

Product datasheet for **RC216458**

NMDAR1 (GRIN1) (NM_007327) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NMDAR1 (GRIN1) (NM_007327) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NMDAR1
Synonyms:	GluN1; MRD8; NDHMSD; NDHMSR; NMD-R1; NMDA1; NMDAR1; NR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216458 representing NM_007327
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGCACCATGCGCCTGCTGACGCTCGCCTGCTGTTCTCCTGCTCCGTCGCCCGTGCCGCGTGCGACC
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 GCCATCCAGATGGCTCTGTGGTGTGCGAGGACCTCATCTCCAGCCAGGTCTACGCCATCTAGTTAGCC
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC216458 representing NM_007327
 Red=Cloning site Green=Tags(s)

MSTMRLTLALLFSCSVARAACDPKIVNIGAVLSTRKHEQMFREAVNQANKRHGSWKIQLNATSVTHKPN
 AIQMALSVCEDLISSQVYAILVSHPTPNDFHTPTPVSYTAGFYRIPVLGLTTRMSIYSDKSIHLSFLRT
 VPPYSHQSSVWFEMMRVYSWNHIIILLVSDDEHGRAAQKRLLEERESKAQKVLQFDPGTKNVTALLME
 AKELARVVIILSASEDDAATVYRAAAMLNMTGSGYVWL VGEREISGNALRYAPDGLGLQLINGKNESA
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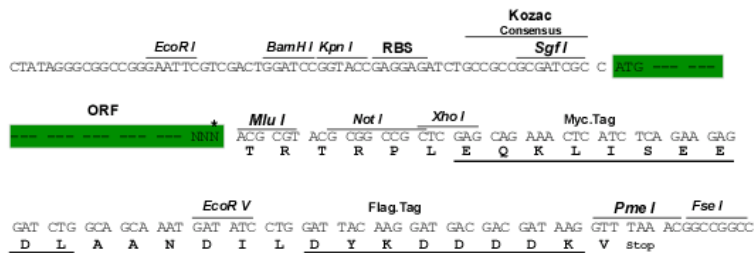
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2636_a01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_007327

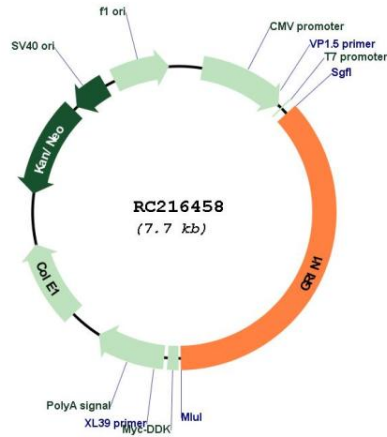
ORF Size: 2814 bp

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 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:	<ol style="list-style-type: none"> 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_007327.4
RefSeq Size:	5137 bp
RefSeq ORF:	2817 bp
Locus ID:	2902
UniProt ID:	Q05586
Cytogenetics:	9q34.3
Protein Families:	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
Protein Pathways:	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Calcium signaling pathway, Huntington's disease, Long-term potentiation, Neuroactive ligand-receptor interaction
MW:	105.37 kDa

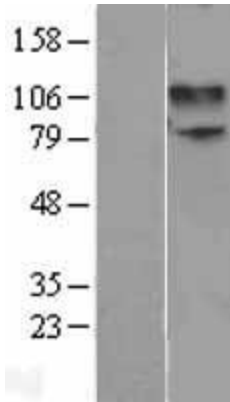
Gene Summary:

The protein encoded by this gene is a critical subunit of N-methyl-D-aspartate receptors, members of the glutamate receptor channel superfamily which are heteromeric protein complexes with multiple subunits arranged to form a ligand-gated ion channel. These subunits play a key role in the plasticity of synapses, which is believed to underlie memory and learning. Cell-specific factors are thought to control expression of different isoforms, possibly contributing to the functional diversity of the subunits. Alternatively spliced transcript variants have been described. [provided by RefSeq, Jul 2008]

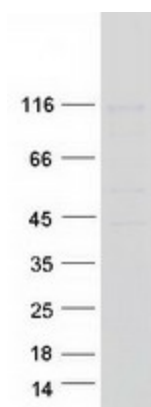
Product images:



Circular map for RC216458



Western blot validation of overexpression lysate (Cat# [LY402129]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216458 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GRIN1 protein (Cat# [TP316458]). The protein was produced from HEK293T cells transfected with GRIN1 cDNA clone (Cat# RC216458) using MegaTran 2.0 (Cat# [TT210002]).