

## Product datasheet for **RG223941**

### **GRIA4 (NM\_001077243) Human Tagged ORF Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                            |
| Product Name:             | GRIA4 (NM_001077243) Human Tagged ORF Clone    |
| Tag:                      | TurboGFP                                       |
| Symbol:                   | GRIA4  |
| Synonyms:                 | GluA4; GluA4-ATD; GLUR4; GLUR4C; GLURD; NEDSGA |
| Mammalian Cell Selection: | Neomycin                                       |
| Vector:                   | pCMV6-AC-GFP (PS100010)                        |
| E. coli Selection:        | Ampicillin (100 ug/mL)                         |



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**ORF Nucleotide Sequence:**

>RG223941 representing NM\_001077243  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGGATTATTTCCAGACAGATTGCTCTGTTATTTCTGGATTTGGGACTCGCCATGGGAGCCTTTC  
 CGAGCAGCGTGCAAATAGGTGGTCTCTTCATCCGAAACACAGATCAGGAATACACTGCTTTTCGATTAGC  
 AATTTTTCTTCATAACACCAGCCCAATGCGTCGGAAGCTCCTTTAATTTGGTACCTCATGTGGACAAC  
 ATTGAGACAGCCAACAGTTTTGCTGTAACAAACGCCTTCTGTTCCAGTATTCTAGAGGAGTATTTGCCA  
 TTTTGGACTCTATGATAAGAGGTCGGTACATACCTTGACCTATTCTGCAGCGCCTTACATATCTCCCT  
 CATCACACCAAGTTCCCTACTGAGGGGAGAGCCAGTTGTGCTGCAACTAAGACCTTCGTTACGAGGA  
 GCACTCTTGAGTTGCTGGATCACTACGAATGGAAGTGTGTTGCTTCTGTATGACACAGACAGGGGAT  
 ACTCGATACTCCAAGCTATTATGAAAAAGCAGGACAAAATGGTTGGCATGTCAGCGCTATATGTGTGGA  
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 ATAGACTGTGAGATAGAGAGACTTCAAAACATATTAGAACAGATTGTAAGTGTGGAAAGCATGTTAAAG  
 GCTACCATTATATCATTGCAAACTTGGGATTCAAGGATATTTCTCTTGAGAGGTTTATACATGGTGGAGC  
 CAATGTTACTGGATTCCAGTTGGTGGATTTAATACACCTATGGTAATCAAATAATGGATCGTGGGAAG  
 AAAGTAGATCAGAGAGAGTATCCAGGATCTGAGACTCCTCAAAGTACACCTCTGCTCTGACTTATGATG  
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 CTTGATCAAGATGTACCAACTCTTGGCAATGACACAGCTGCTATTGAGAACAGAACAGTGGTTGTAACC  
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 AAGGATACTGTAGATTGGCATCTGAAATTGCAAAACATATTGGTATCAAGTATAAAATTGCCATTGT  
 CCCTGATGGAAAAATGGAGCAAGGGATGCAGACACAAAAATCTGGAATGGGATGGTAGGAGAACTGTT  
 TATGGGAAAGCAGAGATTGCTATTGCCCTCTGACAATCACTTTGGTACGAGAGGAGGTCATTGACTTTT  
 CTAAGCCCTTCATGAGTTTGGGCATATCTATCATGATCAAAAAGCCTCAGAAATCCAACCAGGAGTGT  
 TTCCTTCTGGATCCTCTGGCCTATGAGATTTGGATGTGCATAGTCTTTGCCTACATTGGTGTGAGCGT  
 GTCTTATCTAGTTAGTAGATTAGTCCATATGAGTGGCACACAGAAGGCCAGAGGACGGAAAGGAAG  
 GACCCAGCGACCGCCTCCAATGAGTTTGGCATCTTAAACAGCCTCTGGTTTTCCCTGGGTGCTTTTAT  
 GCAGCAAGGATGTGACATTTACCCAGATCCCTCTCAGGTGCAATTGTTGGAGGTGTTTGGTGGTCTTT  
 ACACTCATCATTATATCATCTTATACTGCTAACCTCGCTGCTTTTCTGACGGTTGAGCGAATGGTCTCTC  
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 CCATCAGTATTCAGTACTAGGACTACAGCTGAGGGAGTAGCTCGTGTCCGCAATCCAAGGGCAAATTTGCCT  
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 CTTCTACATTCTGGTTGGCGCTTGGGCTTGGCAATGCTGGTGGCTTTGATAGAGTTCTGTTACAAGTCC  
 AGGGCAGAAGCGAAGAGAATGAAGGTGGCAAGAGTGCACAGACTTTTAAACCAACTTCTCGCAGAATA  
 CCCAGAATTTAGCAACCTATAGAGAAGGTTACAACGTATATGGAACCGAAAGTATTTAAATTT

