

**GRIN2A Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP11331c****Specification**

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**GRIN2A Antibody (Center) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q12879</a>
Other Accession	<a href="#">NP_001127880.1</a> , <a href="#">NP_001127879.1</a>
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	165283
Antigen Region	1057-1084

**GRIN2A Antibody (Center) - Additional Information****Gene ID** 2903**Other Names**

Glutamate receptor ionotropic, NMDA 2A, GluN2A, Glutamate [NMDA] receptor subunit epsilon-1, N-methyl D-aspartate receptor subtype 2A, NMDAR2A, NR2A, hNR2A, GRIN2A, NMDAR2A

**Target/Specificity**

This GRIN2A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1057-1084 amino acids from the Central region of human GRIN2A.

**Dilution**

WB~~1:1000

IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

GRIN2A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**GRIN2A Antibody (Center) - Protein Information****Name** GRIN2A

## Synonyms NMDAR2A

**Function** Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:[8768735](#), PubMed:[26919761](#), PubMed:[26875626](#), PubMed:[28105280](#)). Sensitivity to glutamate and channel kinetics depend on the subunit composition; channels containing GRIN1 and GRIN2A have lower sensitivity to glutamate and faster deactivation kinetics than channels formed by GRIN1 and GRIN2B (PubMed:[26919761](#), PubMed:[26875626](#)). Contributes to the slow phase of excitatory postsynaptic current, long- term synaptic potentiation, and learning (By similarity).

## Cellular Location

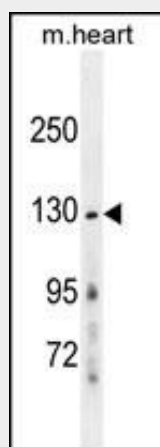
Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q00959}. Cell membrane; Multi-pass membrane protein. Synapse {ECO:0000250|UniProtKB:P35436} Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q00959}; Multi-pass membrane protein. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:P35436}. Note=Expression at the dendrite cell membrane and at synapses is regulated by SORCS2 and the retromer complex. {ECO:0000250|UniProtKB:P35436}

## GRIN2A Antibody (Center) - Protocols

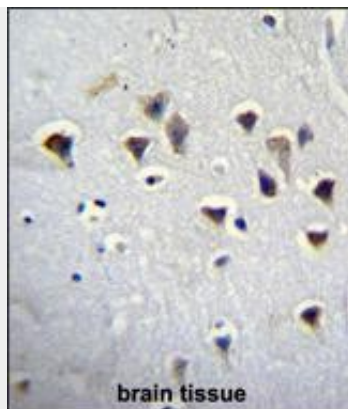
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## GRIN2A Antibody (Center) - Images



GRIN2A Antibody (Center) (Cat. #AP11331c) western blot analysis in mouse heart tissue lysates (35ug/lane). This demonstrates the GRIN2A antibody detected the GRIN2A protein (arrow).



GRIN2A Antibody (Center) (Cat. #AP11331c) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of GRIN2A Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

#### **GRIN2A Antibody (Center) - Background**

N-methyl-D-aspartate (NMDA) receptors are a class of ionotropic glutamate-gated ion channels. These receptors have been shown to be involved in long-term potentiation, an activity-dependent increase in the efficiency of synaptic transmission thought to underlie certain kinds of memory and learning. NMDA receptor channels are heteromers composed of the key receptor subunit NMDAR1 (GRIN1) and 1 or more of the 4 NMDAR2 subunits: NMDAR2A (GRIN2A), NMDAR2B (GRIN2B), NMDAR2C (GRIN2C) and NMDAR2D (GRIN2D). Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

#### **GRIN2A Antibody (Center) - References**

Endele, S., et al. Nat. Genet. 42(11):1021-1026(2010)  
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)  
Saus, E., et al. J Psychiatr Res 44(14):971-978(2010)  
Pinheiro, A.P., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (5), 1070-1080 (2010) :  
King, J.E., et al. Am. J. Pathol. 176(6):2819-2830(2010)