Datasheet for ABIN361395

anti-GRIN2B antibody (C-Term)

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Overview

Quantity:	10 µg
Target:	GRIN2B
Binding Specificity:	C-Term
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GRIN2B antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Immunogen:	Fusion protein from the C-terminal region of the NR2B subunit
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.
Cross-Reactivity:	Human, Mouse (Murine), Rat (Rattus)
Purification:	Antigen Affinity Purified from Pooled Serum

Target Details

Target:	GRIN2B
Alternative Name:	GRIN2B (GRIN2B Products)

Target Details

Background:	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 clonedand 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). Anti-NMDA Receptor, NR2B Subunit Western blot of 10 ug of rat hippocampal (Hipp) lysate showing specific immunolabeling of the ~180k NR2B subunit of the NMDA receptor.
Molecular Weight:	'180 kDa
Gene ID:	24410
UniProt:	Q00960
Pathways:	Response to Growth Hormone Stimulus, Synaptic Membrane, Feeding Behaviour, Regulation of long-term Neuronal Synaptic Plasticity

Application Details

Application Notes:	Recommended Dilution: WB: 1:1000 IHC (frozen sections, unpublished observations): 1:1000 to 1:2000 IP: 3 µl per 200 µg lysate Quality Control: Western blots performed on each lot.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	Lyophilized
Storage:	-20 °C

Publications

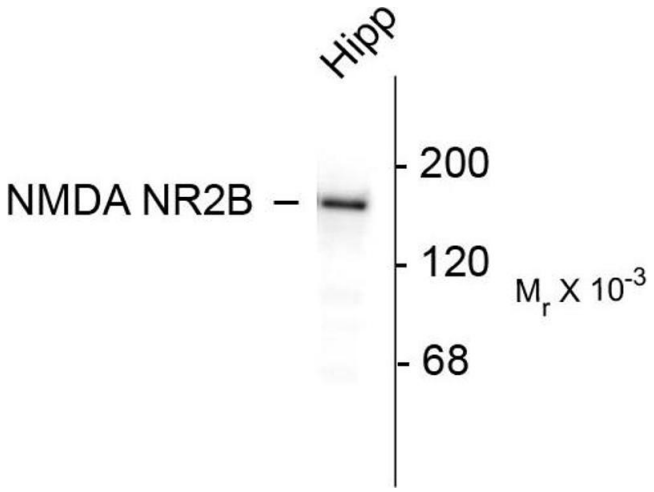
Product cited in:

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).

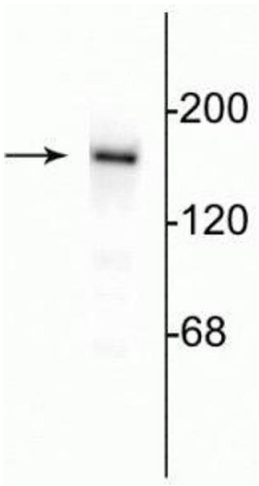
Kurup, Zhang, Xu, Venkitaramani, Haroutunian, Greengard, Nairn, Lombroso: "Abeta-mediated NMDA receptor endocytosis in Alzheimer's disease involves ubiquitination of the tyrosine phosphatase STEP61." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 30, Issue 17, pp. 5948-57, (2010) (PubMed).

Images



Western Blotting

Image 1. Western blots of 10 ug of rat hippocampal (Hipp) lysate showing specific immunolabeling of the ~180k NR2B subunit of the NMDA receptor.



Western Blotting

Image 2. Western blot of 10 µg of rat hippocampal lysate showing specific immunolabeling of the ~180 kDa NR2B subunit of the NMDA receptor.