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG223941 representing NM\_001077243  
 Red=Cloning site Green=Tags(s)

MRIISRQIVLLFSGFWGLAMGAFSSVQIGGLFIRNTDQEYAFRLAIFLHNTSPNASEAPFNLVPHVDN  
 IETANSFAVTNAFCSQYSRGVFAIFGLYDKRSVHTLSFCSALHISLITPSFPTEGESQFVLQLRPSLRG  
 ALLSLLDHYEWNCVFVLYDTRGYSILQAIMEKAGQNGWHVSAICVENFNDVSYRQLLEELDRRQEKKFV  
 IDCEIERLQNIIEQIVSVGKHKVGYHYIIANLGFKDISLERFIHGGANVTGFQLVDFNTPMVIKLMDRWK  
 KLDQREYPGSETPPKYTSALTYDGVLVMAETFRSLRRQKIDISRRGNAGDCLANPAAPWQGQIDMERTLK  
 QVRIQGLTGNVQFDHYGRRVNYTMDVFEKSTGPRKVGWYNDMDKLVLIQDVPTLGNDTAAIENRTVVVT  
 TIMESPYVMYKKNHEMFEGNDKYEYCVDLASEIAKHIGIKYKIAIVPDGKYGARDADTKIWNMGVDELV  
 YGKAEIAIAPLTITLVREEVIDFSKPFMSLGISIMIKPKQSKPGVFSFLDPLAYEIMWCIVFAYIGVSV  
 VLFLVSRFSPYEWHTTEPEDGKEGSDQPPNEFGIFNSLWFLGAFMQQGCDSRSLSGRIVGGVWVWF  
 TLIIISSYANLAAFLTVERMVSPIESAEDLAKQTEIAYGTLDSGSTKEFFRRSKIAVYEKMWTYMRSAE  
 PSVFTRTTAEGVARVRKSKGKFAFLLESTMNEYIEQRKPCDTMKVGGNLDKSGYGVATPKGSSLGNVNL  
 AVLKLNQGLLDKLNKWWYDKGECGSGGGDSKDKTSALSLSNVAGVFYILVGGGLAMLVALIEFCYKS  
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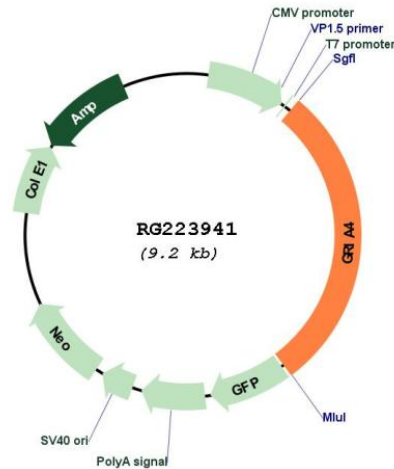
TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_001077243

**ORF Size:** 2652 bp

**OTI Disclaimer:** 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\\_001077243.2](#), [NP\\_001070711.2](#)

**RefSeq Size:** 5621 bp

**RefSeq ORF:** 2655 bp

**Locus ID:** 2893

**UniProt ID:** [P48058](#)

|                          |   |
|--------------------------|---|
| <b>Cytogenetics:</b>     | 11q22.3   |
| <b>Protein Families:</b> | Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane  |
| <b>Protein Pathways:</b> | Neuroactive ligand-receptor interaction   |
| <b>Gene Summary:</b>     | <p>Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. These receptors are heteromeric protein complexes composed of multiple subunits, arranged to form ligand-gated ion channels. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. The subunit encoded by this gene belongs to a family of AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate)-sensitive glutamate receptors, and is subject to RNA editing (AGA-&gt;GGA; R-&gt;G). Alternative splicing of this gene results in transcript variants encoding different isoforms, which may vary in their signal transduction properties. Some haplotypes of this gene show a positive association with schizophrenia. [provided by RefSeq, Jul 2008]</p> |