

## Product datasheet for MR219694

### Grin3a (NM\_001033351) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Grin3a (NM\_001033351) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Grin3a  
**Synonyms:** 6430537F04; A830097C19Rik; mKIAA1973; NMDAR-L; NR3A  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR219694 representing NM\_001033351  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGGATCGCC

ATGAGGAGACTGAGTTTGTGGTGGCTGCTGAGCAGGGTCTGTCTGTTGCTGCCTCCGCCCTGTGCACTGG  
 TGCTGGCCGGGGTGCCAGCTCCTCCTCGCACCCGCAACCCTGCCAGATCCTCAAGCGCATCGGACACGC  
 GGTGAGGGTGGGCGGGTGCACCTGCAACCCTGGACCACGGCCACGCGCAGCCAGTCCGCTCAGGAC  
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 TGCCCTTCTCTTCCCAAGCTCACCGTGGAGCAGTGACCCTTCTCTTCTGACAGCGTGTGCCACAC  
 CGTAGTGGTACAAGGGTTTCAGCGCTGCTGGCCTTCCCCAGAGCCAGGGCGAAATGATGGAGCTGGAC  
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 ATCCCCTGCACCTACAGCTGAGTTTAGAAAATTCATAAGTTCTGATGCTGATGCTCACTGTCTCAATCCT  
 GACCATGAACAACCTGTTACAATTTAGCTTGTGCTATGCCAGGAAGACTGGAATATCACCGACTTCCTA  
 CTCCTTACAGAGAATAACTCAAGTCCACCTCGAGTCTATCATCAACATCACTGTAACCTGTCCTCCA  
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 GTTTGGCTGTGACATGGGAGCATCCGGCAGATATTTGAAATGTCCACACAGTTTGGGCTATCACCTCCT  
 GATCTTCACTGGGTTTTAGGAGACTCACAGAATGTGGAGGAGCTGAGGACAGAAGGCCTGCCCTTAGGGC  
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ATGGACTCGGAATATGGCCAGAGCAGGCCAGAGGCACAAAACCCACTTCCATCACCCAAACAAGTTAC  
 ACTTGAGAGTGGTGACTGATTGAACATCCATTTGTTTTACGAGAGAAGTAGATGATGAAGGCTTATG  
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 CTACATAGCAGTAATGATACAGTGCCAATCAAGTTCAAGAAGTGTGCTATGGGTATTGCATTGATCTAC  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR219694 representing NM\_001033351  
 Red=Cloning site Green=Tags(s)

MRRLLSLWVLLSRVCLLLPPPCALVLAGVPSSSSHPQCQILKRIGHAVRVGAVHLQPWTTAPRAASRAQD  
 GGRAGAQRDEPESGTWRPPAPSQGARWLSALHGRGPPGSRKLGEGAGTETLWPRDALLFAVENLNRVEG  
 LLPYNLSLEVMAIEAGLDLPLMPFSSPSSPSSDPFSLQSVCHTVVQVQSALLAFQSQGEMMELD  
 LVSSVLHIPVLSIVRHEFPRESQNPQLHLQSLLENSLSSDADVTVSILTMNNWYNFSLLLCQEDWNIIDFL  
 LLTENSKFHLESIIINITANLSSTKDLLSFLQVQLENIRNSTPTMVMFGCDMGSIRQIFEMSTQFGLSPP  
 DLHWVLGDSQNVHEELRTEGLPLGLIAHGKTTQSVFEYYQDAMELVARAVATATMIQPELALLPSTMNMC  
 DVKTTNLTSGQYLSRFLANTTFRGLSGSIVKVGSTIVSSENNFFIWNLQYDPMGKPMWTRLGSWQGGRIV  
 MDSGIWPEQAQRHKTFFHHPNKLHLRVVTLIEHPFVFTREVDDEGLCPAGQLCLDPMNTDSSILDSLFSS  
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 FGMTPKGRNRNKVFSFSSALNVCYALLFGRTAAIKPPKWTGRFLMNLWAIKCFMFLSTYANLAAVMVG  
 EKIEEELSGIHDPKLLHPSQGFRTVRESSAEDYVRSFPEMHEYMRRYVNPATPDGVQYLKNDPEKLD  
 AFIMDKALLDYEVSIDACKLLTVGKPFVIEGYIGLPPNSPLTNISELISQYKSHGFMVDLHDKWYKV  
 VPCGKRSFAVTETLQMGIKHFSGLFVLLCIGFGLSILTTIGEHIYRLLLPRIKKNKSKLQYWLHTSQRFH  
 RALNTSFVEEKQPCSKTKRVEKRSNMGPQQLMVWNTSNLSDNQRKYIFNDEEQNLGTQTHQDIPLPP  
 RRRELPAASLTNNGKADSLNVARNSVMQELSELEKQIQVIRQELQLAVSRKTELEEYQRTNRTCES

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mm9099\\_c07.zip](https://cdn.origene.com/chromatograms/mm9099_c07.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_001033351

ORF Size: 3345 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\\_001033351.2](#), [NP\\_001028523.1](#)

**RefSeq Size:** 7667 bp

**RefSeq ORF:** 3348 bp

**Locus ID:** 242443

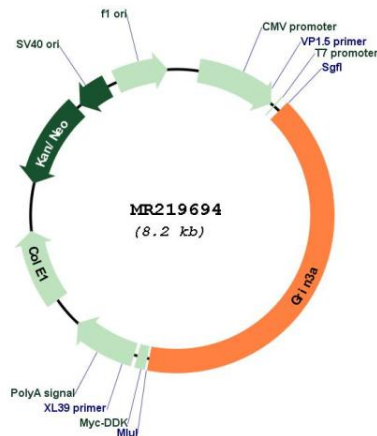
**UniProt ID:** [A2AIR4](#)

**Cytogenetics:** 4 B1

**MW:** 125.1 kDa

**Gene Summary:** NMDA receptor subtype of glutamate-gated ion channels with reduced single-channel conductance, low calcium permeability and low voltage-dependent sensitivity to magnesium. Mediated by glycine. During the development of neural circuits, plays a role in the synaptic refinement period, restricting spine maturation and growth (By similarity). By competing with GIT1 interaction with ARHGEF7/beta-PIX, may reduce GIT1/ARHGEF7-regulated local activation of RAC1, hence affecting signaling and limiting the maturation and growth of inactive synapses (PubMed:24297929). May also play a role in PPP2CB-NMDAR mediated signaling mechanism (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR219694