

## Rabbit NMDA NR2B Subunit Polyclonal Antibody | anti-GRIN2B antibody

Anti-NMDA Receptor, NR2B Subunit

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                                            |
|-----------|--------|-------------------|---------------------------------------------------------|
| AAA72796  | Rabbit | Rat, mouse, human | Immunoprecipitation, Immunohistochemistry, Western Blot |

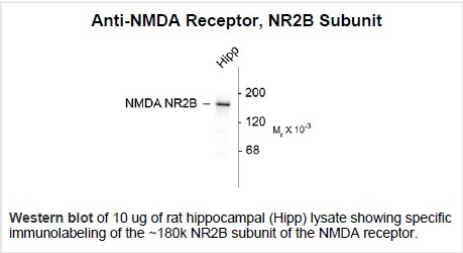
### PRODUCT SYNONYMS

NMDA NR2B Subunit; Polyclonal Antibody; Anti-NMDA Receptor; NR2B Subunit; anti-GRIN2B antibody

### PRODUCT SPECIFICATIONS

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Reactivity                                       | Rat, mouse, human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Clonality                                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Specificity                                      | Specific for the ~180k NR2B subunit of the NMDA receptor. Recognizes human, mouse and rat forms of the NR2B subunits of NMDAR. Immunolabeling is blocked by pre-adsorption of antibody with the fusion protein used to generate the antibody. No reactivity towards the NR2A and NR2C subunits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Purity/Purification                              | Affinity Purified (Prepared from rabbit serum by affinity purification using a column to which the fusion protein immunogen was coupled.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Form/Format                                      | 10 ug antibody vial; lyophilized from 5 mM ammonium bicarbonate. The antibody should be reconstituted in 50 ul phosphate buffered saline (PBS: 137 mM NaCl, 7.5 mM Na2HPO4, 2.7 mM KCl, 1.5 mM KH2PO4, pH 7.4) before use. After reconstitution the antibody sh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Sequence Length                                  | 1482                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Applicable Applications for anti-GRIN2B antibody | IP (Immunoprecipitation), IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Antigen                                          | Fusion protein from the C-terminus of the NR2B subunit of rat NMDA receptor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Immunogen Information                            | Fusion protein from the C-terminal region of the NR2B subunit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Immunogen Species                                | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Species Reactivity Note                          | The antibody has been directly tested for reactivity in Western blots with human, mouse and rat tissue.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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). The rat NMDAR1 (NR1) was the first subunit of the NMDAR to be cloned and it can form NMDA activated channels when expressed in Xenopus oocytes but the currents in such channels are much smaller than those seen in situ. Channels with more physiological characteristics are produced when the NR1 subunit is combined with one or more of the NMDAR2 (NR2 A-D) subunits. 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). The NMDAR is also potentiated by protein phosphorylation (Lu et al., 1999). |
| Preparation and Storage                          | Store at -20 degree C; stable for at least 1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

IMAGES



Application Data

ADDITIONAL INFORMATION

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-GRIN2B antibody | Affinity purified rabbit polyclonal antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| References                                           | <ul style="list-style-type: none"><li>• 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.</li><li>• Carroll RC, Zukin RS (2002) NMDA-receptor trafficking and targeting: implications for synaptic transmission and plasticity. Trends Neurosci 25:571-577.</li><li>• Clayton DA, Grosshans DR, Browning MD (2002a) Aging and surface expression of hippocampal NMDA receptors. J Biol Chem 277:14367-14369.</li><li>• 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.</li><li>• 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.</li></ul> |

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.

