Rabbit NMDAR1 Polyclonal Antibody | anti-NMDAR1 antibody

NMDAR1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322387	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

NMDAR1; Polyclonal Antibody; NMDAR1 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

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	NMDAR1 antibody detects endogenous levels of total NMDAR1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid 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, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human NMDAR1
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	**Pig, Bovine, Horse, Dog, Chicken, Xenopus**
Similarity	Pig (100%), Bovine (100%), Horse (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA322387 staining A549 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

IHC (Immunohiostchemistry)
AAA322387 at 1/100 staining Mouse intestine tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample 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 expression in Jurkat whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-NMDAR1 antibody	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. 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). 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). 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. 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.

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: 130 kDa 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.

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