

Datasheet for ABIN7043232
anti-GRIN2D antibody (Extracellular)



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2 Images

Overview

Quantity:	25 µL
Target:	GRIN2D
Binding Specificity:	AA 345-359, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GRIN2D antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunochromatography (IC)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to NMDA Receptor 2D (GRIN2D)
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: CRTQNRTHRGESLHR, corresponding to amino acid residues 345-359 of rat NMDAR2D
Isotype:	IgG
Specificity:	Extracellular, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse,human - 14,15 amino acid residues identical
Characteristics:	Anti-NMDAR2D (GRIN2D) (extracellular) Antibody is directed against an epitope of rat NMDA

Product Details

receptor 2D. Anti-NMDAR2D (GRIN2D) (extracellular) Antibody (ABIN7043232, ABIN7044350 and ABIN7044351)) can be used in western blot and immunocytochemistry applications. It has been designed to recognize NR2D from rat, mouse, and human samples.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: GRIN2D

Alternative Name: GRIN2D ([GRIN2D Products](#))

Background: NMDA receptor 2D, NR2D, GluN2D, Ionotropic glutamate receptor subunit ϵ 4, N-methyl-D-aspartate receptor subunit 2D, The NMDA receptors (NMDARs) are members of the glutamate receptor family of ion channels that also include the AMPA and Kainate receptors. The NMDA receptors are encoded by seven genes: one NMDAR1 (or NR1) subunit, four NR2 (NR2A-NR2D) and two NR3 (NR3A-NR3B) subunits. The functional NMDA receptor appears to be a heterotetramer composed of two NMDAR1 and two NMDAR2 subunits. Whereas the NMDAR2 subunits that assemble with the NMDAR1 subunit can be either of the same kind (i.e. two NMDAR2A subunits) or different (one NMDAR2A with one NMDAR2B). NMDAR3 subunits can substitute the NMDAR2 subunits in their complex with the NMDAR1 subunit. The NMDAR is unique among ligand-gated ion channels in that it requires the simultaneous binding of two obligatory agonists: glycine and glutamate that bind to the NMDAR1 and NMDAR2 binding sites respectively. Another unique characteristic of the NMDA receptors is their dependence on membrane potential. At resting membrane potentials the channels are blocked by extracellular Mg^{2+} . Neuronal depolarization relieves the Mg^{2+} blockage and allows ion influx into the cells. NMDA receptors are strongly selective for Ca^{2+} influx differing from the other glutamate receptor ion channels that are non-selective cation channels. Ca^{2+} entry through the NMDAR regulates numerous downstream signaling pathways including long term potentiation (a molecular model of memory) and synaptic plasticity that may underlie learning. In addition, the NMDA receptors have been implicated in a variety of neurological disorders including epilepsy, ischemic brain damage, Parkinson's and Alzheimer's disease. The expression and function of NMDA receptors are modulated by a variety of factors including receptor trafficking to the synapses and internalization as well as phosphorylation and interaction with other intracellular proteins.

Alternative names: NMDAR2D (GRIN2D), NMDA receptor 2D, NR2D, GluN2D, Ionotropic glutamate receptor subunit epsilon4, N-methyl-D-aspartate receptor subunit 2D

Target Details

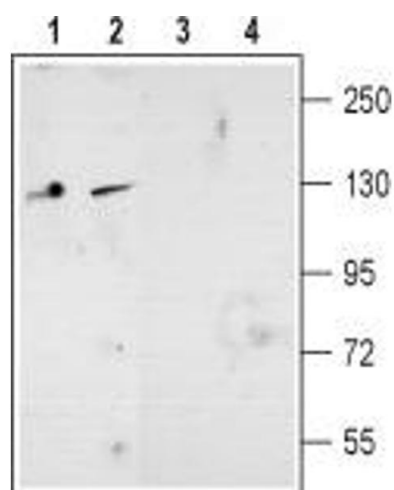
Gene ID:	24412
NCBI Accession:	NM_000836
UniProt:	Q62645
Pathways:	Synaptic Membrane

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:200 Application Dilutions Western blot wb: 1:200
Comment:	Negative Control: BLP-GC020 Blocking Peptide: BLP-GC020
Restrictions:	For Research Use only

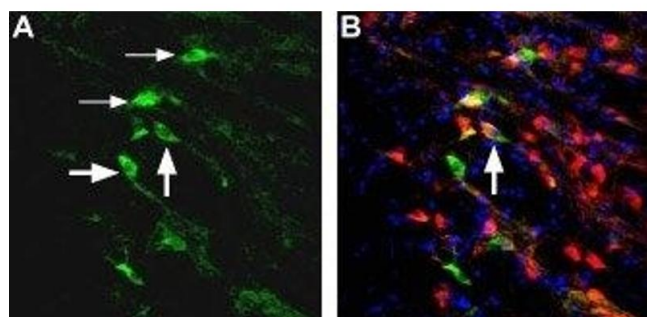
Handling

Format:	Lyophilized
Reconstitution:	Reconstitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C, -20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



Western Blotting

Image 1. Western blot analysis of mouse (lanes 1 and 3) and rat (lanes 2 and 4) brain membranes: - 1,2. Anti-NMDAR2D (GRIN2D) (extracellular) Antibody (ABIN7043232, ABIN7044350 and ABIN7044351), (1:200).3,4. Anti-NMDAR2D (GRIN2D) (extracellular) Antibody, preincubated with NMDAR2D/GRIN2D (extracellular) Blocking Peptide (#BLP-GC020).



Immunohistochemistry

Image 2. Expression of NMDA receptor 2D in rat reticular thalamic nucleus - Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-NMDAR2D (GRIN2D) (extracellular) Antibody (ABIN7043232, ABIN7044350 and ABIN7044351), (1:200). A. Staining (green) appears in a discrete population of cells (thin arrows). B. The same section was stained for parvalbumin (red) and cell nuclei were visualized with DAPI (blue). Cells positive for NR2D but negative for parvalbumin (thick arrow, shown in A) and cells positive for both NR2D and parvalbumin (vertical arrow) are both present.