

GRIN2B
Purified Mouse Monoclonal Antibody
Catalog # AO2659a**Specification**

GRIN2B - Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q13224
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	166.4kDa KDa

Immunogen

Purified recombinant fragment of human GRIN2B (AA: extra 27-163) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

GRIN2B - Additional Information

Gene ID 2904

Other Names

MRD6; NR2B; hNR3; EIEE27; GluN2B; NMDAR2B

Dilution

WB~~ 1/500 - 1/2000

IHC~~ 1:100~500

ICC~~ 1/100 - 1/500

E~~ 1/10000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

GRIN2B is for research use only and not for use in diagnostic or therapeutic procedures.

GRIN2B - Protein Information

Name GRIN2B {ECO:0000303|Ref.3, ECO:0000312|HGNC:HGNC:4586}

Function

Component of N-methyl-D-aspartate (NMDA) receptors (NMDARs) that function as heterotetrameric, ligand-gated cation channels with high calcium permeability and voltage-dependent block by Mg(2+) (PubMed:24272827, PubMed:24863970, PubMed:26875626, PubMed:26919761, PubMed:27839871, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). Participates in synaptic plasticity for learning and memory formation by contributing to the long-term depression (LTD) of hippocampus membrane currents (By similarity). Channel activation requires binding of the neurotransmitter L-glutamate to the GluN2 subunit, glycine or D-serine binding to the GluN1 subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:24272827, PubMed:24863970, PubMed:26875626, PubMed:26919761, PubMed:27839871, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). NMDARs mediate simultaneously the potassium efflux and the influx of calcium and sodium (By similarity). Each GluN2 subunit confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, Ca2(+) permeability, and binding to allosteric modulators (PubMed:26875626, PubMed:28095420, PubMed:28126851, PubMed:38538865, PubMed:8768735). In concert with DAPK1 at extrasynaptic sites, acts as a central mediator for stroke damage. Its phosphorylation at Ser-1303 by DAPK1 enhances synaptic NMDA receptor channel activity inducing injurious Ca2+ influx through them, resulting in an irreversible neuronal death (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q00960}; Multi-pass membrane protein. Cell projection, dendrite. Late endosome {ECO:0000250|UniProtKB:Q01097}. Lysosome {ECO:0000250|UniProtKB:Q01097}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q01097}. Note=Co-localizes with the motor protein KIF17 along microtubules. {ECO:0000250|UniProtKB:Q01097}

Tissue Location

Primarily found in the fronto-parieto-temporal cortex and hippocampus pyramidal cells, lower expression in the basal ganglia.

GRIN2B - 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](#)

GRIN2B - Images

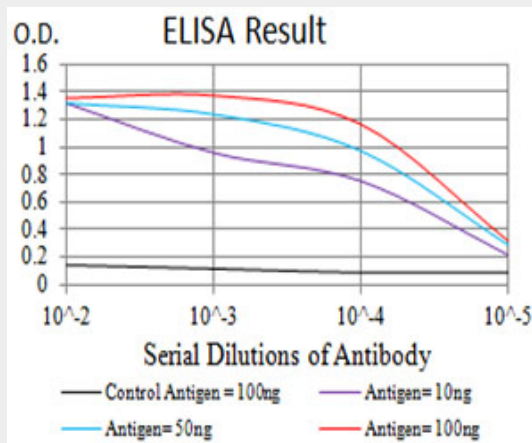


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

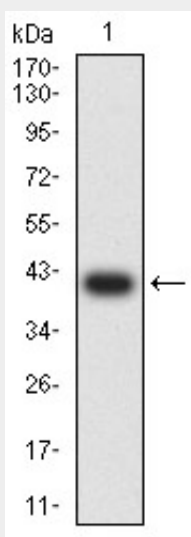


Figure 2: Western blot analysis using GRIN2B mAb against human GRIN2B (AA: extra 27-163) recombinant protein. (Expected MW is 41 kDa)

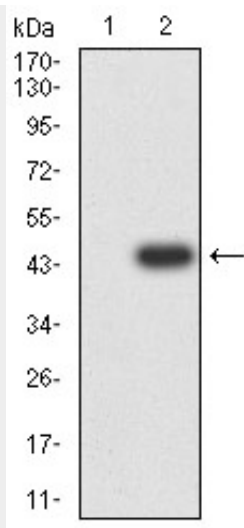


Figure 3: Western blot analysis using GRIN2B mAb against HEK293 (1) and GRIN2B (AA: extra 27-163)-hlgGFc transfected HEK293 (2) cell lysate.

