

## Product datasheet for RC223136

### NMDAR2A (GRIN2A) (NM\_000833) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NMDAR2A (GRIN2A) (NM_000833) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NMDAR2A
Synonyms:	EPND; FESD; GluN2A; LKS; NMDAR2A; NR2A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223136 representing NM_000833 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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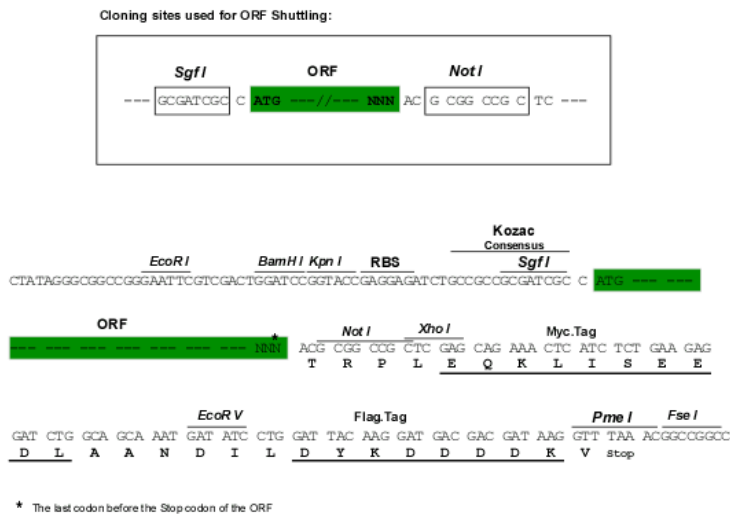
**Protein Sequence:** >RC223136 representing NM\_000833  
 Red=Cloning site Green=Tags(s)

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 A L L M N R T D P K S L I T H V C D L M S G A R I H G L V F G D D T D Q E A V A Q M L D F I S S H T F V P I L G I H G G A S M I M A D K D P  
 T S T F F Q F G A S I Q Q Q A T V M L K I M Q D Y D W H V F S L V T T I F P G Y R E F I S F V K T T V D N S F V G W D M Q N V I T L D T S F  
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 T E E G Y Q V H P R L V V I V L N K D R E W E K V G K W E N H T L S L R H A V W P R Y K S F S D C E P D D N H L S I V T L E E A P F V I V E  
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 L R S S L R S T A S Y C S R D S R G H N D V Y I S E H V M P Y A A N K N M Y S T P R V L N S C S N R R V Y K K M P S I E S D V

TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-NotI

**Cloning Scheme:**



**ACCN:** NM\_000833

**ORF Size:** 4392 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_000833.5](#)

**RefSeq Size:** 14450 bp

**RefSeq ORF:** 4395 bp

**Locus ID:** 2903

**UniProt ID:** [Q12879](#)

**Cytogenetics:** 16p13.2

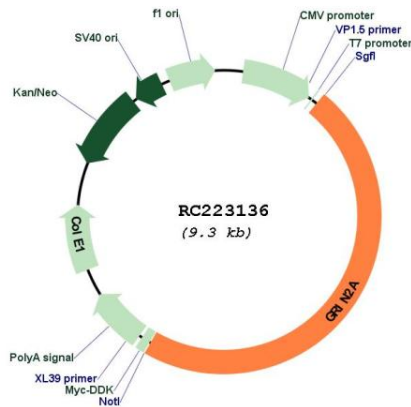
**Protein Families:** Druggable Genome, Ion Channels: Glutamate Receptors, Ion Channels: Sodium, Transmembrane

**Protein Pathways:** Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Calcium signaling pathway, Long-term potentiation, Neuroactive ligand-receptor interaction, Systemic lupus erythematosus

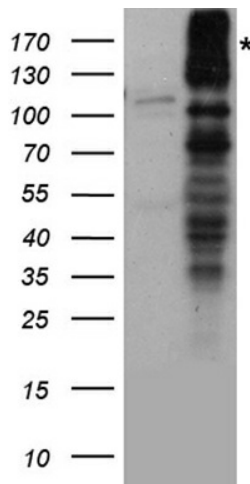
**MW:** 165.3 kDa

**Gene Summary:**

This gene encodes a member of the glutamate-gated ion channel protein family. The encoded protein is an N-methyl-D-aspartate (NMDA) receptor subunit. NMDA receptors are both ligand-gated and voltage-dependent, and are involved in long-term potentiation, an activity-dependent increase in the efficiency of synaptic transmission thought to underlie certain kinds of memory and learning. These receptors are permeable to calcium ions, and activation results in a calcium influx into post-synaptic cells, which results in the activation of several signaling cascades. Disruption of this gene is associated with focal epilepsy and speech disorder with or without cognitive disability. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]

**Product images:**


Circular map for RC223136



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GRIN2A (Cat# RC223136, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GRIN2A rabbit polyclonal antibody (Cat# [TA890121]).