

## Product datasheet

# Anti-NMDAR2B antibody ab65783

★★★★★ 5 Abreviews 47 References 5 Images

### Overview

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<b>Product name</b>	Anti-NMDAR2B antibody
<b>Description</b>	Rabbit polyclonal to NMDAR2B
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rat, Chicken, Dog, Xenopus laevis, Zebrafish 
<b>Immunogen</b>	Synthetic peptide conjugated to KLH derived from within residues 1450 to the C-terminus of Rat NMDAR2B. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab71176</a> .)
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -

80°C. Avoid freeze / thaw cycle.

#### Storage buffer

pH: 7.40

Preservative: 0.02% Sodium azide

Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

#### Purity

Immunogen affinity purified

#### Clonality

Polyclonal

#### Isotype

IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab65783** 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
WB	★★★★☆	Use a concentration of 1 µg/ml. Detects a band of approximately 180 kDa (predicted molecular weight: 166 kDa).
ICC/IF		Use a concentration of 5 µg/ml.
IP		Use a concentration of 5 µg/ml.

### Target

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#### Function

NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine.

#### Tissue specificity

Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia.

#### Sequence similarities

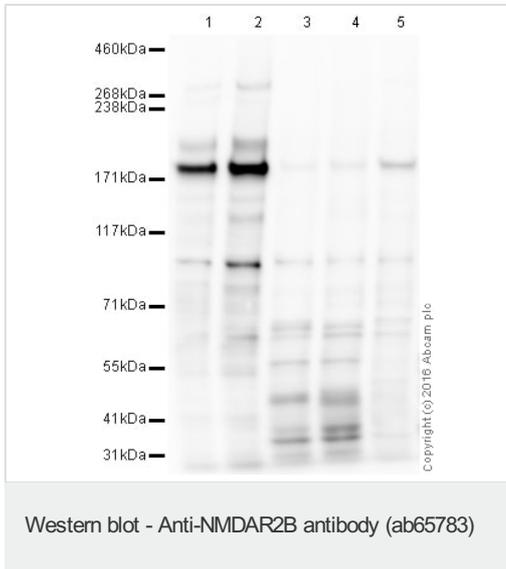
Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR2B/GRIN2B subfamily.

#### Cellular localization

Cell membrane. Cell junction > synapse > postsynaptic cell membrane.

### Images

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**All lanes :** Anti-NMDAR2B antibody (ab65783) at 1 µg/ml

**Lane 1 :** Rat Hippocampus Tissue Lysate at 10 µg

**Lane 2 :** Mouse Hippocampus Tissue Lysate ([ab48631](#)) at 10 µg

**Lane 3 :** Human brain tissue lysate - total protein ([ab29466](#)) at 20 µg

**Lane 4 :** Human brain hippocampus tissue lysate - total protein ([ab30180](#)) at 20 µg

**Lane 5 :** Human brain amygdala tissue lysate - total protein at 10 µg

### Secondary

**All lanes :** Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 166 kDa

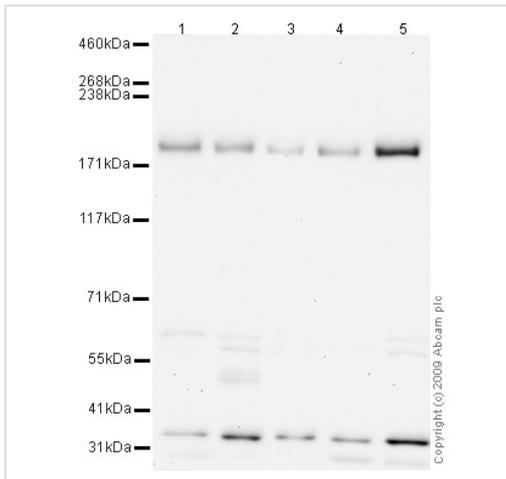
**Observed band size:** 180 kDa

[why is the actual band size different from the predicted?](#)

**Additional bands at:** 100 kDa, 200 kDa, 35 kDa, 45 kDa, 56 kDa, 65 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 8 minutes

This blot was produced using a 3-8% Tris Acetate gel under the TA buffer system. The gel was run at 150V for 60 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab65783 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution [ab133406](#).



