

## Product datasheet for MR222676

### Grin2c (NM\_010350) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Grin2c (NM_010350) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Grin2c
Synonyms:	GluN2C; NMDAR2C; NR2C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR222676 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTGGAGCCCTGGGGCCCGCCTGCTTCTCACTTCACTCCTTGGTGCTTGGGCAGGGCTGGGCGCAG  
GGCAGGGGAGAACAGGCCGTGACCGTGGCGGTGGTGTGGCAGCTCTGGGCCACTGCAGGCCAGGCCCG  
GACTCGTCTCACCCGAGAACTTCTGGACTTGCTTGGAGATCCAGCCACTCACCATCGGGTCAAC  
AATACCAACCCAGCAGCATCTCACCAAATCTGTGGGCTCCTGGTGCCGCCGAGTCCACGGCATCG  
TCTTTGAGGACAACGTGGACTGAGGCCGTGGCTCAGCTGCTGGATTCGTCTCCTCTCAGACCCAGT  
GCCCATCCTCAGCATCAGTGGAGTTCTGCTGTGGTCTCACCCCAAGGAGCCAGGCTCCGCCTTTCTA  
CAGCTGGGCGTGTCCCTGGAGCAGCAGTGCAGGTGCTGTTCAAGGTGCTGGAGGAATACGACTGGAGCG  
CGTTTCGCTGTATCACCAGCCTGCACCCGGGCCACGCGCTCTTCCCTCGAGGGCGTGCAGCGCGTCCCGA  
CGCCAGCTACCTGAGCTGGCGGCTGCTGGACGTGCTCACGCTGGAGCTGGGCCCGGTGGGCCGCGAGCG  
CGCACTCAGCGCTTACTGCGCCAGGTGACGCCCCGGTGTGGTGGCCTACTGCTCCCGTGAAGAGGCGG  
AGGTGCTCTTCGCGGAGGCTGCACAGGCTGGCTGGTGGGACCCGGTACGCTGTGGTGTAGTACCTAATCT  
GGCGCTGGGAAGCACCGACGCTCCCCCTGCAGCCTTCCAGTGGGCCATCAGTGTGGTACCCAGAGT  
TGGCGCTTAGCCTACGCCAGAAAGTCCGCGACGGTGTAGCCATTCTGGCCCTCGGTGCCACAGTACC  
GACGCCAGTACGGTACCCTTCCAGCCCCGGCTGGAGACTGCCGAAGCCACCCAGGACCCGTCAGCCCTGC  
CAGGGAGGCTTTTACAGGCATCTGCTGAATGTACCTGGGAAGGCCGAGACTTCTCTTTTAGCCCTGGT  
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GGTGGGATCATGGGTCTGTACATGAAGTATCCAGTATGGCCTCGTACAGCACTTCTCTGCAGCCTGT  
GGTGGACAGCCGACCTGACAGTGGCCACACTGGAAGAAAGGCCTTTTGTATTGTGGAGAGCCCTGAC  
CCTGGCACAGGTGGCTGTGTTCCCAACTGTGCCCTGCCGTAGACAGAGCAACCCACACCTTCAGCAGCG  
GGGATATAACCCCTACCCAAGCTCTGTTGTAAGGGCTTCTGCATCGACATCTCAAGAAGCTGGCCAA  
GGTGGTCAAGTCTCCTACGACTGTACCTGGTACCAACGGCAAGCAGCGCAAGAGGGTTCGTGGTGTG



