

Product Datasheet

NMDAR1 Antibody (R1JHL) - Azide and BSA Free NB300-118

Unit Size: 0.015 mg

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

www.novusbio.com



technical@novusbio.com

Reviews: 14 Publications: 22

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB300-118

Updated 10/23/2024 v.20.1

**Earn rewards for product
reviews and publications.**

Submit a publication at www.novusbio.com/publications

Submit a review at www.novusbio.com/reviews/destination/NB300-118



NB300-118

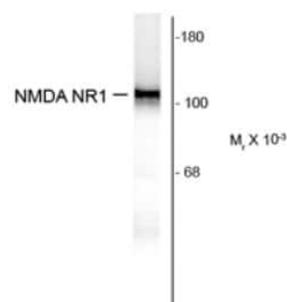
NMDAR1 Antibody (R1JHL) - Azide and BSA Free

Product Information	
Unit Size	0.015 mg
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	R1JHL
Preservative	No Preservative
Reconstitution Instructions	Reconstitute with 50 ul PBS to desired concentration.
Isotype	IgG
Purity	Tissue culture supernatant
Target Molecular Weight	120 kDa
Product Description	
Description	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 uL/vial depending on usage).
Host	Mouse
Gene ID	2902
Gene Symbol	GRIN1
Species	Human, Mouse, Rat
Reactivity Notes	Human reactivity reported in scientific literature (PMID: 20414717). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
Marker	Neuronal Marker
Specificity/Sensitivity	Specific for endogenous levels of the ~120 kDa NR1 subunit of the NMDA receptor.
Immunogen	Fusion protein containing amino acids 1-564 of the NMDAR1 subunit. Accession # P35439
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation 3ug/200ug lysate, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen 1 ug per ml
Application Notes	Use in ICC/IF and IHC-F reported in scientific literature (PMID: 20414717). Use in IHC-P reported in scientific literature (PMID 26635527).

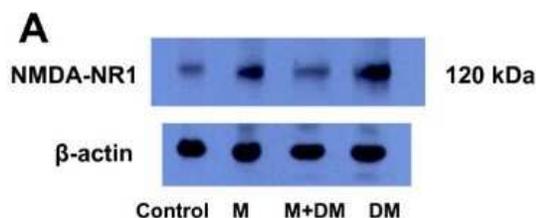
Images

Western Blot: NMDAR1 Antibody (R1JHL) [NB300-118] - 10 ug of rat hippocampal lysate showing specific immunolabeling of the ~120 kDa NR1 subunit of the NMDA receptor.

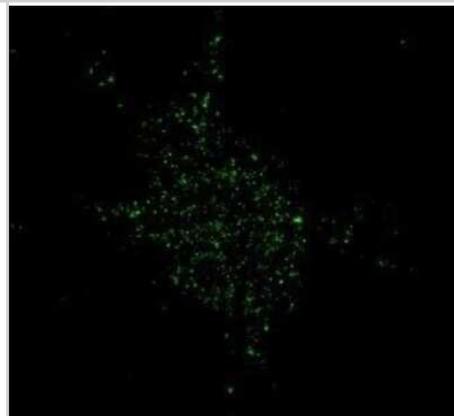
Anti-NMDAR, NR1 Subunit



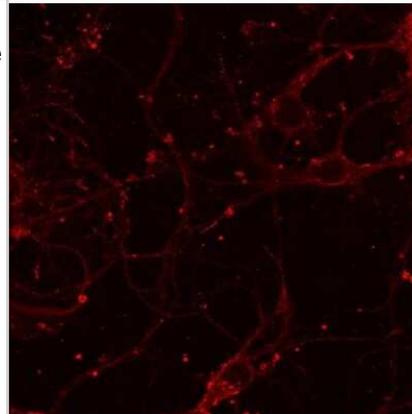
Western Blot: NMDAR1 Antibody (R1JHL) [NB300-118] - The blots show the examples of immunobands against NMDAR1 and beta-actin antibodies on the membrane, which was performed on the membrane protein prepared from the lumbar spinal cords of the offspring (P14) rats in different groups. Image collected and cropped by CiteAb from the following publication (<https://www.jbiomedsci.com/content/18/1/64>) licensed under a CC-BY license.



