



Qty: 100µL – Sufficient for 10 mini-blots

Rabbit anti-phospho-NMDA NR2B [pT1472]

Catalog No. 38-7000

Lot No.

Rabbit anti-phospho-NMDA NR2B [pT1472]

FORM

This polyclonal antibody is supplied as a 100 µL aliquot in 10 mM Hepes (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, 0.09% NaN₃ and 50% glycerol. This antibody is purified from rabbit antiserum by sequential chromatography on Protein A, phospho- and dephospho-peptide affinity columns.

PAD: PS1472

IMMUNOGEN

Synthetic phosphopeptide corresponding to amino acid residues surrounding the phosphorylated Tyr1472 of rat NMDA receptor, NR2B subunit.

SPECIFICITY

This antibody reacts with rat NMDA NR2B when it is phosphorylated at Tyr1472. On Western blots, it identifies a band at ~180 kDa. In Western blots on rat brain two additional bands may be seen at ~115 and ~65 kDa.

REACTIVITY

Reactivity has been confirmed with rat brain homogenates. The labeling of the NR2B protein is blocked by the phosphopeptide but not by the dephosphopeptide. Based on 100% amino acid identity with mouse and human, cross-reactivity is expected with mouse and human phospho-NMDA NR2B Tyr1472 proteins.

Sample	Western Blotting
Rat	+++
Mouse	ND
Human	ND

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

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 dilution is the recommended starting point for this product.

Western Blotting: 1:1000

STORAGE

Store at –20°C and product will remain liquid for aliquotting.

(cont'd)

For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.

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BACKGROUND

The N-methyl-D-aspartate (NMDA) receptor NR2B subunit has been implicated in modulating functions such as learning, memory processing, pain perception and feeding behaviors.¹ It has also been suggested that NMDA receptor antagonists that selectively target the NR2B subunit may have anti-parkinsonian actions.² The NR2B subunit has also been implicated in Huntington disease.³ Phosphorylation of Tyr1472 is largely dependant on the kinase Fyn, with phosphorylation events facilitated by the presence of PSD-95.⁴ Decreases in Tyr1472 phosphorylation of the NMDA receptor NR2B subunit have also been associated with the neuroprotective effects of lithium, which is a mood stabilizer.⁵

REFERENCES

1. Loftis JM and Janowsky A. *Pharmacol Ther* 97(1):55-85, 2003.
2. Marino MJ, et al. *Drugs Aging* 20(5):377-397, 2003.
3. Li L, et al. *Neurobiol Aging* 24(8):1113-1121, 2003.
4. Nakazawa T, et al. *Nihon Shinkei Seishin Yakurigaka Zasshi* 22(5):165-167, 2002.
5. Hashimoto R, et al. *FEBS Lett* 538(1-3):145-148, 2003.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

Conjugate	ZyMAX[™] Goat x Rabbit IgG (H+L)	ZyMAX[™] Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy [™] 3	81-6115	81-6515
Cy [™] 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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