



Polyclonal Anti-NMDAR1 (Sephacose Bead Conjugate)

Catalogue No. PA1222-S

Lot No. 10F02

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, rat. No cross reactivity with other proteins.

Recommended application

(Immunoprecipitation(IP))

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminal of human NMDAR1, identical to the related rat and mouse sequence.

Purification

Immunogen affinity purified.

Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN₃ preservative.

Storage

Store at 4°C for frequent use.

Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

BACKGROUND

The NMDA receptor (NMDAR) is a specific type of ionotropic glutamate receptor. NMDA (*N*-methyl *D*-aspartate) is the name of a selective agonist that binds to NMDA receptors but not to other glutamate receptors. Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. NMDAR1 gene is mapped to 9q34.3 and encodes a 938-amino acid protein which showed high evolutionary conservation in structure and physiologic properties.¹ It consists of 21 exons distributed over about 31 kb. Three of the exons that are alternatively spliced in the rat and which produce 8 isoforms in that species were also present in the human sequence. The promoter region contained 2 DNA binding sites for the homeobox proteins 'even-skipped'.² The gene is a candidate for the site of the mutation in torsion dystonia.^{3, 4} The NMDA receptor is a non-specific cation channel and thus directly contributes to excitatory synaptic transmission by depolarizing the postsynaptic cell. NMDA receptors are modulated by a number of endogenous and exogenous compounds and play a key role in a wide range of physiologic and pathologic processes, such as excitotoxicity.

REFERENCE

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3. Collins, C.; Duff, C.; Duncan, A. M. V.; Planells-Cases, R.; Sun, W.; Norremolle, A.; Michaelis, E.; Montal, M.; Worton, R.; Hayden, M. R. : Mapping of the human NMDA receptor subunit (NMDAR1) and the proposed NMDA receptor glutamate-binding subunit (NMDARA1) to chromosomes 9q34.3 and chromosome 8, respectively. *Genomics* 17: 237-239, 1993.
4. Takano, H.; Onodera, O.; Tanaka, H.; Mori, H.; Sakimura, K.; Hori, T.; Kobayashi, H.; Mishina, M.; Tsuji, S. : Chromosomal localization of the epsilon-1, epsilon-3, and zeta-1 subunit genes of the human NMDA receptor channel. *Biochem. Biophys. Res. Commun.* 197: 922-926, 1993.

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