

## Product datasheet for **RG231447**

### **NMDAR1 (GRIN1) (NM\_001185090) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NMDAR1 (GRIN1) (NM_001185090) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NMDAR1
Synonyms:	GluN1; MRD8; NDHMSD; NDHMSR; NMD-R1; NMDA1; NMDAR1; NR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG231447 representing NM\_001185090  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAGCACCATGCGCCTGCTGACGCTCGCCCTGCTGTTCTCCTGCTCCGTCGCCCGTGCCGCGTGCAGACC  
 CCAAGATCGTCAACATTGGCGCGGTGCTGAGCACGCGGAAGCACGAGCAGATGTTCCGCGAGGCCGTGAA  
 CCAGGCCAACAAGCGGCACGGCTCCTGGAAGATTCAGCTCAATGCCACCTCCGTCACGCACAAGCCCAAC  
 GCCATCCAGATGGCTCTGTGGTGTGCGAGGACCTCATCTCCAGCCAGGTCTACGCCATCTAGTTAGCC  
 ATCCACCTACCCCAACGACCACCTTCACTCCCACCCTGTCTCCTACACAGCCGGCTTCTACCGCATACC  
 CGTGTGGGGCTGACCACCCGCATGTCCATCTACTCGGACAAGAGCATCCACCTGAGCTTCTGCGCACC  
 GTGCCGCCCTACTCCCACAGTCCAGCGTGTGGTTTGGATGATGCGTGTCTACAGCTGGAACCACATCA  
 TCCTGCTGGTCAAGGACGACCACGAGGGCCGGGGCTCAGAAACGCCTGGAGACGCTGCTGGAGGAGCG  
 TGAGTCCAAGAGTAAAAAAGGAACTATGAAAACCTCGACCAACTGTCCTATGACAACAAGCGCGGACCC  
 AAGGCAGAGAAGGTGCTGCAATTTGACCAGGGACCAAGAACGTGACGGCCCTGCTGATGGAGGCGAAAG  
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 GATGCTGAACATGACGGGCTCCGGGTACGTGTGGCTGGTCCGGCGAGCGCGAGATCTCGGGGAACGCCCTG  
 CGCTACGCCCCAGACGGCATCCTCGGGTGCAGCTCATCAACGGCAAGAACGAGTCGGCCACATCAGCG  
 ACGCCGTGGGCGTGGTGGCCAGGCCGTGCACGAGCTCCTCGAGAAGGAGAACATCACCGACCCGCCGCG  
 GGGCTGCGTGGCAACACCAACTCTGGAAGACCGGGCCGCTCTCAAGAGAGTGTGATGCTTCCAAG  
 TATGCGGATGGGTGACTGGTCCGCTGGAGTTCAATGAGGATGGGACCGGAAGTTCGCCAACTACAGCA  
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 GGCTGCTGGTGGGGCTGTCCGGTGCACGTGGTGGCCGTGATGCTGTACCTGCTGGACCGCTTCAGCCCTT  
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 GCATGGTGTGGGCGGCTTTGCCATGATCATCGTGGCCTCCTACACCGCCAACCTGGCGGCTTCTGGT  
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 ATCTACGCCACGGTGAAGCAGAGCTCCGTGGATATCTACTCCGGCGCCAGGTGGAGCTGAGCACCATGT  
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 GGAGAGCTGTTTTCCGCTCGGGCTTCGGCATAGGCATGCGCAAAGACAGCCCTTGAAGCAGAAGCTCT  
 CCTGTCCATCCTCAAGTCCCACGAGAATGGCTTCATGGAAGACCTGGACAAGACGTGGGTTCCGGTATCA  
 GGAATGTGACTCGCGCAGCAACGCCCTGCGACCTTACTTTTGAAGAATGGCCGGGGTCTTCATGCTG  
 GTAGCTGGGGCATCGTGGCCGGATCTTCTGATTTTTCATCGAGATTGCCTACAAGCGGCACAAGGATG  
 CTCGCCGAAGCAGATGCAGCTGGCCTTTGCCCGGTTAACGTGTGGCGGAAGAACCTGCAGGATAGAAA  
 GAGTGGTAGAGCAGAGCCTGACCCTAAAAAGAAAGCCACATTTAGGGCTATCACCTCCACCCTGGCTTCC  
 AGCTTCAAGAGGCGTAGTCTCCTCAAGACACGCAGTACCATCCACTGATATCACGGGCCCGCTCAACC  
 TCTCAGATCCCTCGGTACGACCCGTGGT

