

# Product Datasheet

## NMDAR2B Antibody - C-terminus - Azide Free NB300-106-100ul

Unit Size: 100 ul

Store at -20C. Avoid freeze-thaw cycles.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

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Updated 9/29/2025 v.20.1

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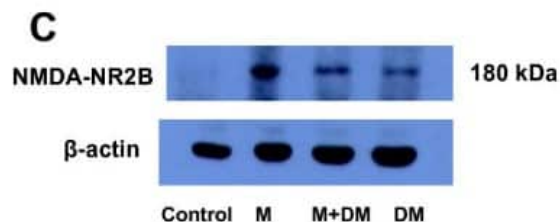
**NB300-106-100ul**

NMDAR2B Antibody - C-terminus - Azide Free

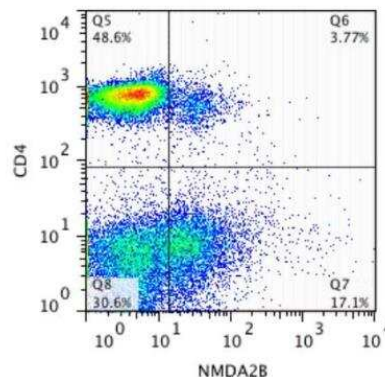
<b>Product Information</b>	
<b>Unit Size</b>	100 ul
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG
<b>Purity</b>	Antigen Affinity-purified
<b>Buffer</b>	10mM HEPES (pH 7.5), 0.15M NaCl, 0.1 mg/ml BSA and 50% Glycerol
<b>Target Molecular Weight</b>	180 kDa
<b>Product Description</b>	
<b>Description</b>	PLEASE NOTE: If 0.01mg size is ordered, product will come lyophilized from 5 mM ammonium bicarbonate. Please reconstitute lyophilized product in 50 ul phosphate buffered saline (PBS: 137 mM NaCl, 7.5 mM Na <sub>2</sub> HPO <sub>4</sub> , 2.7 mM KCl, 1.5 mM KH <sub>2</sub> PO <sub>4</sub> , pH 7.4)
<b>Host</b>	Rabbit
<b>Gene ID</b>	2904
<b>Gene Symbol</b>	GRIN2B
<b>Species</b>	Human, Mouse, Rat
<b>Specificity/Sensitivity</b>	Specific for the ~180kDa NR2B subunit of the NMDA receptor. Recognizes human, mouse and rat forms of the NR2B subunits of NMDAR. Immunolabeling is blocked by pre-adsorption of antibody with the fusion protein used to generate the antibody. No reactivity towards the NR2A and NR2C subunits.
<b>Immunogen</b>	Fusion protein from the C-terminal region of the NR2B subunit. Accession # Q00960
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot 1:1000, Flow Cytometry 1:10-1:1000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 3 ul per 200 ug lysate, Immunohistochemistry-Frozen 1:1000-1:2000
<b>Application Notes</b>	NB300-106 can be used in Western blot where a band is seen at ~ 180 kDa representing the NMDAR2B. Immunohistochemical analysis can be performed using frozen or fixed tissue sections. NB300-106 can also be used to quantitatively immunoprecipitate NMDAR2B where 3 ul will (under appropriate conditions) quantitatively immunoprecipitate all NMDAR2B in 200 mg of rat brain. NB300-106 has also been used successfully in immunofluorescence as reported in the literature (PMID: 20082293) and reported by an anonymous customer review. After reconstitution the antibody should be aliquoted and stored at -20C. Adequate amount of material to conduct 10-mini Western Blots.

## Images

Western Blot: NMDAR2B Antibody [NB300-106] - The blots show the examples of immunobands against NMDAR2B (C) and beta-actin antibodies on the membrane, which was performed on the membrane protein prepared from the lumbar spinal cords of the offspring (P14) rats in different groups. Image collected and cropped by CiteAb from the following publication (<https://www.jbiomedsci.com/content/18/1/64>) licensed under a CC-BY license.

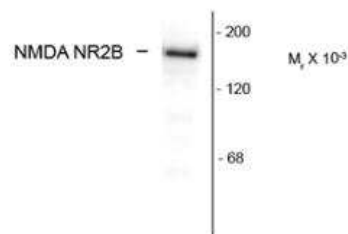


Flow Cytometry: NMDAR2B Antibody [NB300-106] - NMDA2B receptor expression on CD4+ T cells. Image supplied by review from confirmed customer.



Western Blot: NMDAR2B Antibody [NB300-106]

Anti-NMDA Receptor, NR2B subunit



Western blot of rat hippocampal lysate showing specific immunolabeling of the 180k NR2B subunit of the NMDA receptor.

