

## Product datasheet for **RG219368**

### **NMDAR1 (GRIN1) (NM\_000832) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NMDAR1 (GRIN1) (NM_000832) 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:**

>RG219368 representing NM\_000832  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGCACCATGCGCCTGCTGACGCTCGCCTGCTGTTCTCCTGCTCCGTCGCCCCGTGCCGCTGCGACC  
 CCAAGATCGTCAACATTGGCGCGGTGCTGAGCACGCGGAAGCACGAGCAGATGTTCCGCGAGGCCGTGAA  
 CCAGGCCAACAAGCGGCACGGCTCCTGGAAGATTAGCTCAATGCCACCTCCGTCACGCACAAGCCCAAC  
 GCCATCCAGATGGCTCTGTGGTGTGCGAGGACCTCATCTCCAGCCAGGTCTACGCCATCTAGTTAGCC  
 ATCCACCTACCCCAACGACCCTTCACTCCCACCCTGTCTCCTACACAGCCGGCTTCTACCGCATACC  
 CGTGTGGGGCTGACCACCCGCATGTCCATCTACTCGGACAAGAGCATCCACCTGAGCTTCTGCGCACC  
 GTGCCGCCCTACTCCCACAGTCCAGCGTGTGGTTTGGATGATGCGTGTCTACAGCTGGAACCACATCA  
 TCCTGCTGGTCAAGGACGACCACGAGGGCCGGGCGGCTCAGAAACGCCTGGAGACGCTGCTGGAGGAGCG  
 TGAGTCCAAGGCAGAGAAGGTGCTGCAGTTTACCAGGGACCAAGAAGCTGACGCCCTGCTGATGGAG  
 GCGAAAGAGCTGGAGGCCCGGTATCATCTTTCTGCCAGCGAGGACGATGCTGCCACTGTATACCGCG  
 CAGCCCGCATGCTGAACATGACGGGCTCCGGGTACGTGTGGTGGTGGCGAGCGCGAGATCTCGGGGAA  
 CGCCCTGCGCTACGCCCCAGACGGCATCCTCGGGCTGCAGCTCATCAACGGCAAGAACGAGTCGGCCAC  
 ATCAGCGACGCGGTGGCGTGGTGGCCAGGCCGTGCACGAGCTCCTCGAGAAGGAGAACATCACCGACC  
 CGCCGCGGGCTGCGTGGGAACACCAACATCTGGAAGACCGGGCCGCTTTCAAGAGAGTGTGATGTC  
 TTCCAAGTATGCGGATGGGGTACTGGTGCAGTGGAGTTCAATGAGGATGGGACCGGAAGTTCCGCAAC  
 TACAGCATCATGAACCTGCAGAACCGAAGCTGGTCAAGTGGGCATCTACAATGGCACCCACGTCATCC  
 CTAATGACAGGAAGATCATCTGGCCAGGCGGAGAGACAGAGAAGCCTCGAGGGTACCAGATGTCCACCAG  
 ACTGAAGATTGTGACGATCCACCAGGAGCCCTTGGTGTACGTCAAGCCCACGCTGAGTGTGGACATGC  
 AAGGAGGAGTTACAGTCAACGGCGACCCAGTCAAGAAGGTGATCTGCACCGGGCCCAACGACACGTCGC  
 CGGGCAGCCCCGCCACACGGTGCCTCAGTGTGCTACGGCTTTTGCATCGACCTGCTCATCAAGCTGGC  
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 AACACAGCAACAAGAAGGAGTGGAAATGGGATGATGGGCGAGCTGCTCAGCGGCAGGCAGACATGATCG  
 TGGCGCCGCTAACATAAACAACGAGCGCGCAGTACATCGAGTTTCCAAGCCCTTCAAGTACCAGGG  
 CCTGACTATTCTGGTCAAGAAGGAGATCCCCGGAGCACGCTGGACTCGTTCATGCAGCCGTTCCAGAGC  
 AACTGTGGCTGTGGTGGGGCTGTGGTGCACGTGGTGGCCGTGATGCTGTACCTGCTGGACCGCTTCA  
 GCCCTTCGGCCGTTCAAGGTGAACAGCGAGGAGGAGGAGGAGGACGCACTGACCTGTCTCGGCCAT  
 GTGGTTCTCCTGGGGCGTCTGCTCAACTCCGGCATCGGGGAAGGCGCCCCCAGAAGCTTCTCAGCGCGC  
 ATCCTGGGCATGGTGTGGGCCGGCTTTGCCATGATCATCGTGGCCTCCTACACCGCCAACCTGGCGGCT  
 TCCTGGTGTGGACCGCCGGAGGAGCGCATCACGGGCATCAACGACCCCTCGGCTGAGGAACCCCTCGGA  
 CAAGTTTATCTACGCCACGGTGAAGCAGAGCTCCGTGGATATCTACTCCGGCGCCAGGTGGAGCTGAGC  
 ACCATGTACCGGCATATGGAGAAGCACAACCTACGAGAGTGGCGGAGGCCATCCAGGCCGTGAGAGACA  
 ACAAGCTGCATGCCTTCACTGGGACTCGGCGGTGCTGGAGTTGAGGCCCTCGCAGAAGTGGACCTGGT  
 GACGACTGGAGAGCTGTTTTCCGCTCGGGCTTCGGCATAGGCATGCGCAAAGACAGCCCTGGAAGCAG  
 AACGTCTCCCTGTCCATCCTCAAGTCCCACGAGAATGGCTTCATGGAAGACCTGGACAAGACGTGGGTTT  
 GGTATCAGGAATGTGACTCGCGCAGCAACGCCCTGCGACCCCTACTTTTGAACAATGGCCGGGTCTT  
 CATGCTGGTAGCTGGGGCATCGTGGCCGGATCTTCTGATTTTCATCGAGATTGCCTACAAGCGGCAC  
 AAGGATGCTCGCCGAAGCAGATGCAGCTGGCCTTTGCCCGCTTAACGTGTGGCGGAAGAACCTGCAGC  
 AGTACCATCCACTGATATCACGGGCCGCTCAACCTCTCAGATCCCTCGGTCAGCACCGTGGT

