are not functional alone, they combine with the NR1 subunit to produce a variety of different receptor types. A number have studies have also shown that the functional properties of the receptors complexes formed by the NR1 and NR2 subunits are largely determined by the NR2 components of the complex.

NMDA receptors are post-synaptic and play important roles in plasticity in the developing and mature central nervous system (CNS). Agonists and antagonists of NMDA receptors have been proposed to be of therapeutic benefit in a number of CNS disorders, including stroke, head injury, epilepsy, pain, and Alzheimer's disease.

Reagent

Supplied lyophilized from 5 mM ammonium bicarbonate.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Anti-Glutamate Receptor NMDAR2A should be reconstituted with 50 µl of sterile phosphate buffered saline (PBS).

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, solution may be frozen at -20 °C in working aliquots. Storage in "frost-free" freezers, or repeated freezing and thawing, is not recommended.

Product Profile

Suggested working concentrations:

Immunoblotting: 1:1,000

Immunohistochemistry: 1:1,000-1:2,000

Immunoprecipitation: 3 µL per 200 µg of lysate

Note: Optimal working concentration should be determined by serial dilutions.

References

1. Joelson, D. et al. "Development of N-methyl-D-aspartate receptor subunit immunoreactivity in the neonatal gerbil cochlear nucleus." *Microsc. Res. Tech.* **41**, 246-262 (1998).
2. Cik, M. et al. "Optimal expression of cloned NMDAR₁/NMDAR_{2A} heteromeric glutamate receptors: a biochemical characterization." *Biochem. J.* **296**, 877-883 (1993).
3. Monyer, H. et al. "Heteromeric NMDA receptors: molecular cloning and functional distinction of subtypes." *Science* **256**, 1217-1221 (1992).

FF,PHC 11/10-1