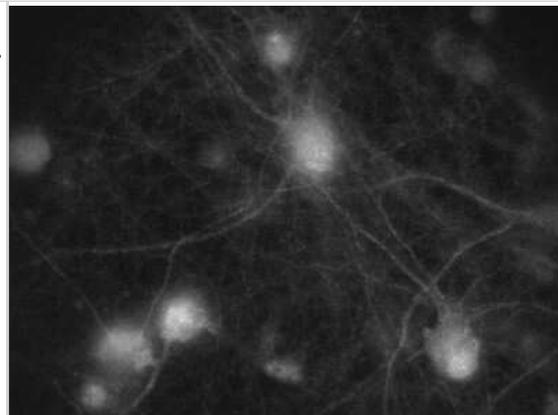
Immunocytochemistry/Immunofluorescence: NMDAR1 Antibody (R1JHL) [NB300-118] - NR1 surface staining of mouse cortical neurons. This image was submitted via customer Review.



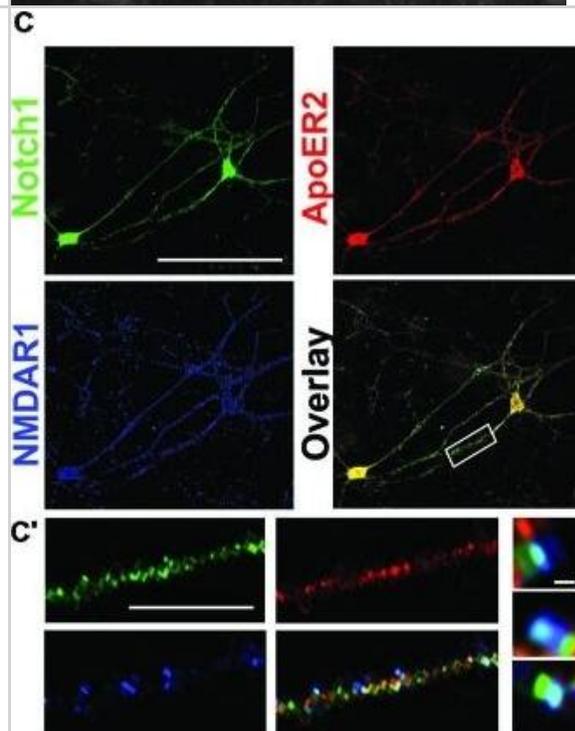
Immunocytochemistry/Immunofluorescence: NMDAR1 Antibody (R1JHL) [NB300-118] - Mouse neuron stained with anti-NMDAR1 antibody. Image from verified customer review.



Immunocytochemistry/Immunofluorescence: NMDAR1 Antibody (R1JHL) [NB300-118] - Mixed rat cortical cultures (21 DIV) were labelled with anti-NMDAR1 (1:200) and anti-mouse CF568 (1:250). The antibody labels small punctae along the neuronal processes. No distinct features such as spines are visible. This image was submitted via customer Review.



Immunocytochemistry/ Immunofluorescence: NMDAR1 Antibody (R1JHL) - Azide and BSA Free [NB300-118] - Notch1 colocalizes postsynaptically with Reelin signaling components. (A) Representative IEM images from hippocampal slices using an antibody specific for Notch1 show that gold particles are localized at postsynaptic as well as presynaptic membrane terminals. (B) Bar graph summarizing the counting of gold particles on the length of presynaptic & postsynaptic membranes indicates that the majority of the Notch1 gold particles are localized postsynaptically ($5 \times 10^{-3} \pm 0.8 \times 10^{-3}$ vs. $2 \times 10^{-3} \pm 0.4 \times 10^{-3}$, $n = 3$ mice; Student's t-test, $p < 0.01$). (C) Fluorescent immunolabeling on 14 days primary neuronal WT cultures shows colocalization of Notch1 & ApoER2 in soma & processes of pyramidal neurons. Both Notch1 & ApoER2 are similarly co-expressed in NMDAR1 positive puncta ($R = 0.92 \pm 0.03$ & $R = 0.86 \pm 0.08$, respectively; Student's t-test, $p = 0.23$). (C') Close up of a dendrite displaying Notch1, ApoER2 & NMDAR1 expression & "zoom in" captions of puncta showing clustering of the three receptors in teal. (D) Fluorescent immunolabeling on primary neuronal cultures shows that Notch1 & Dab1 localize in the same pyramidal neuron's soma & processes labeled by phalloidin ($R = 0.87 \pm 0.06$ & $R = 0.74 \pm 0.07$ respectively; Student's t-test, $p = 0.5$). (D') Close up of a dendrite with Notch1, Dab1 & F-actin labeling & "zoom in" captions of dendritic puncta showing clustering of Notch1, Dab1 & F-actin in teal. $**p < 0.01$. Error bars are SEM & scale bar in (A) is 200 nm for all IEM panels, in (C,D) 50 μm & in (C',D') 10 μm & 500 nm in zoom in captions. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/26635527>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Lin YH, Yamahashi Y, Kuroda K, Faruk MO et Al. Accumbal D2R-medium spiny neurons regulate aversive behaviors through PKA-Rap1 pathway *Neurochem Int* 2020-12-10 [PMID: 33301817]

