

## Product datasheet

# Anti-NMDAR1 antibody [N308/48] - Neuronal Marker ab134308

[12 References](#) [4 Images](#)

### Overview

<b>Product name</b>	Anti-NMDAR1 antibody [N308/48] - Neuronal Marker
<b>Description</b>	Mouse monoclonal [N308/48] to NMDAR1 - Neuronal Marker
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt, WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Fusion protein corresponding to Rat NMDAR1 aa 1-400 (Hinge). Database link: <a href="#">P35439</a>
<b>Positive control</b>	WB: Human, Mouse and Rat brain membrane tissue lysate, Neuro-2a cell lysate. ICC/IF: SK-N-BE cells. Flow Cyt: SH-SY5Y cells.
<b>General notes</b>	<p>The clone number has been updated from S308-48 to N308/48, both clone numbers name the same antibody clone.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 49% PBS, 50% Glycerol
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	N308/48
<b>Isotype</b>	IgG1

## Applications

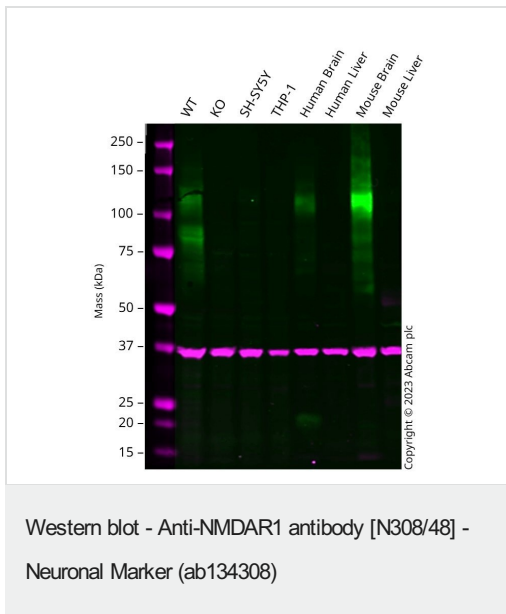
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab134308 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration.
WB		1/1000. Predicted molecular weight: 105 kDa.
ICC/IF		1/100.

## Target

<b>Function</b>	NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine. This protein plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. It mediates neuronal functions in glutamate neurotransmission. Is involved in the cell surface targeting of NMDA receptors.
<b>Sequence similarities</b>	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR1/GRIN1 subfamily.
<b>Post-translational modifications</b>	NMDA is probably regulated by C-terminal phosphorylation of an isoform of NR1 by PKC. Dephosphorylated on Ser-897 probably by protein phosphatase 2A (PPP2CB). Its phosphorylated state is influenced by the formation of the NMDAR-PPP2CB complex and the NMDAR channel activity.
<b>Cellular localization</b>	Cell membrane. Cell junction > synapse > postsynaptic cell membrane. Cell junction > synapse > postsynaptic cell membrane > postsynaptic density. Enriched in post-synaptic plasma membrane and post-synaptic densities.

## Images



**All lanes :** Anti-NMDAR1 antibody [N308/48] - Neuronal Marker (ab134308) at 1/1000 dilution

**Lane 1 :** Wild-type Neuro-2a cell lysate

**Lane 2 :** GRIN1 knockout Neuro-2a cell lysate

**Lane 3 :** SH-SY5Y UNBOILED cell lysate

**Lane 4 :** THP-1 UNBOILED cell lysate

**Lane 5 :** Human Brain UNBOILED cell lysate

**Lane 6 :** Human Liver UNBOILED cell lysate

**Lane 7 :** Mouse Brain UNBOILED cell lysate

**Lane 8 :** Mouse Liver UNBOILED cell lysate

Lysates/proteins at 20 µg per lane.

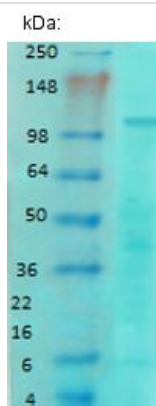
Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

Western blot: Anti-GRIN1 antibody [N308/48] (ab134308) staining at 1/1000 dilution, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] ([ab181602](#)) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab134308 was shown to bind specifically to GRIN1. A band was observed at 120 kDa in wild-type Neuro-2a cell lysates with no signal observed at this size in GRIN1 knockout cell line [ab281960](#) (knockout cell lysate [ab282987](#)). To generate this image, unboiled wild-type and GRIN1 knockout Neuro-2a cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L 800CW and Goat anti-Rabbit IgG H&L 680RD at 1/20000 dilution.



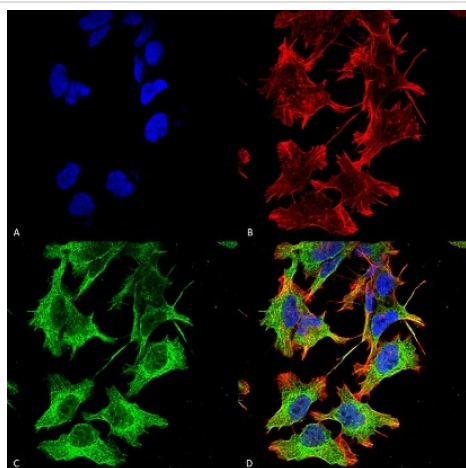
Western blot - Anti-NMDAR1 antibody [N308/48] - Neuronal Marker (ab134308)

Anti-NMDAR1 antibody [N308/48] - Neuronal Marker (ab134308) at 1/1000 dilution + Rat brain membrane tissue lysate

### Secondary

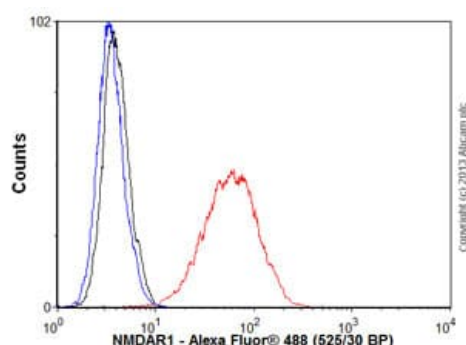
Goat anti-mouse IgG HRP

**Predicted band size:** 105 kDa



Immunocytochemistry/ Immunofluorescence - Anti-NMDAR1 antibody [N308/48] - Neuronal Marker (ab134308)

SK-N-BE cells labeling NMDAR1 using ab134308 at 1/100 dilution in ICC/IF. Cells were fixed using 4% formaldehyde for 15 minutes at room temperature. Incubated with primary antibody for 1 hour at room temperature. Secondary antibody was a goat anti-mouse ATTO 488 (green) at 1/100 dilution for 1 hour at room temperature. Counterstained with Phalloidin Texas Red F-actin stain. Nuclei were stained with DAPI (blue).



Flow Cytometry - Anti-NMDAR1 antibody [N308/48] - Neuronal Marker (ab134308)

Overlay histogram showing SH-SY5Y cells stained with ab134308 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab134308, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (**ab150113**) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 1µg/1x10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW

Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive result in 80% methanol (5 min) fixed SH-SY5Y cells used under the same conditions. Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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