



Qty: 100 µL

Rabbit anti-NMDA NR2B Subunit [pY1252]

Catalog No. 485200

Lot No.

Rabbit Anti-NMDA Receptor, NR2B Subunit, [phosphotyrosine 1252]

FORM

This affinity-purified rabbit polyclonal antibody is supplied as a 100 µL aliquot in 10 mM HEPES (pH 7.5), 150 mM NaCl containing BSA and 50% glycerol.

PAD: ZMD.660

IMMUNOGEN

Phosphopeptide corresponding to amino acid residues surrounding the phosphotyrosine 1252 of the NR2B subunit of the rat NMDA receptor.

SPECIFICITY

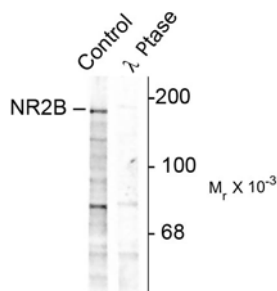
Specific for ~180 kDa NMDAR NR2B subunit protein phosphorylated at tyrosine 1252. Immunolabeling of the NMDA NR2B subunit band is blocked by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide. Immunolabeling is also blocked by λ-phosphatase treatment. The antibody may also show some slight reactivity with tyrosine 1246 of NR2A.

REACTIVITY

The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primate and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Sample	Western Blotting
Rat	+++
Bovine	ND
Canine	ND
Chicken	ND
Human	ND
Mouse	ND
Non-human primates	ND
Zebra fish	ND

(Excellent +++, Good ++, Poor +, No reactivity 0, Not applicable N/A, Not determined ND)



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~180 kDa NR2B subunit of the NMDAR phosphorylated at tyrosine 1252 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the phosphotyrosine 1252 NMDA NR2B subunit antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

(cont')

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USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1:1000

STORAGE

Store at -20°C for long-term storage. After reconstitution, aliquot and store at 2-8°C for up to one month or store at -20°C for long-term storage. Avoid repeated freezing and thawing.

BACKGROUND

The ion channels activated by glutamate that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA Receptors (NMDAR). The NMDAR plays an essential role in memory and 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.¹⁻³ 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.⁴ Phosphorylation of tyrosine 1252 is thought to potentiate NMDA receptor-dependent influx of calcium.⁵

REFERENCES

1. Grosshans DR, et al., Nat Neurosci 5:27-33, 2002.
2. Wenthold RJ, et al., Annu Rev Pharmacol Toxicol 43:335-358, 2003.
3. Carroll RC, Zukin RS, Trends Neurosci 25:571-577, 2002.
4. Ishii T, et al., J Biol Chem 268:2836-2843, 1993.
5. Takasu MA, et al., Science 295:491-495, 2002.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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