

### Anti-NMDAR1 antibody [EPR2481(2)] ab109182

敲除验证
重组
RabMAb

★★★★☆
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#### 概述

产品名称	Anti-NMDAR1抗体[EPR2481(2)]
描述	兔单克隆抗体[EPR2481(2)] to NMDAR1
宿主	Rabbit
经测试应用	<b>适用于:</b> WB, ICC/IF <b>不适用于:</b> IHC-P
种属反应性	<b>与反应:</b> Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	Fetal brain cell lysate. ICC/IF: Mouse primary neuron cells
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR2481(2)
同种型	IgG

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab109182于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB	★★★★☆ (4)	1/1000 - 1/10000. Detects a band of approximately 120 kDa (predicted molecular weight: 105 kDa).
ICC/IF		1/50.

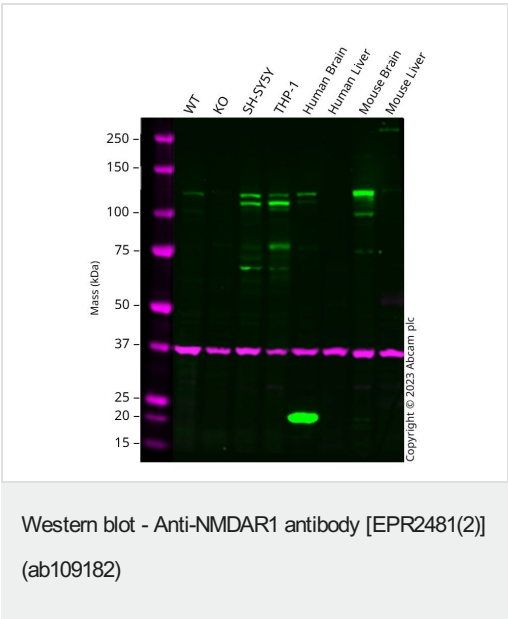
应用说明

Is unsuitable for IHC-P.

靶标

功能	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.
序列相似性	Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR1/GRIN1 subfamily.
翻译后修饰	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.
细胞定位	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.

图片



All lanes : Anti-NMDAR1 antibody [EPR2481(2)] (ab109182) 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

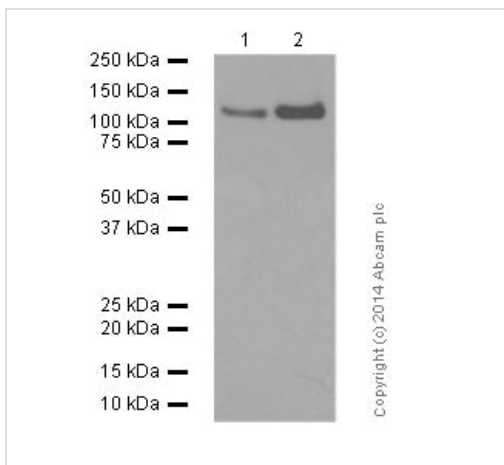
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

Western blot: Anti-GRIN1 antibody [EPR2481(2)] (ab109182) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab109182 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, 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<sup>®</sup> 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-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-NMDAR1 antibody [EPR2481(2)] (ab109182)

**All lanes :** Anti-NMDAR1 antibody [EPR2481(2)] (ab109182) at 1/5000 dilution (purified)

**Lane 1 :** Mouse brain tissue lysate

**Lane 2 :** Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

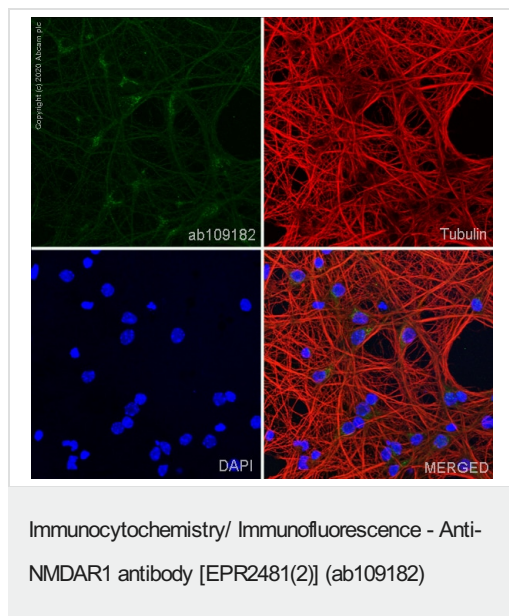
**All lanes :** HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