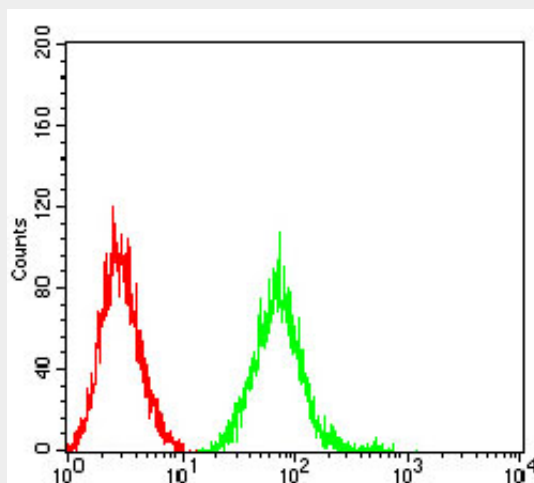


Figure 6: Flow cytometric analysis of SK-N-SH cells using GRIN2B mouse mAb (green) and negative control (red).

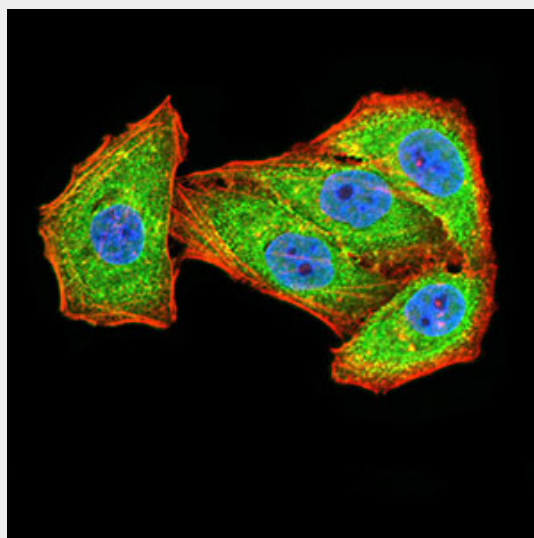


Figure 4: Immunofluorescence analysis of HeLa cells using GRIN2B mouse mAb (green). Blue:

DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

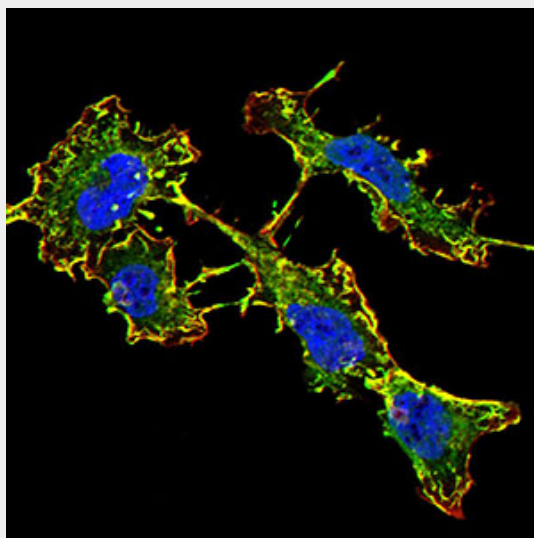


Figure 5: Immunofluorescence analysis of SK-N-SH cells using GRIN2B mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

GRIN2B - References

1. J Neural Transm (Vienna). 2014 May;121(5):533-42. 2. Psychopharmacology (Berl). 2014 Feb;231(4):685-93.