Datasheet for ABIN371829

anti-NMDA 1 Receptor antibody (N-Term)

1 Image | 4 Publications

Go to Product page

Overview

Quantity:	15 µg
Target:	NMDA 1 Receptor (NMDA R1)
Binding Specificity:	AA 1-564, N-Term
Reactivity:	Rat, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This NMDA 1 Receptor antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunoprecipitation (IP)

Product Details

Immunogen:	Fusion protein containing amino acids 1-564 of the NR1 subunit of rat NMDA receptor.
Clone:	R1JHL
Isotype:	IgG1
Specificity:	This antibody is specific for the ~120k NR1 subunit of the NMDA Receptor.
Cross-Reactivity (Details):	Species reactivity (tested):Rat and Mouse.
Characteristics:	Synonyms: NMDAR1, GRIN1, Glutamate [NMDA] receptor subunit zeta-1
Purification:	Supernatant.

Target Details

Target:	NMDA 1 Receptor (NMDA R1)
Alternative Name:	NMDA Receptor 1 (NMDA R1 Products)
Background:	The ion channels activated by glutamate are typically divided into two classes. Glutamate receptors that are activated by kainate and α-amino-3-hydroxy-5-methyl-4-isoxalone propionic acid (AMPA) are known as kainate/AMPA receptors (K/AMPAR). Those 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 NMDAR is also potentiated by protein phosphorylation (Lu et al., 1999). The rat NMDAR1 (NR1) was the first subunit of the NMDAR to be cloned. The NR1 protein 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.Synonyms: GRIN1, Glutamate [NMDA] receptor subunit zeta-1, NMDAR1
Gene ID:	24408
UniProt:	P35439

Application Details

Application Notes:	Western Blot: 1/1,000. Immunoprecipitation: 3 µg per 200 µg lysate. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Restrictions:	For Research Use only

Handling

Reconstitution:	Restore in 50 µL PBS (137 mM NaCl, 7.5 mM Na2HPO4, 2.7 mM KCl, 1.5 mM KH2PO4, pH 7.4) before use.
Storage:	-20 °C
Storage Comment:	After reconstitution Store the antibody in aliquots at -20 °C. Avoid repeated freezing and thawing.

Handling

	Shelf life: one year from despatch.
Expiry Date:	12 months

Publications

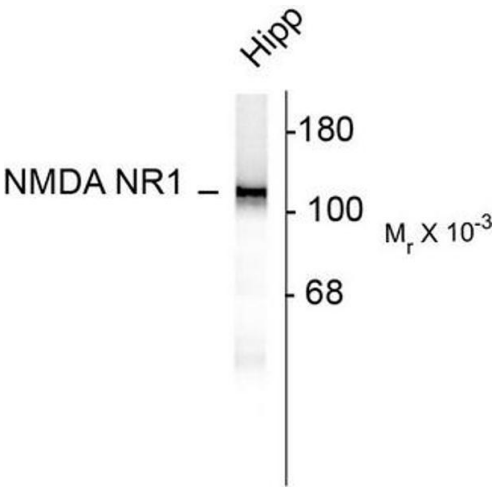
Product cited in:

Brady, Diaz, Iuso, Everett, Valenzuela, Caldwell: "Moderate prenatal alcohol exposure reduces plasticity and alters NMDA receptor subunit composition in the dentate gyrus." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 33, Issue 3, pp. 1062-7, (2013) (PubMed).

Hicklin, Wu, Radcliffe, Freund, Goebel-Goody, Correa, Proctor, Lombroso, Browning: "Alcohol inhibition of the NMDA receptor function, long-term potentiation, and fear learning requires striatal-enriched protein tyrosine phosphatase." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 108, Issue 16, pp. 6650-5, (2011) (PubMed).

Davies, Goebel-Goody, Coultrap, Browning: "Long term synaptic depression that is associated with GluR1 dephosphorylation but not alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptor internalization." in: **The Journal of biological chemistry**, Vol. 283, Issue 48, pp. 33138-46, (2008) (PubMed).

Fan, Fernandes, Zhang, Hayden, Raymond: "Altered NMDA receptor trafficking in a yeast artificial chromosome transgenic mouse model of Huntington's disease." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 27, Issue 14, pp. 3768-79, (2007) (PubMed).



Western Blotting

Image 1.