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG231447 representing NM\_001185090  
Red=Cloning site Green=Tags(s)

```
MSTMRLTLALLFSCSVARAACDPKIVNIGAVLSTRKHEQMFREAVNQANKRHGSKIQLNATSVTHKPN
AIQMALSVCEDLISSQVYAILVSHPTPNDFHTPTPVSYTAGFYRIPVLGLTTRMSIYSDKSIHLSFLRT
VPPYSHQSSVWFEMMRVYSWNHIIILLVSDDEHGRAAQKRLLEERESKSKRNYENLDQLSYDNKRGP
KAEKVLQFDPGTKNVTALLMEAKELEARVIIISASEDDAATVYRAAAMLNMTGSGYVWL VGEREISGNAL
RYAPDGI LGLQLINGKNESAHI SDAVG VVAQA VHELLEKENITDPPRGCVGNTNIWKTGPLFKRVLMSK
YADGVTGRVEFNEDGDRKFANYSIMNLQNRKLVQVGIYNGTHVIPNDRKI IWPGGETEKPRGYQMSTRLK
IVTIHQEPFVYVKPTLSDGTCKEEFTVNGDPVKKVICTGPNDTSPGSPRHTVPQCCYGFCIDL L IKLART
MNFTYEVHLVADGKFGTQERVNNSNKKEWNGMMGELL SGQADMI VAPLT INNERAQYIEFSKPFKYQGLT
ILVKKEIPRSTLDSFMQPFQSTLWLLVGLSVHVAVMLYLLDRFSPFGRFKVNSEEEEDAL TLSSAMWF
SWGVLNLSGIGEGAPRSFSARILGMVWAGFAMIIVASYANLAAFLVDRPEERITGINDPRLRNP SDKF
IYATVKQSSVDIYFRRQVELSTMYRHMEKHNYESAAEAIQAVRDNKLHAF IWDSAVLEFEASQKCDLVTT
GELFFRSFGF IGMRKDSPWKQNVSL SILKSHENGFMEDLDKTTWVRYQECDSRSNAPATLTFENMAGVFM L
VAGGIVAGIFLIFIEIAYKRHKDARRKQMLAF AAVNVWRKNLQDRKSGRAEPDPKKKATFRAITSTLAS
SFKRRRSSKDTQYHPTDITGPLNLSDPVSTVV
```

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

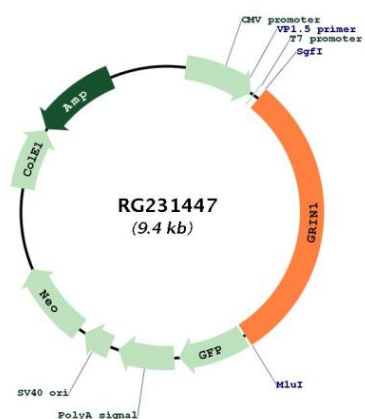


**ACCN:** NM\_001185090

**ORF Size:** 2829 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_001185090.2</a>
<b>RefSeq Size:</b>	4100 bp
<b>RefSeq ORF:</b>	2832 bp
<b>Locus ID:</b>	2902
<b>UniProt ID:</b>	<a href="#">Q05586</a>
<b>Cytogenetics:</b>	9q34.3
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
<b>Protein Pathways:</b>	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Calcium signaling pathway, Huntington's disease, Long-term potentiation, Neuroactive ligand-receptor interaction
<b>Gene Summary:</b>	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 RG231447