

Datasheet: AHP978

| | |
|----------------------|---|
| Description: | RABBIT ANTI NMDA RECEPTOR NR2B (pTyr1336) |
| Specificity: | NMDAR NR2B (pTyr1336) |
| Format: | Purified |
| Product Type: | Polyclonal Antibody |
| Isotype: | Polyclonal IgG |
| Quantity: | 0.1 ml |

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

| | Yes | No | Not Determined | Suggested Dilution |
|----------------------------|-----|----|----------------|--------------------|
| Flow Cytometry | | | ■ | |
| Immunohistology - Frozen | | | ■ | |
| Immunohistology - Paraffin | | | ■ | |
| ELISA | | | ■ | |
| Immunoprecipitation | | | ■ | |
| Western Blotting (1) | ■ | | | 1/1000 |

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) **For the detection of phosphoproteins, tyrosine phosphatase inhibitors such as 1mM Sodium Orthovanadate should be added to the sample buffer. Milk or other casein-based blocking solutions are not recommended as casein is a phosphoprotein and its use can result in high background.**

| | |
|---------------------------------|---|
| Target Species | Rat |
| Species Cross Reactivity | Based on sequence similarity, is expected to react with: Mouse, Monkey, Human N.B. Antibody reactivity and working conditions may vary between species. |
| Product Form | Purified IgG - liquid |

Antiserum Preparation Antisera to rat NMDA receptor NR2B subunit were raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG was prepared by affinity chromatography.

| | |
|------------------------|--|
| Buffer Solution | 10mM Hepes pH7.5 |
| Preservative | 0.09% Sodium Azide |
| Stabilisers | 0.01% Bovine Serum Albumin 50% Glycerol |

Immunogen Synthetic phosphopeptide corresponding to an amino acid sequence within the NR2B subunit of the NMDA receptor, which includes phosphorylated Tyr1336.

External Database Links

UniProt:
[Q00960](#) [Related reagents](#)

Entrez Gene:
[24410](#) Grin2b [Related reagents](#)

Specificity

Rabbit anti Rat NMDA receptor NR2B (pTyr1336) antibody recognizes NMDA receptor NR2B, also known as glutamate receptor ionotropic, NMDA 2B (GluN2B), glutamate [NMDA] receptor subunit epsilon-2 and N-methyl D-aspartate receptor subtype 2B (NMDAR2B), when phosphorylated at tyrosine 1336.

Receptors for NMDA belong to a group of ionotropic glutamate receptors which play a key role in the mediation of glutamate neurotransmission within the mammalian central nervous system (CNS), including involvement in memory and learning processes. Several antagonists and agonists of NMDA receptors (NMDAR) have been identified, including the glutamate analogue Homoquinolinic acid, which displays a higher affinity for NR2B-containing NMDAR. Properties of NMDAR include modulation by glycine, inhibition by Zn²⁺, voltage-dependent Mg²⁺ blockade and high Ca²⁺ permeability and the phosphorylation of tyrosine 1336 is thought to potentiate NMDAR-dependent Ca²⁺ influx.

The involvement of NMDAR in the CNS has become a focus area for neurodegenerative diseases such as Alzheimer's disease ([Popke 2003](#)) and also epilepsy and ischemic neuronal cell death.

Western Blotting

AHP978 detects a band of approximately 180kDa in rat hippocampus cell lysates.

References

1. Takasu, M.A. *et al.* (2002) Modulation of NMDA receptor-dependent calcium influx and gene expression through EphB receptors. [Science. 295 \(5554\): 491-5.](#)
 2. Rosenblum, K. *et al.* (1996) Long-term potentiation increases tyrosine phosphorylation of the N-methyl-D-aspartate receptor subunit 2B in rat dentate gyrus in vivo. [Proc Natl Acad Sci U S A. 93 \(19\): 10457-60.](#)
-

Further Reading

1. Ishii, T. *et al.* (1993) Molecular characterization of the family of the N-methyl-D-aspartate receptor subunits. [J Biol Chem. 268 \(4\): 2836-43.](#)
 2. Popke, E.J. (2003) From anticholinesterase toxicity to Alzheimer's disease: important interactions of cholinergic and NMDA receptor systems. [Toxicol Sci. 72 \(2\): 185-7.](#)
-

Storage

Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10088 available at:
10088: <https://www.bio-rad-antibodies.com/uploads/MSDS/10088.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)
Sheep Anti Rabbit IgG (2AB02...) [Biotin](#)
Sheep Anti Rabbit IgG (STAR36...) [DyLight@488](#), [DyLight@549](#), [DyLight@649](#),
[DyLight@680](#), [DyLight@800](#)

North & South America Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

Europe Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

'M313781:180403'

Printed on 27 May 2018

© 2018 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)