

## Rabbit NMDAR1 Polyclonal Antibody | anti-NMDAR1 antibody

Phospho-NMDAR1 (Ser897) Antibody

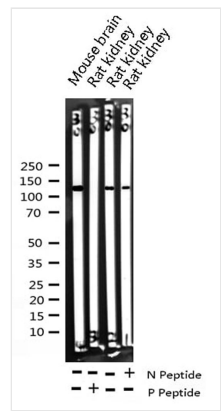
| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                              |
|-----------|--------|-------------------|-------------------------------------------|
| AAA321700 | Rabbit | Human, Mouse, Rat | ELISA, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

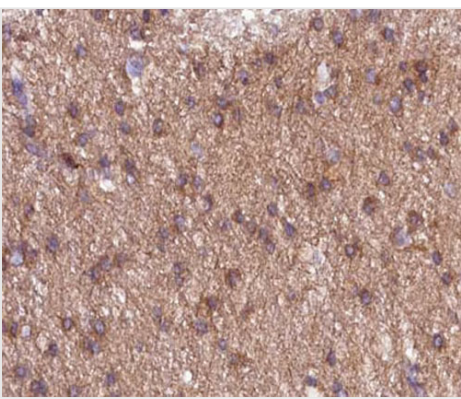
NMDAR1; Polyclonal Antibody; Phospho-NMDAR1 (Ser897) Antibody; GluN1; Glutamate [NMDA] receptor subunit zeta-1; Glutamate receptor ionotropic N methyl D aspartate 1; Glutamate receptor ionotropic; N-methyl-D aspartate; subunit 1; glutamate receptor ionotropic; NMDA 1; Grin1; MRD8; N methyl D aspartate receptor; N methyl D aspartate receptor channel subunit zeta 1; N methyl D aspartate receptor subunit NR1; N-methyl-D-aspartate receptor subunit NR1; NMD-R1; NMDA R1; NMDA receptor 1; NMDA1; NMDAR; NMDZ1\_HUMAN; NR1; anti-NMDAR1 antibody

### PRODUCT SPECIFICATIONS

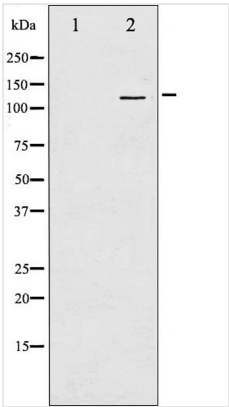
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|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                             | Rabbit                                                                                                                                                                                                                   |
| Reactivity                                       | Human, Mouse, Rat                                                                                                                                                                                                        |
| Clonality                                        | Polyclonal                                                                                                                                                                                                               |
| Isotype                                          | IgG                                                                                                                                                                                                                      |
| Specificity                                      | Phospho-NMDAR1 (Ser897) antibody detects endogenous levels of NMDAR1 only when phosphorylated at Serine 897                                                                                                              |
| Purity/Purification                              | From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.                                                                                   |
| Form/Format                                      | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                            |
| Concentration                                    | 1mg/ml (varies by lot)                                                                                                                                                                                                   |
| Sequence Length                                  | 885                                                                                                                                                                                                                      |
| Applicable Applications for anti-NMDAR1 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                     |
| Immunogen                                        | A synthesized peptide derived from human NMDAR1 around the phosphorylation site of Serine 897                                                                                                                            |
| Subcellular Location                             | 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. |
| Predicted Cross Reactivity                       | <b>Pig, Bovine, Horse, Dog, Chicken, Xenopus</b>                                                                                                                                                                         |
| Similarity                                       | Pig (100%), Bovine (100%), Horse (100%), Dog (100%), Chicken (100%), Xenopus (100%)                                                                                                                                      |
| Conjugation                                      | Unconjugated                                                                                                                                                                                                             |
| Epitope                                          | Phospho Ser897                                                                                                                                                                                                           |
| Preparation and Storage                          | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                        |



