

Rabbit anti-Rat NMDA NR2B Subunit (Tyr1472) Polyclonal Antibody | anti-GRIN2B antibody

Anti-Phospho-Tyr1472 NMDA NR2B-Subunit

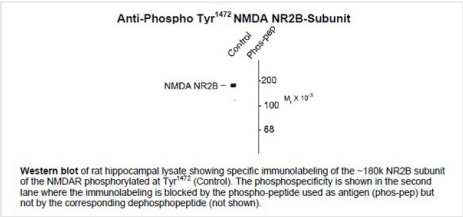
CATALOG # AAA72797	HOST Rabbit	REACTIVITY Rat	APPLICATIONS Western Blot
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PRODUCT SYNONYMS

NMDA NR2B Subunit (Tyr1472); Polyclonal Antibody; Anti-Phospho-Tyr1472 NMDA NR2B-Subunit; anti-GRIN2B antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Rat
Clonality	Polyclonal
Specificity	Specific for the ~180k NMDAR NR2B-subunit protein phosphorylated at Tyr1472 in Western blots. The antibody also labels proteins of ~65k and ~115k. Immunolabeling is completely blocked by blocked by either lambda-Ptase or by the phosphopeptide used as the antigen but not by the corresponding dephosphopeptide.
Purity/Purification	Affinity Purified (Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.)
Form/Format	100 ul in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.
Sequence Length	1482
Applicable Applications for anti-GRIN2B antibody	WB (Western Blot)
Antigen	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Tyr1472 of NMDA NR2B.
Immunogen Information	Synthetic phospho-peptide corresponding to amino acid residues surrounding Tyr1472 conjugated to KLH
Immunogen Species	Rat
Reactivity Assumed Based on 100% Sequence Homology	Bovine, canine, chicken, human, mouse, non-human primate and zebra fish
Species Reactivity Note	The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primate and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.
Biological Significance	The ion channels activated by glutamate that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR). The NMDAR plays an essential role in memory, neuronal development and it has also been implicated in several disorders of the central nervous system including Alzheimer's, epilepsy and ischemic neuronal cell death (Grosshans et al., 2002; Wenthold et al., 2003; Carroll and Zukin, 2002). The NMDA receptor is also one of the principal molecular targets for alcohol in the CNS (Lovinger et al., 1989; Alvestad et al., 2003; Snell et al., 1996). Channels with physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits (Ishii et al., 1993). Overexpression of the NR2B-subunit of the NMDA Receptor has been associated with increases in learning and memory while aged, memory impaired animals have deficiencies in NR2B expression (Clayton et al., 2002a; Clayton et al., 2002b). Recent work suggests that phosphorylation of Tyr1472 on NR2B may regulate the functional expression the receptor in LTP and other forms of plasticity (Nakazawa et al., 2001; Roche et al., 2001).
Preparation and Storage	For long term storage -20 degree C is recommended. Stable at -20 degree C for at least 1 year.



Application Data

ADDITIONAL INFORMATION

Related Product Information for anti-GRIN2B antibody	Affinity purified rabbit polyclonal antibody
References	• Alvestad RM, Grosshans DR, Coultrap SJ, Nakazawa T, Yamamoto T, Browning MD (2003) Tyrosine dephosphorylation and ethanol inhibition of N-methyl-D-aspartate receptor function. J Biol Chem 278:11020-11025. • Carroll RC, Zukin RS (2002) NMDA-receptor trafficking and targeting: implications for synaptic transmission and plasticity. Trends Neurosci 25:571-577. • Clayton DA, Grosshans DR, Browning MD (2002a) Aging and surface expression of hippocampal NMDA receptors. J Biol Chem 277:14367-14369. • Clayton DA, Mesches MH, Alvarez E, Bickford PC, Browning MD (2002b) A hippocampal NR2B deficit can mimic age-related changes in long-term potentiation and spatial learning in the Fischer 344 rat. J Neurosci 22:3628-3637. • Grosshans DR, Clayton DA, Coultrap SJ, Browning MD (2002) LTP leads to rapid surface expression of NMDA but not AMPA receptors in adult rat CA1. Nat Neurosci 5:27-33.

NCBI AND UNIPROT INFORMATION

NCBI GI #	6980984
NCBI GeneID	24410
NCBI Accession #	NP_036706.1
NCBI GenBank Nucleotide #	NM_012574.1
UniProt Accession #	Q00960; Q62684
Molecular Weight	180
NCBI Official Full Name	glutamate receptor ionotropic, NMDA 2B
NCBI Official Synonym Full Names	glutamate receptor, ionotropic, N-methyl D-aspartate 2B
NCBI Official Symbol	Grin2b
NCBI Official Synonym Symbols	GluN2B
NCBI Protein Information	glutamate receptor ionotropic, NMDA 2B; NR2B; NMDAR2B; glutamate receptor, ionotropic, NMDA2B; N-methyl D-aspartate receptor subtype 2B; glutamate [NMDA] receptor subunit epsilon-2
UniProt Protein Name	Glutamate receptor ionotropic, NMDA 2B
UniProt Gene Name	Grin2b
UniProt Synonym Gene Names	GluN2B; NMDAR2B; NR2B
UniProt Entry Name	NMDE2_RAT

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.