Western blot - Anti-NMDAR2B antibody (ab65783)

**All lanes** : Anti-NMDAR2B antibody (ab65783) at 1 µg/ml

**Lane 1** : Human brain tissue lysate - total protein ([ab29466](#))

**Lane 2** : Brain (Mouse) Tissue Lysate

**Lane 3** : Brain (Rat) Tissue Lysate

**Lane 4** : Hippocampus (Mouse) Tissue Lysate

**Lane 5** : Rat Hippocampus Tissue Lysate

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes** : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

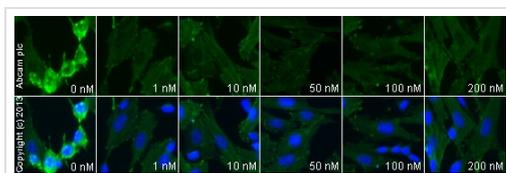
**Predicted band size:** 166 kDa

**Observed band size:** 180 kDa [why is the actual band size different from the predicted?](#)

**Additional bands at:** 35 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 1 minute

NMDAR2B contains a number of potential phosphorylation and glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.

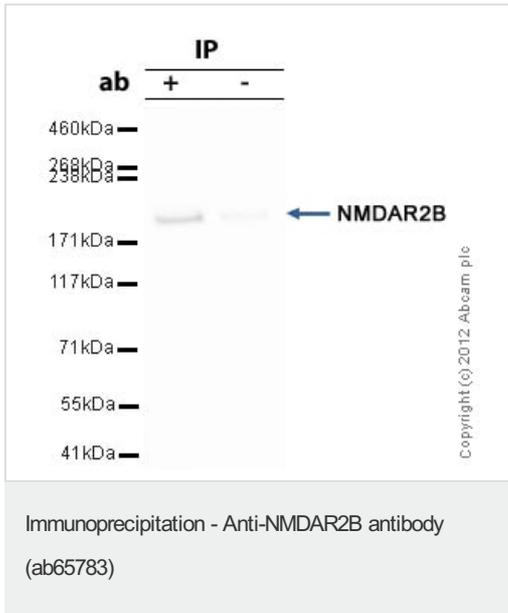


Immunocytochemistry/ Immunofluorescence - Anti-NMDAR2B antibody (ab65783)

ab65783 staining NR2B in SKNSH cells treated with GBR 12909 dihydrochloride ([ab120607](#)), by ICC/IF. Decrease in NR2B expression correlates with increased concentration of GBR 12909 dihydrochloride, as described in literature.

The cells were incubated at 37°C for 10 minutes in media containing different concentrations of [ab120607](#) (GBR 12909 dihydrochloride) in DMSO, fixed with 100% methanol for 5 minutes at -20°C and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab65783 (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-rabbit polyclonal antibody ([ab96899](#)) at 1/250 dilution was used as the secondary antibody. Nuclei were

counterstained with DAPI and are shown in blue.



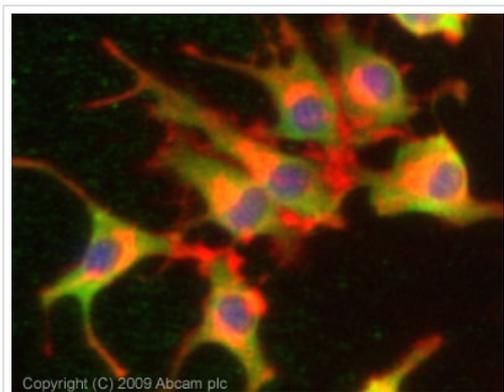
NMDAR2B was immunoprecipitated using 0.5mg Mouse Brain tissue lysate, 5µg of Rabbit polyclonal to NMDAR2B and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Mouse Brain tissue lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab65783.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).

Band: 180kDa; NMDAR2B



ICC/IF image of ab65783 stained PC12 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab65783, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 4% PFA fixed (10 min) PC12 cells at 5µg/ml.

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

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