

# NMDA $\zeta$ 1 (phospho Ser896) Polyclonal Antibody

Catalog # AP67628

## Product Information

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC-P, IF, ICC, E  |
| Primary Accession | <a href="#">Q05586</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 105373                 |

## Additional Information

|                    |                                                                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID            | 2902                                                                                                                                                                 |
| Other Names        | GRIN1; NMDAR1; Glutamate [NMDA] receptor subunit zeta-1; N-methyl-D-aspartate receptor subunit NR1; NMD-R1                                                           |
| Dilution           | WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A |
| Format             | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.                                                                                        |
| Storage Conditions | -20°C                                                                                                                                                                |

## Protein Information

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name     | GRIN1 ( <a href="#">HGNC:4584</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Function | <p>Component of N-methyl-D-aspartate (NMDA) receptors (NMDARs) that function as heterotetrameric, ligand-gated cation channels with high calcium permeability and voltage-dependent block by Mg(2+) (PubMed:<a href="#">21376300</a>, PubMed:<a href="#">26875626</a>, PubMed:<a href="#">26919761</a>, PubMed:<a href="#">28126851</a>, PubMed:<a href="#">28228639</a>, PubMed:<a href="#">36959261</a>, PubMed:<a href="#">7679115</a>, PubMed:<a href="#">7681588</a>, PubMed:<a href="#">7685113</a>). NMDARs participate in synaptic plasticity for learning and memory formation by contributing to the long-term potentiation (LTP) (PubMed:<a href="#">26875626</a>). Channel activation requires binding of the neurotransmitter L-glutamate to the GluN2 subunit, glycine or D-serine binding to the GluN1 subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:<a href="#">21376300</a>, PubMed:<a href="#">26875626</a>, PubMed:<a href="#">26919761</a>, PubMed:<a href="#">27164704</a>, PubMed:<a href="#">28095420</a>, PubMed:<a href="#">28105280</a>, PubMed:<a href="#">28126851</a>, PubMed:<a href="#">28228639</a>, PubMed:<a href="#">36959261</a>, PubMed:<a href="#">38538865</a>, PubMed:<a href="#">7679115</a>, PubMed:<a href="#">7681588</a>, PubMed:<a href="#">7685113</a>). NMDARs mediate simultaneously the potassium efflux and the influx of calcium and sodium (By similarity). Each GluN2 or GluN3 subunit</p> |

confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, Ca<sup>2+</sup>(+) permeability, and binding to allosteric modulators (PubMed:[26875626](#), PubMed:[26919761](#), PubMed:[36309015](#), PubMed:[38598639](#)).

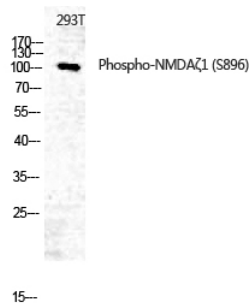
## Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P35439}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:P35438}. Postsynaptic density membrane {ECO:0000250|UniProtKB:P35439}. Synaptic cell membrane {ECO:0000250|UniProtKB:P35438}. Note=Synaptic cell membrane targeting is dependent of GRIN2B/GluN2B subunit (By similarity). Association with GRIN3A occurs in the endoplasmic reticulum (By similarity) {ECO:0000250, ECO:0000250|UniProtKB:P35438, ECO:0000250|UniProtKB:P35439}

## Background

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<sup>2+</sup> (PubMed:[7685113](#), PubMed:[28126851](#), PubMed:[26919761](#), PubMed:[26875626](#), PubMed:[28105280](#)). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:[26919761](#)).

## Images



Western Blot analysis of 293T using Phospho-NMDAζ1 (S896) Polyclonal Antibody. Antibody was diluted at 1:500

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.