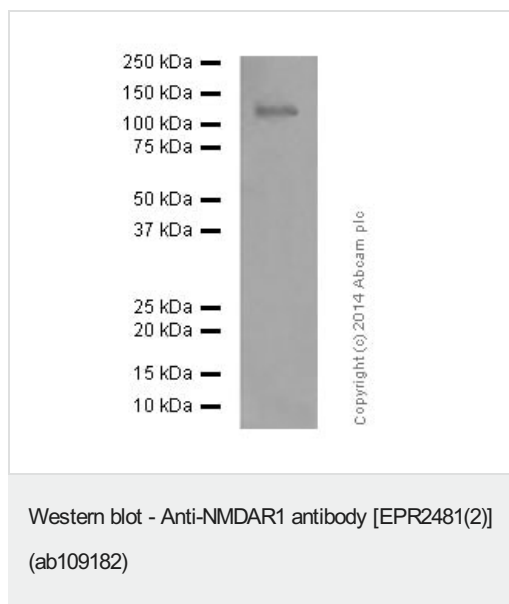
Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



Immunocytochemistry/ Immunofluorescence analysis of mouse primary neuron cells labeling NMDAR1 with purified ab109182 at 1/50 (9.5µg/mL). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection.



Anti-NMDAR1 antibody [EPR2481(2)] (ab109182) at 1/1000 dilution (purified) + Human cerebellum tissue lysate at 20 µg

#### Secondary

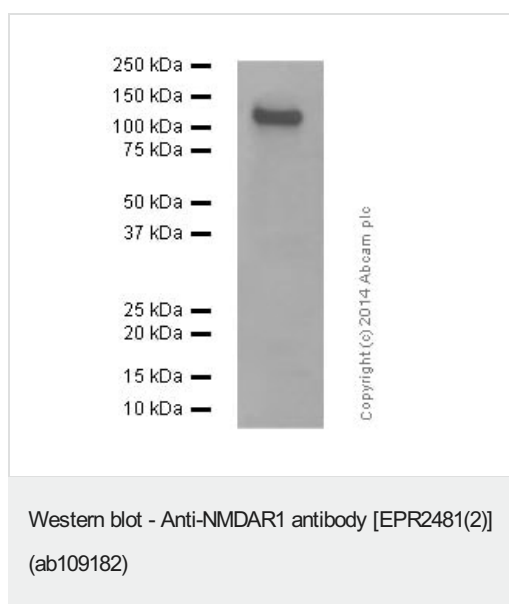
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



Anti-NMDAR1 antibody [EPR2481(2)] (ab109182) at 1/5000 dilution (purified) + Human fetal brain tissue lysate at 20 µg

#### Secondary

HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



Western blot - Anti-NMDAR1 antibody [EPR2481(2)]  
(ab109182)

Anti-NMDAR1 antibody [EPR2481(2)] (ab109182) at 1/1000  
dilution (unpurified) + Human fetal brain cell lysate at 10 µg

**Predicted band size:** 105 kDa

**Observed band size:** 120 kDa

Secondary antibody - **anti-rabbit HRP (ab6721)**

#### Why choose a recombinant antibody?



**Research with  
confidence**  
Consistent and  
reproducible results



**Long-term and  
scalable supply**  
Recombinant  
technology



**Success from the  
first experiment**  
Confirmed  
specificity



**Ethical standards  
compliant**  
Animal-free  
production

Anti-NMDAR1 antibody [EPR2481(2)] (ab109182)

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