abcam

Product datasheet

Anti-NMDAR2B antibody ab65783

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Overview

Product name	Anti-NMDAR2B antibody
Description	Rabbit polyclonal to NMDAR2B
Host species	Rabbit
Specificity	Replenishment batches of our polyclonal antibody, ab65783 are tested in WB. Previous batches were additionally validated in ICC/IF, IHC-FoFr and IP. These applications are still expected to work and are covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, **ab254356**.
Tested applications	**Suitable for:** WB, ICC/IF, IP, IHC-FoFr
Species reactivity	**Reacts with:** Mouse, Rat, Chicken, Human, Xenopus laevis **Predicted to work with:** Dog
Immunogen	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 **ab71176**.)
General notes	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. 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&As

Properties

Form	Liquid
Storage instructions	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

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab65783 in the following tested applications.

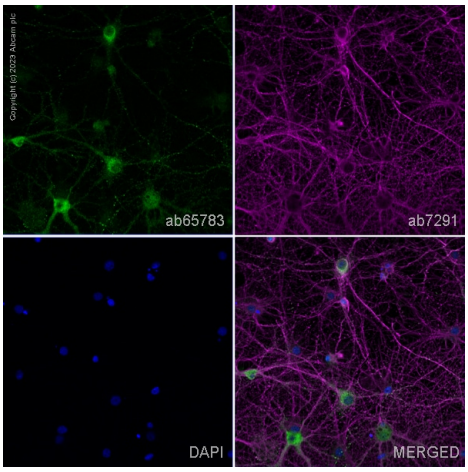
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ (3)	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.
IHC-FoFr	★★★★☆ (1)	Use at an assay dependent concentration.

Target

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.

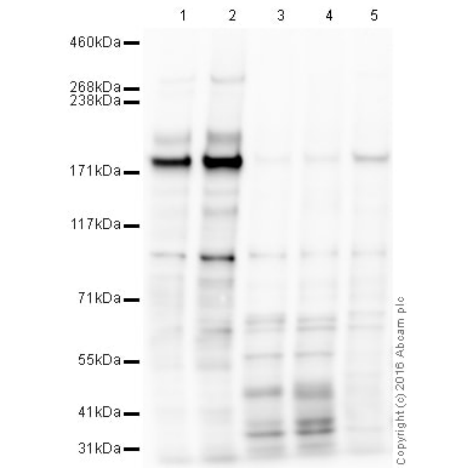
Images



Immunocytochemistry/ Immunofluorescence - Anti-NMDAR2B antibody (ab65783)

ab65783 staining NMDAR2B in Rat Primary Neurons DIV14 cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab65783 at 1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown..



Western blot - Anti-NMDAR2B antibody (ab65783)

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 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

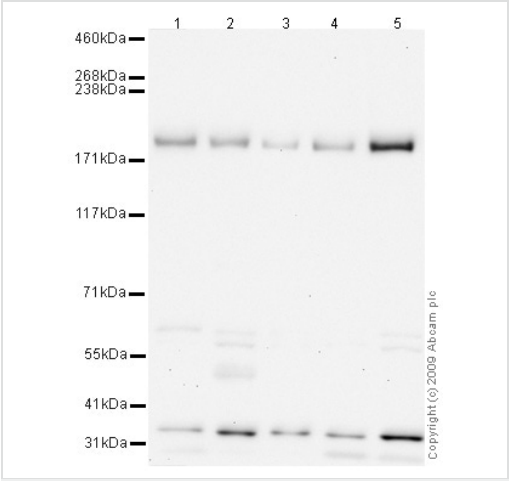
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 166 kDa
Observed band size: 180 kDa
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.

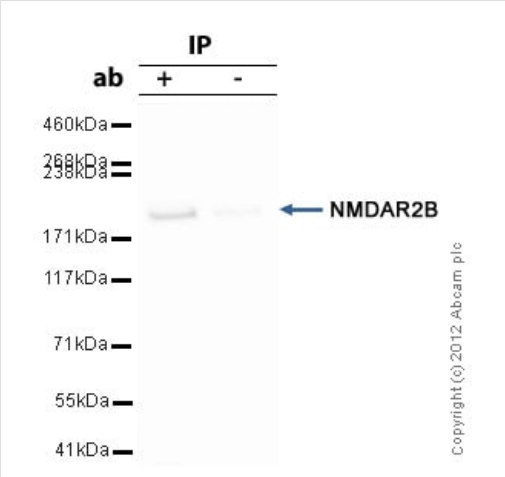
Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 166 kDa
Observed band size: 180 kDa
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.



Immunoprecipitation - Anti-NMDAR2B antibody (ab65783)

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 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^{o}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

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