TGGAATGGTATGATCGGTGAGGTATACTACAAGCGGGCAGACATGGCCATCGGCTCCCTCACCATCAATG  
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GAGCAACGGCACCGTCTCCCCCTCGGCTTTTCTGGAGCCCTACAGCCCTGCCGTGTGGGTGATGATGTTT  
GTAATGTGCCTCACGGTGGTTGCCATCACTGTCTTCATGTTTCGAGATTTTCAGCCCTGTGAGCTACAACC  
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GTGTGGCCTTCTCGCTGTCTCTTCCCTCGTAGTACACGGCCAATCTGGCAGCCTTCATGATCCAGG  
AACAAATACATCGACACTGTGTGGGCCTTAGTGACAAGAAGTTTTCAGCGGCCTCAAGACCAATACCACC  
CTTCCGTTTTGGCACGGTACCTAATGGCAGCACAGAGAGGAACATTTCGTAGCAACTATCGTGACATGCAC  
ACTCACATGGTCAAGTTCAACCAGCGCTCGGTGGAGGATGCTCTCACAAGCCTGAAGATGGGGAAGCTGG  
ACGCCCTCATCTATGATGCCGCCCTCTCAACTACATGGCGGGCAAGGACGAAGGCTGCAAGCTGGTCCAC  
CATTGGGTCTGGCAAAGTCTTGGCCACTGGCTATGGCATTGCCATGCAGAAAGACTCCCCTGGAAG  
CGGGCCATAGACCTGGCGCTCCTGCAGTTCCTGGGGATGGGGAGACACAGAAGTTGGAGACAGTGTGGC  
TCTCAGGGATCTGCCATAACGAGAAGAACGAGGTGATGAGCAGCAAGCTGGACATTGACAACATGGCGGG  
CGTCTTCTACATGCTGTTGGTGGCCATGGGGCTGGCCCTTCTGGTCTTTCCTGGGAGCACCTGGTCTAC  
TGGAAACTTCGACACTCAGTGCCAGCTCATCCCAGCTGGACTTCTGCTGGCTTTCAGCAGGGGCATCT  
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CTCAGCCCAGGCCAATGTGCTGAAGATGCTGCAGGCGGCTCGAGACATGGTGAGCACAGCGGACGTGAGC  
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CTCAGCCCGACGTGTCCCGAGCATCCTGCAGGCACGCTTGGGATGCGCGGTGGCCAGTGCAGTGGGC  
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CCACTACAGTTCCCTTCCCTCGAGCAGAGAGGTCAGGGCGCCATTCTCCCGCTATTCGCGAGCCCCG  
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CCCTCTGCCTGCCAGGTGTACCGGTACGCCTGCGCTTGCCATGTCCCCAAAGCCGGCCATCTGCCGG  
CACGTGGCTCAAACACAGTCGTTGCGGCTGCCATCCTACCGGGAGGCTGTGTGGAGGGCGTGCCAGCAG  
GGGTGGCCGCCACCTGGCAGCCAGACAGCATGTCTGCCTGCACACCCATACCCACCTGCCGTTCTGCTG  
GGGACTGTCTGCCGTACCCCTCACCCCTGTTCCAGCCACAGTCCCTGGCTCATTGGAATTGGGAGCCT  
CCATCACACAGAGGCAGGACCCTGGGGTAGGTACAGGCTACAGGACAGTGGGGTCTAGAAGAGGTCA  
GCAGGGAAGCTTGTGGGACACAAGGGTTTCCAAGTCTGCACCTGGAGGCGGATCTCCAGCCTGGAATC  
AGAAGTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR222676 protein sequence  
Red=Cloning site Green=Tags(s)

