

**Anti-NMDAR2A Antibody**  
**Catalog # ABO10544****Specification**

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**Anti-NMDAR2A Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q12879</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Glutamate receptor ionotropic, NMDA 2A(GRIN2A) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-NMDAR2A Antibody - Additional Information**

**Gene ID** 2903

**Other Names**

Glutamate receptor ionotropic, NMDA 2A, GluN2A, Glutamate [NMDA] receptor subunit epsilon-1, N-methyl D-aspartate receptor subtype 2A, NMDAR2A, NR2A, hNR2A, GRIN2A, NMDAR2A

**Calculated MW**

165283 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Rat, Human, Mouse, By Heat<br> <br>Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human<br>

**Subcellular Localization**

Cell membrane; Multi-pass membrane protein. Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein.

**Protein Name**

Glutamate receptor ionotropic, NMDA 2A

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human NMDAR2A(1360-1376aa, DHTSDNPFLHSHRDDQR), different from the related mouse sequence by three amino acids, and from the related rat sequence by four amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-NMDAR2A Antibody - Protein Information**

**Name** GRIN2A

**Synonyms** NMDAR2A

**Function**

Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed: [8768735](http://www.uniprot.org/citations/8768735), PubMed: [26919761](http://www.uniprot.org/citations/26919761), PubMed: [26875626](http://www.uniprot.org/citations/26875626), PubMed: [28105280](http://www.uniprot.org/citations/28105280)). Sensitivity to glutamate and channel kinetics depend on the subunit composition; channels containing GRIN1 and GRIN2A have lower sensitivity to glutamate and faster deactivation kinetics than channels formed by GRIN1 and GRIN2B (PubMed: [26919761](http://www.uniprot.org/citations/26919761), PubMed: [26875626](http://www.uniprot.org/citations/26875626)). Contributes to the slow phase of excitatory postsynaptic current, long-term synaptic potentiation, and learning (By similarity).

**Cellular Location**

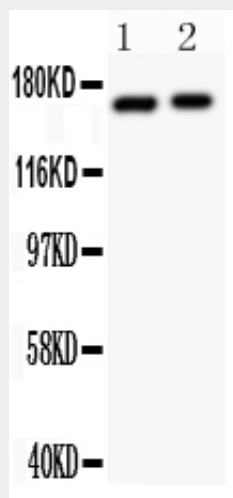
Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q00959}. Cell membrane; Multi-pass membrane protein. Synapse {ECO:0000250|UniProtKB:P35436} Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q00959}; Multi-pass membrane protein. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:P35436}. Note=Expression at the dendrite cell membrane and at synapses is regulated by SORCS2 and the retromer complex. {ECO:0000250|UniProtKB:P35436}

**Anti-NMDAR2A Antibody - Protocols**

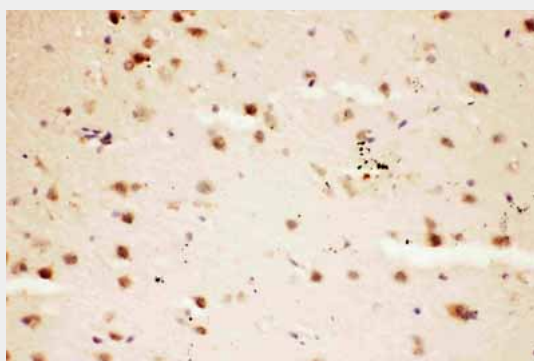
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-NMDAR2A Antibody - Images**



Anti-NMDAR2A antibody, ABO10544, Western blotting All lanes: Anti NMDAR2A (ABO10544) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Mouse Brain Tissue Lysate at 50ug  
Predicted bind size: 165KD  
Observed bind size: 165KD



Anti-NMDAR2A antibody, ABO10544, IHC(P)  
IHC(P): Rat Brain Tissue

### Anti-NMDAR2A Antibody - Background

GRIN2A is also known as N-methyl-D-aspartate receptor channel, subunit epsilon-1 (NMDAR2A). This gene encodes a member of the glutamate-gated ion channel protein family. The encoded protein is an N-methyl-D-aspartate (NMDA) receptor subunit. NMDA receptors are both ligand-gated and voltage-dependent, and are involved in long-term potentiation, an activity-dependent increase in the efficiency of synaptic transmission thought to underlie certain kinds of memory and learning. These receptors are permeable to calcium ions, and activation results in a calcium influx into post-synaptic cells, which results in the activation of several signaling cascades. Disruption of this gene is associated with focal epilepsy and speech disorder with or without mental retardation. Alternative splicing results in multiple transcript variants.