

#### DESCRIPTION

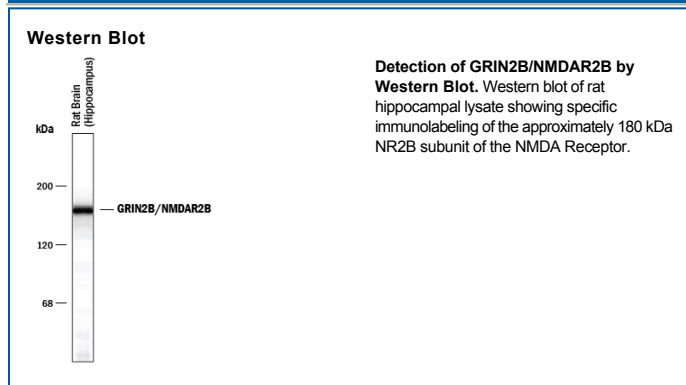
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Human, mouse, and rat ~180 kDa NMDA NR2B
<b>Source</b>	Polyclonal Rabbit Serum
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	NMDA R, NR2B Subunit
<b>Formulation</b>	50 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 mg/mL BSA and 50% glycerol. See Certificate of Analysis for details.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1:1000 dilution	See Below

#### DATA



#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	For long-term storage, -20 °C is recommended. Product is stable at ≤ -20° C for at least 1 year.

#### BACKGROUND

NMDA (N-Methyl D-Aspartate) receptors are members of the glutamate receptor family of ligand-gated ion channels. The functional NMDA receptor (NMDAR) is a 650-850 kDa heteromultimer of at least two NR2 (NMDAR2) subunits and two NR1 subunits. NR2 subunits determine overall NMDAR characteristics such as conductance and Mg<sup>++</sup> sensitivity. In addition, NR2 subunits mediate NMDAR clustering and synaptic localization through cytoplasmic interaction with PSD-95/SAP90 family members. Upon glutamate binding to NR2, and glycine binding to NR1, the NMDA channel is opened, allowing calcium and sodium influx into the cell. There are four genes that code for NR2 subunits (NR2A-D). The two (or three) NR2 subunits making up the NMDAR may be homodimers or heterodimers. The 2B form generates a high conductance NMDAR. Human NR2B (also NR3 and GRIN2B) is a 180 kDa, 1458 amino acid (aa), three transmembrane (TM) glycoprotein that contains a 531 aa N-terminal extracellular domain (ECD) and a 646 aa cytoplasmic region. The loop connecting TM segments 2 and 3, plus the N-terminal ECD constitute the glutamate binding site. Human NR2B is more than 98% aa identical to NR2B in mouse, rat, and dog.

#### References:

- Stephenson, F.A. (2001) *Curr. Drug Targets* 2:233.
- Cull-candy, S.G. and D.N. Leszkiewicz (2004) *Sci. STKE* re16 (2004).
- Prybylowski, K. and R.J. Wenthold (2004) *J. Biol. Chem.* 279:9673.
- Ishii, T. *et al.* (1993) *J. Biol. Chem.* 268:2836.
- Hess, S.D. *et al.* (1996) *J. Pharmacol. Exp. Ther.* 278:808.