Mireia Carcolé, Sami Kummer, Leonor Gonçalves, Daniel Zamanillo, Manuel Merlos, Anthony H. Dickenson, Begonia Fernández-Pastor, David Cabañero, Rafael Maldonado σ_1 receptor modulates neuroinflammation associated with mechanical hypersensitivity and opioid tolerance in a mouse model of osteoarthritis pain *British Journal of Pharmacology* 2019-09-12 [PMID: 31332781]

Perri RGB, Mantello AG, Rosa DS, Beleboni RO. Silencing of the GluN1-NMDA Glutamate Receptor Subunit by Intranasal siRNA Increases the Latency Time for Seizures in the Pilocarpine Rodent Model of Epilepsy *Pharmaceuticals (Basel)* 2022-11-26 [PMID: 36558924] (Block/Neutralize)

Hossen E, Funahashi Y, Faruk M et al. Rho-Kinase/ROCK Phosphorylates PSD-93 Downstream of NMDARs to Orchestrate Synaptic Plasticity *International Journal of Molecular Sciences* 2022-12-26 [PMID: 36613848] (WB, Mouse)

Rahim M, Yoon Y, Dimovasili C et al. PS1 familial Alzheimer disease mutants inactivate EFNB1- and BDNF-dependent neuroprotection against excitotoxicity by affecting neuroprotective complexes of NMDA receptor *Brain Commun* 2020-10-02 [PMID: 33005890]

Yamahashi Y, Lin YH, Mouri A et al. Phosphoproteomic of the acetylcholine pathway enables discovery of the PKC-beta-PIX-Rac1-PAK cascade as a stimulatory signal for aversive learning *Molecular psychiatry* 2022-06-03 [PMID: 35665767] (WB)

Wang, Y, Kerrisk Campbell, M Et al. PCDH7 interacts with GluN1 and regulates dendritic spine morphology and synaptic function. *Sci Rep* 2020-07-02 [PMID: 32616769] (FLOW, Rat)

Details:

Citation using the Alexa Fluor 647 format of this antibody.

Staats KA, Seah C, Sahimi A, Wang Y Small molecule inhibition of PIKFYVE kinase rescues gain-and loss-of-function C9ORF72 ALS/FTD disease processes in vivo *bioRxiv* 2019-06-28 (WB, Mouse)

Shi Y, Hung ST, Rocha G et al. Identification and therapeutic rescue of autophagosome and glutamate receptor defects in C9ORF72 and sporadic ALS neurons *JCI Insight* 2019-07-16 [PMID: 31310593] (WB, Human)

Stewart M, Lau P, Banks G et al. Loss of *Frrs11* disrupts synaptic AMPA receptor function, and results in neurodevelopmental, motor, cognitive and electrophysiological abnormalities *Dis Model Mech* 2019-02-22 [PMID: 30692144] (WB, Mouse)

Stewart ME. Development of high-throughput, non-invasive behavioural and cognitive tests in mice to uncover new mechanisms of abnormal cognition and behaviour *Thesis* 1905-07-10 (Mouse)

Shi Y, Lin S, Staats KA, Li Y. Haploinsufficiency leads to neurodegeneration in C9ORF72 ALS/FTD human induced motor neurons. *Nat. Med.* 2018-02-05 [PMID: 29400714] (Human)

More publications at <http://www.novusbio.com/NB300-118>



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 NB300-118

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97019-5mg	Mouse IgG Isotype Control
H00002902-G01-10ug	Recombinant Human NMDAR1 Protein

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB300-118

Earn gift cards/discounts by submitting a publication using this product:
www.novusbio.com/publications

