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GRIN2A
Purified Mouse Monoclonal Antibody
Catalog # AO2608a

Specification

GRIN2A - Product Information

Application	**E, WB**
Primary Accession	Q12879
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**165.3kDa KDa**

Immunogen
Purified recombinant fragment of human GRIN2A (AA: extra 23-165) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

GRIN2A - Additional Information

Gene ID 2903

Other Names
LKS; EPND; FESD; NR2A; GluN2A; NMDAR2A

Dilution
E~~ 1/10000
WB~~ 1/500 - 1/2000

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
GRIN2A is for research use only and not for use in diagnostic or therapeutic procedures.

GRIN2A - Protein Information

Name GRIN2A (HGNC:4585)

Synonyms NMDAR2A

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:<a

href="http://www.uniprot.org/citations/20890276" target="_blank">20890276, PubMed:23933818, PubMed:23933819, PubMed:23933820, PubMed:24504326, PubMed:26875626, PubMed:26919761, PubMed:28242877, PubMed:36117210, PubMed:38538865, PubMed:8768735). NMDARs participate in synaptic plasticity for learning and memory formation by contributing to the slow phase of excitatory postsynaptic current, long-term synaptic potentiation, and learning (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:23933818, PubMed:23933819, PubMed:23933820, PubMed:24504326, PubMed:26875626, PubMed:26919761, PubMed:27288002, PubMed:28095420, PubMed:28105280, PubMed:28126851, PubMed:28182669, PubMed:29644724, PubMed:38307912, PubMed:8768735). NMDARs mediate simultaneously the potasium 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:26919761). Participates in the synaptic plasticity regulation through activation by the L- glutamate releaseed by BEST1, into the synaptic cleft, upon F2R/PAR-1 activation in astrocyte (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 - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence

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- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GRIN2A - Images

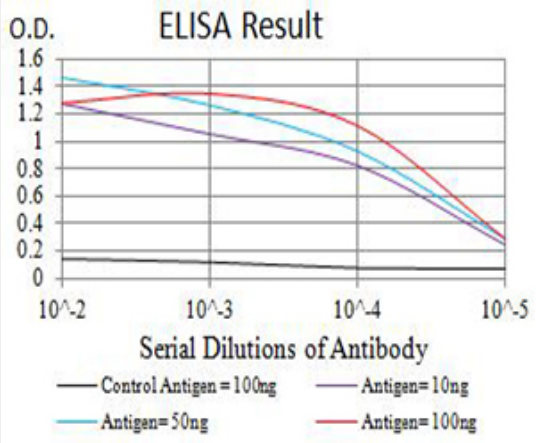

Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

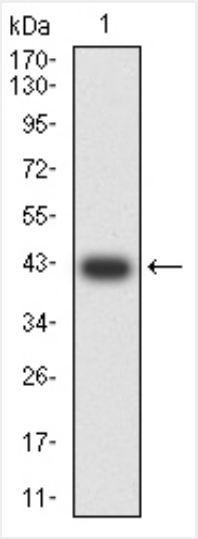

Figure 2:Western blot analysis using GRIN2A mAb against human GRIN2A (AA: extra 23-165) recombinant protein. (Expected MW is 41.3 kDa)

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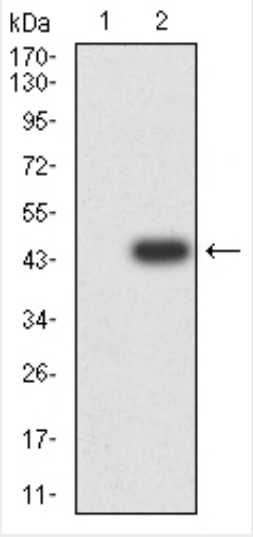

Figure 3:Western blot analysis using GRIN2A mAb against HEK293 (1) and GRIN2A (AA: extra 23-165)-hIgGFc transfected HEK293 (2) cell lysate.

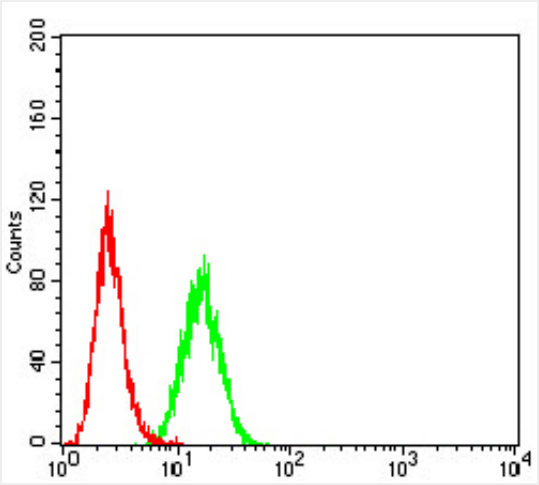

Figure 4:Flow cytometric analysis of Hela cells using GRIN2A mouse mAb (green) and negative control (red).

GRIN2A - References

1.PLoS Genet. 2014 Nov 20;10(11):e1004788.2.PLoS One. 2014 Jun 10;9(6):e99294.