MGGALGPALLLTSLLGAWAGLGAGQGEQAVTVAVVFGSSGPLQAQARTRLTQNFLLDPLEIQPLTIGVN  
 NTNPNSSILTQICGLLGAARVHGI VFEDNVDTEAVAQLLDFVSSQTHVPILSISGGSAVVLTPKEPGSAFL  
 QLGVSLEQQLQVLFKVLEEYDWSAFVITSLHPGHALFLEGVRVADASYLSWRLLDVL TLELPGGGPRA  
 RTQRLLRQVDAPVLVAYCSREEAEVLF AEAAQAGLVGPGHWL VPNLALGSTDAPPAAFPVGLISVVTES  
 WRLSLRQKVRDGVAILALGAHSYRRQYGTLPAPAGDCRSHPGPVSPAREAFYRHLLNVTWEGRDFSFSPG  
 GYL VQPTMVVIALNRHRLWEMVGRWDHGVL YMKYPVWPRYSTSLQPVDSRHLTVATLEERPFVIVESPD  
 PGTGGCVPNTVPCRRQSNHTFSSGDITPYTKLCKGFCIDILKKLAKVVKFSYDLYLVTNGKHGKRVGV  
 WNGMIGEYVYKRADMAIGSLTINEERSEIIDFSVPFVETGISVMVARSNGTVSPSAFLEPYSPAVWMMF  
 VMCLTVVAITVFMFEYFSPVSYNQNLTKGKSGGPSFTIGKSVLLWALVFNNVPIENPRGTTSKIMVL  
 VWAFFAVIFLASYANLAAFMIQEYIDTVSGLSDKKFQRPQDQYPPFRFGTVPNGSTERNIRSNYRDMH  
 THMVKFNQRSVEDAL TSLKMGKLDAFIYDAAVLN YMAGKDEGCKLVTIGSGKVFATTGYGIAMQKDSHWK  
 RAIDLALLQFLGDGETQKLETVWL SGICHNEKNEVMSSKLDIDNMAGVFYMLLVAMGLALLVFAWEHLVY  
 WKLRHSPSSQLDFLLAFSRGIYSCFNGVQSLPSPARPPSPDLTAGSAQANVLKMLQAARDMVSTADVS  
 GSLDRATRTIENWGNRRAPAPTTSGPRCTPGPPGQPSPSGWRPPGGGRTPLARRAPQPPARPATCAGS  
 PQPDVSRASCRHAWDARWPVRVGHQGSLSASERRALPERSLLHAHCHYSSFPRAERSGRPFLPLFPEPP  
 EPDDLPLLGPEQLARREALLRAAWARGPRPRHASLPSSVAEAFTRSNPLPARCTGHACACPCQSRPSCR  
 HVAQTQSLRRLPSYREACVEGVPAGVAATWQPRQHVCLHTHTLHPFCWGTVCRHPPPCSSHSPWLIGTWEP  
 PSHRGRTLGLGTGYRDSGVLEEVSRACGTQGFPRRCTWRRISSELESEV

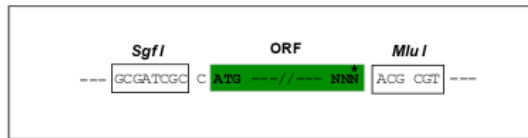
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



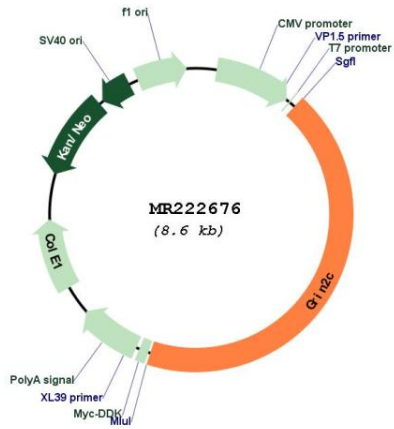
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_010350

**ORF Size:** 3720 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_010350.2</a> , <a href="#">NP_034480.2</a>
<b>RefSeq Size:</b>	4895 bp
<b>RefSeq ORF:</b>	3720 bp
<b>Locus ID:</b>	14813
<b>UniProt ID:</b>	<a href="#">Q01098</a>
<b>Cytogenetics:</b>	11 80.8 cM
<b>MW:</b>	135.4 kDa
<b>Gene Summary:</b>	Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. 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+) (PubMed:1377365). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:1377365). Plays a role in regulating the balance between excitatory and inhibitory activity of pyramidal neurons in the prefrontal cortex (PubMed:27922130). Contributes to the slow phase of excitatory postsynaptic current, long-term synaptic potentiation, and learning (PubMed:8987814).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR222676