

Product Information



NMDA Receptor NR2B Subunit (Phospho-Tyr¹²⁵²) Polyclonal Antibody

Item No. 10009759

Supplied as:	100 µl of affinity-purified antibody in 10 mM HEPES, pH 7.5, containing 150 mM NaCl, 100 µg/ml BSA, and 50% glycerol.
Host:	Rabbit
Antigen:	Phosphopeptide corresponding to amino acid residues surrounding Phospho-Tyr ¹²⁵² of the human NMDA Receptor NR2B Subunit
Cross Reactivity:	(+) Human and rat NMDA receptor; expected to react with bovine, canine, chicken, mouse, non-human primates, and zebrafish NMDA receptor based on 100% homology with the amino acid sequence used as the antigen
Stability:	≥1 year at -20°C
Application:	The recommended starting dilution for western blot is 1:1,000.

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 disease, epilepsy, and ischemic neuronal death.¹⁻³ 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.⁴ Phosphorylation of Tyr¹²⁵² in NR2B is thought to potentiate NMDA receptor-dependent influx of calcium.⁵

References

1. Grosshans, D.R., Clayton, D.A., Coultrap, S.J., *et al.* LTP leads to rapid surface expression of NMDA but not AMPA receptors in adult rat CA1. *Nat. Neurosci.* **5**, 27-33 (2002).
2. Wenthold R.J., Prybylowski, K., Standley, S., *et al.* Trafficking of NMDA receptors. *Annu. Rev. Pharmacol Toxicol* **43**, 335-358 (2003).
3. Carroll, R.C., Zukin, R.S. NMDA-receptor trafficking and targeting: implications for synaptic transmission and plasticity. *Trends Neurosci.* **25**, 571-577 (2002).
4. Ishii, T., Moriyoshi, K., Sugihara, H., *et al.* Molecular characterization of the family of the N-methyl-D-aspartate receptor subunits. *J. Biol. Chem.* **268**, 2836-2843 (1993).
5. Takasu, M.A., Dalva, M.B., Zigmond, R.E., *et al.*, Modulation of NMDA Receptor -Dependent Calcium Influx and Gene Expression Through EphB Receptors. *Science* **295**, 491-495 (2002).

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