

Anti-NMDA Receptor, NR1 Subunit Antibody

Product Data Sheet · Rev 01 · Reissued 2026-09-19 (layout only)

Product code	Pack size
P80001-15	15 µg
Host Species	Mouse (Monoclonal)
Mr (kDa)	120

Description

The ion channels activated by glutamate are typically divided into two classes. Glutamate receptors that are activated by kainate and α-amino-3-hydroxy-5-methyl-4-isoxalone propionic acid (AMPA) are known as kainate/AMPA receptors (K/AMPA). Those that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR). The 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 NMDA receptor is also one of the principal molecular targets for alcohol in the CNS (Lovinger et al., 1989; Alvestad et al., 2003; Snell et al., 1996). The NMDAR is also potentiated by protein phosphorylation (Lu et al., 1999). 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.

Toxicol 43:335-358.

Immunogen

Fusion protein containing amino acids 1-564 of the NR1 subunit of rat NMDA receptor.

Species Reactivity

The antibody has been directly tested for reactivity in Western blots in rat and mouse tissues.

Physical State

Lyophilized from culture supernatant.

The antibody should be reconstituted in 50 µl phosphate buffered saline (PBS: 137 mM NaCl, 7.5 mM Na₂HPO₄, 2.7 mM KCl, 1.5 mM KH₂PO₄, pH 7.4) before use. After reconstitution the antibody should be aliquoted and stored at -20°C.

Purification Method

Culture supernatant

Recommended Antibody Dilutions

WB: 1:1000 3 µg per 200 µg lysate IP:

Storage/Stability

Stable at -20 °C for at least 1 year.

For long term storage -20 °C is recommended

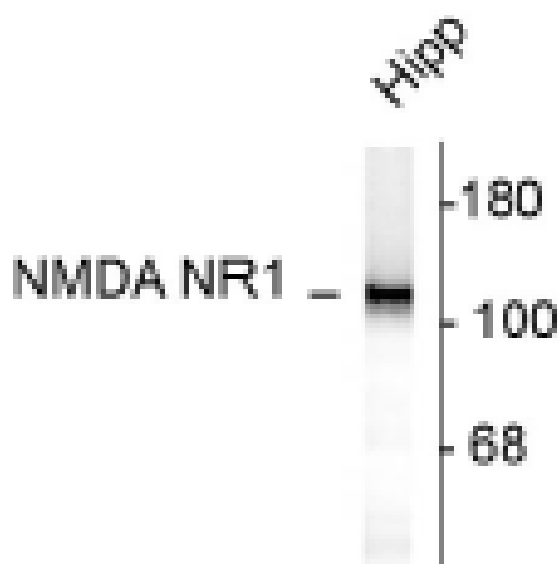
Shipping Conditions

Domestic: Blue Ice

International: Blue Ice or Dry Ice

References

- 1) Alvestad RM et al. (2003) J Biol Chem 278:11020-11025.
- 2) Carroll RC et al. (2002) Trends Neurosci 25:571-577.
- 3) Grosshans DR et al. (2002) Nat Neurosci 5:27-33.
- 4) Lovinger DM et al. (1989) Science 243:1721-1724.
- 5) Lu W-Y et al. (1999) Nature Neurosci 2:331-338.
- 6) Snell LD et al. (1996) Mol Brain Res 40:71-78.
- 7) Wenthold RJ et al. (2003) Annu Rev Pharmacol



Western Blot 10 µg of rat hippocampal (Hipp) lysate showing specific immunolabeling of the ~120k NR1 subunit of the NMDA receptor.

For research use or further manufacturing only. Not for use in diagnostic procedures, or for human or animal consumption.