**WB (Western Blot)**  
Western blot analysis of Phospho-NMDAR1 (Ser897) expression in various lysates



**IHC (Immunohistochemistry)**  
AAA321700 at 1/200 staining human brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



**WB (Western Blot)**  
Western blot analysis of NMDAR1 phosphorylation expression in LOVO whole cell lysates. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

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|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-NMDAR1 antibody | <p>Description: The protein encoded by this gene is a critical subunit of N-methyl-D-aspartate receptors, members of the glutamate receptor channel superfamily which are heteromeric protein complexes with multiple subunits arranged to form a ligand-gated ion channel. These subunits play a key role in the plasticity of synapses, which is believed to underlie memory and learning. The gene consists of 21 exons and is alternatively spliced, producing transcript variants differing in the C-terminus.</p> <p>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 Mg2+ (PubMed:7685113, PubMed:28126851, PubMed:26919761, PubMed:26875626, PubMed:28105280). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:26919761).</p> <p>Subunit Structure: Heterotetramer. Forms heterotetrameric channels composed of two zeta subunits (GRIN1), and two epsilon subunits (GRIN2A, GRIN2B, GRIN2C or GRIN2D) (in vitro) (PubMed:7685113, PubMed:28126851, PubMed:26919761, PubMed:26875626, PubMed:28105280). Can also form heterotetrameric channels that contain at least one zeta subunit (GRIN1), an epsilon subunit, plus GRIN3A or GRIN3B (in vitro). In vivo, the subunit composition may vary in function of the expression levels of the different subunits. Found in a complex with GRIN2A or GRIN2B, GRIN3A and PPP2CB (By similarity). Found in a complex with GRIN2A or GRIN2B and GRIN3B (By similarity). Interacts with SNX27 (via PDZ domain); the interaction is required for recycling to the plasma membrane when endocytosed and prevent degradation in lysosomes (By similarity). Interacts with DLG4 and MPDZ. Interacts with LRFN1 and LRFN2 (By similarity). Interacts with MYZAP (PubMed:18849881). Found in a complex with DLG4 and PRR7 (By similarity). Found in a complex with GRIN2B and PRR7 (PubMed:27458189). Interacts with PRR7; the interaction is reduced following NMDA receptor activity (PubMed:27458189).</p> <p>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.</p> <p>Similarity: A hydrophobic region that gives rise to the prediction of a transmembrane span does not cross the membrane, but is part of a discontinuously helical region that dips into the membrane and is probably part of the pore and of the selectivity filter. Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR1/GRIN1 subfamily.</p> |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 11496971                                                                                       |
| NCBI GeneID                      | 2902                                                                                           |
| NCBI Accession #                 | NP_000823.4                                                                                    |
| NCBI GenBank Nucleotide #        | NM_000832.6                                                                                    |
| UniProt Accession #              | Q05586; P35437; Q12867; Q12868; Q5VSF3; Q5VSF4; Q5VSF5; Q5VSF6; Q5VSF7; A6NLK7; A6NLR1; C9K0X1 |
| Molecular Weight                 | Observed: 120 kDa<br>Predicted: 106 kDa                                                        |
| NCBI Official Full Name          | glutamate receptor ionotropic, NMDA 1 isoform GluN1-4a                                         |
| NCBI Official Synonym Full Names | glutamate ionotropic receptor NMDA type subunit 1                                              |
| NCBI Official Symbol             | GRIN1                                                                                          |
| NCBI Official Synonym Symbols    | NR1; MRD8; GluN1; NMDA1; NDHMSD; NDHMSR; NMD-R1; NMDAR1                                        |
| NCBI Protein Information         | glutamate receptor ionotropic, NMDA 1                                                          |
| UniProt Protein Name             | Glutamate receptor ionotropic, NMDA 1                                                          |
| UniProt Gene Name                | GRIN1                                                                                          |
| UniProt Synonym Gene Names       | NMDAR1; GluN1; NMD-R1                                                                          |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

