Product Information Sheet

Polyclonal Anti-*NMDAR1*

Catalogue No. PA1222

Lot No. 10F02

Ig type rabbit IgG

Size 100µg/vial

Specificity

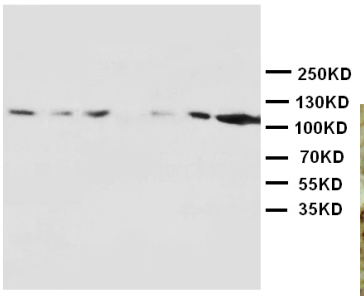
Human, rat.

No cross reactivity with other proteins.

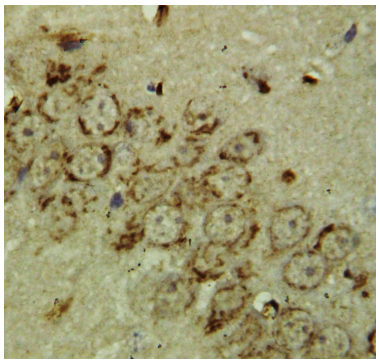
Recommended application

Western blot

Immunohistochemistry(P)



Lane 1 : Rat brain tissue Lysate
Lane 2 : Rat brain tissue Lysate
Lane 3 : Rat liver tissue Lysate
Lane 4 : Rat Heart tissue Lysate
Lane 5 : MM453 Whole Cell Lysate
Lane 6 : MM231 Whole Cell Lysate
Lane 7 : HeLa Whole Cell Lysate



Immunogen

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

Purity

Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	1µg/ml	Hu, Rat	Ms	-
IHC-P	2µg/ml	Rat	Ms	By Heat
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

To reorder contact us at:

Antagene, Inc.

Toll Free: 1(866)964-2589

email: Info@antageneinc.com

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

1. Karp, S. J.; Masu, M.; Eki, T.; Ozawa, K.; Nakanishi, S. : Molecular cloning and chromosomal localization of the key subunit of the human N-methyl-D-aspartate receptor. *J. Biol. Chem.* 268: 3728-3733, 1993.

2. Zimmer, M.; Fink, T. M.; Franke, Y.; Lichter, P.; Spiess, J. : Cloning and structure of the gene encoding the human N-methyl-D-aspartate receptor (NMDAR1). *Gene* 159: 219-223, 1995.

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.