## Publications

Kl□ssendorf M, Song I, Schau L et al. The Golgi-Associated PDZ Domain Protein Gopc/PIST Is Required for Synaptic Targeting of mGluR5 Molecular Neurobiology 2021-11-01 [PMID: 34383253]

Zhang N, Zhang Z, He R et al. GLAST-CreER(T2) mediated deletion of GDNF increases brain damage and exacerbates long-term stroke outcomes after focal ischemic stroke in mouse model Glia 2020-06-04 [PMID: 32497340]

Ahmed Eltokhi, Miguel A. Gonzalez-Lozano, Lars-Lennart Oettl, Andrey Rozov, Claudia Pitzer, Ralph Rōth, Simone Berkel, Markus Hüser, Aliona Harten, Wolfgang Kelsch, August B. Smit, Gudrun A. Rappold, Rolf Sprengel Imbalanced post- and extrasynaptic SHANK2A functions during development affect social behavior in SHANK2-mediated neuropsychiatric disorders Molecular Psychiatry 2021-05-21 [PMID: 34021263]

Yu XJ, Xiao T, Liu XJ et al. Effects of Nrf1 in Hypothalamic Paraventricular Nucleus on Regulating the Blood Pressure During Hypertension Frontiers in neuroscience 2021-12-06 [PMID: 34938159] (WB, Rat)

Hassani Nia, F, Woike, D Et al. Targeting of delta-catenin to postsynaptic sites through interaction with the Shank3 N-terminus. Mol Autism 2020-10-28 [PMID: 33115499] (IF/IHC, Mouse)

Guadagno A, Verlezza S, Long H et al. It is all in the right amygdala: increased synaptic plasticity and perineuronal nets in male, but not female juvenile rat pups after exposure to early-life stress J. Neurosci. 2020-09-25 [PMID: 32978287]

TrovO L, Fuchs C, De Rosa R et al. The green tea polyphenol epigallocatechin-3-gallate (EGCG) restores CDKL5-dependent synaptic defects in vitro and in vivo Neurobiol. Dis. 2020-02-04 [PMID: 32032735] (WB, Mouse)

Schluter A, Aksan B, Diem R et al. VEGFD Protects Retinal Ganglion Cells and, consequently, Capillaries against Excitotoxic Injury Molecular Therapy - Methods & Clinical Development 2020-06-01 [PMID: 32055648] (WB, Human, Mouse)

Head BP, Patel HH, Tsutsumi YM et al. Caveolin-1 expression is essential for N-methyl-D-aspartate receptor-mediated Src and extracellular signal-regulated kinase 1/2 activation and protection of primary neurons from ischemic cell death. FASEB J. 2008-03-01 [PMID: 17905724] (ICC/IF, Mouse)

### Details:

IF/ICC: Cultured mouse cortical neurons, Fig 2.

Kermath BA, Riha PD, Sajjad A, Gore AC. Effects of Chronic NMDA-NR2b Inhibition in the Median Eminence of the Reproductive Senescent Female Rat. J Neuroendocrinol. 2013-10-01 [PMID: 23957788] (ICC/IF, IF/IHC, Rat)

Park CS, Elgersma Y, Grant SG et al. alpha-Isoform of calcium-calmodulin-dependent protein kinase II and postsynaptic density protein 95 differentially regulate synaptic expression of NR2A- and NR2B-containing N-methyl-d-aspartate receptors in hippocampus. Neuroscience 2008-01-02 [PMID: 18082335] (WB, Rat)

Maffucci JA, Noel ML, Gillette R et al. Age- and hormone-regulation of N-methyl-D-aspartate receptor subunit NR2b in the anteroventral periventricular nucleus of the female rat: implications for reproductive senescence. J Neuroendocrinol 2009-05-01 [PMID: 19302193] (IF/IHC, ICC/IF, Rat)

More publications at <http://www.novusbio.com/NB300-106>

## Procedures

### Western Blot protocol for NMDAR2B Antibody (NB300-106)

#### Western Blot Protocol

Thoroughly sonicate tissue in the following buffer:

1 % SDS (hot, but not boiling, ~ 90C )

10 mM Tris pH 8.0

1 mM EDTA

1. Dilute in appropriate SDS PAGE sample buffer and boil for 5 minutes at 100 C. Let samples cool to room temperature then load onto gel.
2. Run SDS-PAGE per gel apparatus manufacturer's instructions.
3. Transfer proteins to nitrocellulose or PVDF membrane (if using PVDF, be sure to activate membrane in Methanol prior to use).
4. After transfer, air-dry blot (~15 min.) to more stably fix proteins onto membrane.
5. Block non-specific sites on membrane in 5% NFDM (Non-fat dry milk) -TTBS(Tris-Buffered Saline + 0.1% Tween-20) for 1 hour while shaking at room temperature.
6. Incubate membrane in primary antibody diluted 1:1,000 in 1% NFDM -TTBS while shaking overnight at 4 C.
7. Decant unbound primary antibody solution and wash blot 3 x 10 minutes in TTBS.
8. Incubate blots in appropriate HRP-conjugated (for ECL detection) secondary antibody at a 1:10,000 dilution in 1% NFDM-TTBS for 1 hour while shaking at room temperature.
9. Decant secondary antibody solution and wash blots 3 x 10 minutes in TTBS or use TBS + 0.1% Triton X-100 to reduce excessive background if needed.
10. ECL Detect. (We recommend Pierce's Super Signal West Dura)





### Novus Biologicals USA

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### Bio-Techne Canada

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### Bio-Techne Ltd

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### General Contact Information

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### Products Related to NB300-106-100ul

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HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
H00002904-Q01-10ug	Recombinant Human NMDAR2B GST (N-Term) Protein

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### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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