

**mouse Grin2a Antibody (Center K1081) Blocking peptide**  
Synthetic peptide  
Catalog # BP19357c

### Specification

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#### mouse Grin2a Antibody (Center K1081) Blocking peptide - Product Information

Primary Accession [P35436](#)

#### mouse Grin2a Antibody (Center K1081) Blocking peptide - Additional Information

Gene ID 14811

#### Other Names

Glutamate receptor ionotropic, NMDA 2A, GluN2A, Glutamate [NMDA] receptor subunit epsilon-1, N-methyl D-aspartate receptor subtype 2A, NMDAR2A, NR2A, Grin2a

#### Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

#### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

#### mouse Grin2a Antibody (Center K1081) Blocking peptide - Protein Information

Name Grin2a {ECO:0000312|MGI:MGI:95820}

#### Function

Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium (PubMed:<a href="http://www.uniprot.org/citations/1374164" target="\_blank">1374164</a>). 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+). 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 (By similarity). Contributes to the slow phase of excitatory postsynaptic current, long-term synaptic potentiation, and learning (PubMed:<a href="http://www.uniprot.org/citations/7816096" target="\_blank">7816096</a>, PubMed:<a href="http://www.uniprot.org/citations/8987814" target="\_blank">8987814</a>). Participates in the synaptic plasticity regulation through activation by the L-glutamate released by BEST1, into the synaptic cleft, upon F2R/PAR-1 activation in astrocyte (PubMed:<a href="http://www.uniprot.org/citations/25645137" target="\_blank">25645137</a>).

#### Cellular Location

Cell projection, dendritic spine. Cell membrane; Multi-pass membrane protein. Synapse

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

#### **Tissue Location**

Detected in striatum (PubMed:28469074). Detected in forbrain (PubMed:7816096). Detected in cerebellum (at protein level) (PubMed:8987814). Detected in brain cortex, piriform cortex, hippocampus, caudate-putamen, dentate gyrus and granule cell layer (PubMed:1374164, PubMed:7816096).

#### **mouse Grin2a Antibody (Center K1081) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

#### **mouse Grin2a Antibody (Center K1081) Blocking peptide - Images**

#### **mouse Grin2a Antibody (Center K1081) Blocking peptide - Background**

NMDA receptor subtype of glutamate-gated ion channels possesses high calcium permeability and voltage-dependent sensitivity to magnesium. Activation requires binding of agonist to both types of subunits.

#### **mouse Grin2a Antibody (Center K1081) Blocking peptide - References**

Fan, J., et al. J. Neurochem. 115(4):1045-1056(2010)Ohno, T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(34):15252-15257(2010)Jin, S.X., et al. PLoS ONE 5 (7), E11732 (2010) :Tang, T.T., et al. Proc. Natl. Acad. Sci. U.S.A. 106(50):21395-21400(2009)Taniguchi, S., et al. EMBO J. 28(23):3717-3729(2009)