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

Protein Sequence: >RG219368 representing NM\_000832  
 Red=Cloning site Green=Tags(s)

MSTMRLTLALLFSCSVARAACDPKIVNIGAVLSTRKHEQMFREAVNQANKRHGSKWIQLNATSVTHKPN  
 AIQMALSVCEDLISSQVYAILVSHPTPNDFHTPTPVSYTAGFYRIPVGLTTRMSIYSDKSIHLSFLRT  
 VPPYSHQSSVWFEMMRVYSWNHIIILLVSDDEHGRAAQKRLLEERESKAQKLVQFDPGTKNVTALLME  
 AKELARVVIILSASEDDAATVYRAAAMLNMTGSGYVWL VGEREISGNALRYAPDGLGLQLINGKNESA  
 ISDAVGVAQAVHELLEKENITDPPRGCVGNTNIWKTGPLFKRVLMSKYADGVTGRVEFNEDGDRKFAN  
 YSIMNLQNRKLVQVGIYNGTHVIPNDRKIIWPGGETEKPRGYQMSTRLKIVTIHQEPFVYVKPTLSDGTC  
 KEEFTVNGDPVKKVICTGPNDTSPGSPRHTVPQCCYGFCIDLILKARTMNFYEVHLVADGKFGTQERV  
 NNSNKKEWNGMMGELLSGQADMIVAPLTINNERAQYIEFSKPFKYQGLTILVKKEIPRSTLDSFMQPFQS  
 TLWLLVGLSVHVAVMLYLLDRFSPFGRFKVNSEEEEDALTLSSAMWFSWVLLNSGIGEGAPRSFSAR  
 ILMVMWAGFAMIIVASYANLAFLVDRPEERITGINDPRLRNPDKFIYATVKQSSVDIYFRRQVELS  
 TMYRHEKHNYESAAEAIQAVRDNKLHAFIWDSAVLEFEASQKCDLVTTGELFFRSGFGIGMRKDSFPWKQ  
 NVSLSILKSHENGFMEDLKTWVRYQECDSRSNAPATLTFENMAGVFMLVAGGIVAGIFLIFIEIAYKRH  
 KDARRKMQQLAFAAVNVWRKLNQQYHPTDITGPLNLSDPVSSTVV

TRTRPLE - GFP Tag - V

Restriction Sites:

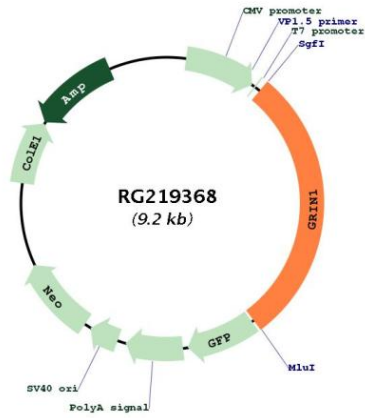
SgfI-MluI

Cloning Scheme:



<b>ACCN:</b>	NM_000832
<b>ORF Size:</b>	2655 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_000832.7</a>
<b>RefSeq Size:</b>	3902 bp
<b>RefSeq ORF:</b>	2658 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 RG219368