abcam

Product datasheet

Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker ab68144

Recombinant   RabMAb

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Overview

Product name	Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker
Description	Rabbit monoclonal [EPR2480Y] to NMDAR1 - Neuronal Marker
Host species	Rabbit
Specificity	This antibody was raised against a phosphorylated peptide however the antibody recognises phosphorylated and non-phosphorylated protein.
Tested applications	**Suitable for:** WB **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Mouse brain lysate; human brain tissue
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant

Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR2480Y
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab68144 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		1/1000 - 1/2000. Detects a band of approximately 105 kDa (predicted molecular weight: 105 kDa).

Application notes	Is unsuitable for Flow Cyt or ICC/IF.

Target

Function	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.
Sequence similarities	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR1/GRIN1 subfamily.
Post-translational modifications	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.
Cellular localization	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

Western blot - Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker (ab68144)
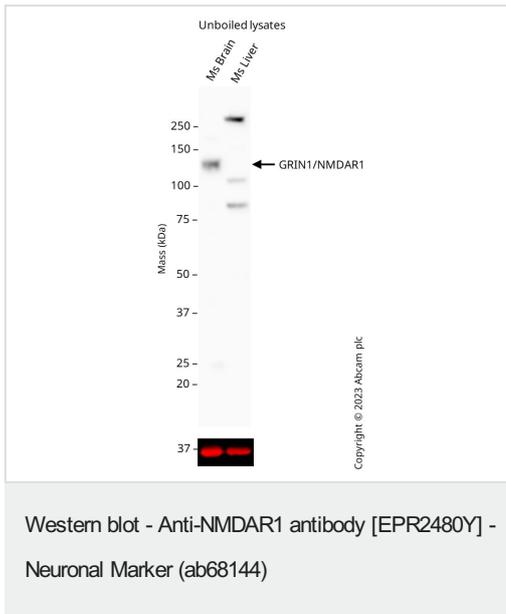
All lanes : Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker (ab68144) at 1/1000 dilution

Lane 1 : Mouse Brain (unboiled) cell lysate

Lane 2 : Mouse Liver (unboiled) cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 105 kDa
Observed band size: 120 kDa

Anti-GRIN1 antibody [EPR2480Y] (ab68144) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab68144 was shown to bind specifically to GRIN1. First, unboiled 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 HRP conjugated Goat anti-Rabbit (H+L) and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
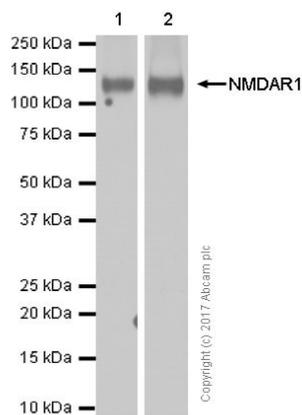
Western blot - Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker (ab68144)

All lanes : Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker (ab68144) at 1/1000 dilution

Lane 1 : Human fetal brain cell lysate

Lane 2 : Human forebrain cell lysate

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 105 kDa

Observed band size: 120 kDa

Exposure time: 30 seconds

Blocking/diluting buffer: 5% NFDM/TBST

Anti-NMDAR1 antibody [EPR2480Y] - Neuronal Marker (ab68144)

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