Product Datasheet

NMDAR2A Antibody
NB300-105-100ul

Unit Size: 100 ul

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

Publications: 8

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Updated 7/23/2019 v.20.1

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**NB300-105-100ul**

**NMDAR2A Antibody**

### Product Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Unit Size</strong></td>
<td>100 ul</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>0.1 mg/ml</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Store at -20C. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Preservative</strong></td>
<td>No Preservative</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td><strong>Buffer</strong></td>
<td>10mM HEPES (pH 7.5), 0.15M NaCl, 0.1 mg/ml BSA and 50% Glycerol</td>
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<tr>
<td><strong>Target Molecular Weight</strong></td>
<td>180 kDa</td>
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</table>

### Product Description

**Host**

Rabbit

**Gene ID**

2903

**Gene Symbol**

GRIN2A

**Species**

Human, Mouse, Rat, Rabbit

**Specificity/Sensitivity**

Specific for the ~180k NR2A subunit of the NMDA receptor. Recognizes human, mouse and rat forms of the NR2A subunit of NMDAR. No reactivity towards the NR2B and NR2C subunits. Immunolabeling is blocked by pre-adsorption of antibody with the fusion protein used to generate the antibody.

**Immunogen**

Fusion protein from the C-terminal region of the NR2A subunit

**Notes**

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 Na2HPO4, 2.7 mM KCl, 1.5 mM KH2PO4, pH 7.4)

### Product Application Details

**Applications**

Western Blot, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation

**Recommended Dilutions**


**Application Notes**

NB 300-105 can be used in Western blot where a band is seen at ~ 180 kDa representing the NMDAR2A.
Western Blot: NMDAR2A Antibody [NB300-105]

Immunohistochemistry: NMDAR2A Antibody [NB300-105] - Immunostaining of rabbit retina showing NR2A in the rod and cone photoreceptors in the outer plexiform layer as well as the entire inner plexiform layer.
### Publications

<table>
<thead>
<tr>
<th>Reference</th>
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<tbody>
<tr>
<td>Koster, KP; Francesconi, W; Berton, F; Alahmadi, S; Srinivas, R; Yoshii, A. Developmental NMDA receptor dysregulation in the infantile neuronal ceroid lipofuscinosis mouse model Elife Apr 4 2019 12:00AM [PMID: 30946007] (WB, Mouse)</td>
<td></td>
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<tr>
<td>Koster K, Francesconi W, Berton F et al. NMDA Receptor Dysregulation by Defective Depalmitoylation in the Infantile Neuronal Ceroid Lipofuscinosis Mouse Model bioRxiv Aug 13 2018 12:00AM (WB, Mouse)</td>
<td></td>
</tr>
<tr>
<td>Lo SC, Wang Y, Weber M et al. Caspase-3 deficiency results in disrupted synaptic homeostasis and impaired attention control J. Neurosci. 2015 Feb 04 [PMID: 25653368] (WB, Mouse)</td>
<td>Details: NMDAR2A (GluN2A/NR2A) antibody used for WB analysis of the lysates from hippocampus tissues which were collected from experienced mice (11 months of age; tissues collected 1 month after the last behavior testing) from WT and Casp3−/− mice genotypes previously subjected to repeated challenges with new behavioral testing (Figure 7B).</td>
</tr>
<tr>
<td>Ning, K et al. Dual Neuroprotective Signaling Mediated by Downregulating Two Distinct Phosphatase Activities of PTEN. The Journal of Neuroscience 24: 4052-4060. 2004 [PMID: 15102920] (WB, IP, Rat)</td>
<td></td>
</tr>
<tr>
<td>Das SR, Magnusson KR. Changes in expression of splice cassettes of NMDA receptor GluN1 subunits within the frontal lobe and memory in mice during aging. Behav Brain Res;222(1):122-133. 2011 Sep 12. [PMID: 21443909] (WB, Mouse)</td>
<td></td>
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</tbody>
</table>
Procedures

Western Blot Protocol specific for NMDAR2A Antibody (NB300-105)

Western Blot:

**For brain tissue homogenize in hot 1% SDS then run 7.5 % (as 2A is ~ 180 kDa) standard SDS gels and blot.

1. Thoroughly sonicate cell lysates or tissue homogenates to be loaded onto gel then dilute in appropriate sample buffer and boil for 5 minutes at 100C. 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 to more stably fix proteins onto membrane.
5. Block non-specific sites on membrane in 5% NFDM (Non-fat dry milk) or 3% BSA-TTBS (Tris-Buffered Saline + 0.1% Tween-20) for 1 hour while shaking at room temperature.
6. Incubate membrane in primary antibody diluted in 1% NFDM (or BSA)-TTBS while shaking overnight at 4C.
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 -1:20,000 dilution in 1% Milk (or BSA)-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(R) X-100 to reduce excessive background if needed.
10. ECL Detect.
**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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**Products Related to NB300-105-100ul**

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>HAF008</td>
<td>Goat anti-Rabbit IgG Secondary Antibody [HRP (Horseradish Peroxidase)]</td>
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<tr>
<td>NB7156</td>
<td>Goat anti-Rabbit IgG (H+L) Secondary Antibody</td>
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<tr>
<td>NBP2-24891</td>
<td>Rabbit IgG Isotype Control</td>
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<tr>
<td>NBP2-64698</td>
<td>NMDAR2D Knockout HeLa Cell Lysate</td>
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