

## Product datasheet for **MR227065**

### **Gria2 (NM\_013540) Mouse Tagged ORF Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                              |
| Product Name:             | Gria2 (NM_013540) Mouse Tagged ORF Clone         |
| Tag:                      | Myc-DDK  |
| Symbol:                   | Gria2  |
| Synonyms:                 | Glu; GluA2; GluR; Glur-2; GluR-B; gluR-K2; Glur2 |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)                           |
| E. coli Selection:        | Kanamycin (25 ug/mL)                             |



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**ORF Nucleotide Sequence:**

>MR227065 representing NM\_013540  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCAAAAGATTATGCATATTTCTGTCCTCTTTCTCCTGTTTTATGGGACTGATTTTTGGTGTCTCTT  
 CTAACAGCATACAGATAGGGGGCTATTTCCAAGGGCGCTGATCAAGAATACAGTGCATTTCCGGTAGG  
 GATGGTTCAGTTTTCCACTTCGGAGTTCAGACTGACACCCCATATCGACAATTTGGAGGTAGCCAACAGT  
 TTCGCAGTCACCAATGCTTTCTGCTCCCAGTTTTCAAGAGGCGTCTATGCGATTTTTGGTTTTACGACA  
 AGAAGTCTGTAATACCATCACATCATTCTGTGGGACTGCATGTATCCTTCATCACACCAAGCTTCCC  
 AACAGATGGCAGCATCCATTTGTCATCCAGATGCGACCTGACCTCAAAGGAGCACTCCTTAGCTTGATT  
 GAGTACTACCAATGGGATAAGTTCGCATACCTCTATGACAGTACAGAGGCTTATCAACTGCAAGCTG  
 TGCTGGATTCTGCTCGGAGAAGAAGTGGCAGGTGACTGCTATCAATGTGGGAACATTAACAATGACAA  
 GAAAGATGAGACCTACAGATCACTTTCAAGATCTGGAGTTAAAAAAGAACGGCGTGAATCCTTGAC  
 TGGCAAAGGGATAAAGTCAATGACATTGTGGACAGGTTATTACCATTTGAAAGCATGTTAAAGGGTACC  
 ATTATATCATTGCAAATCTGGGATTTACTGATGGAGACCTGCTGAAAATTCAGTTTGGAGGAGCAAATGT  
 CTCTGGATTTAGATTGTAGACTACGACGACTCCCTGGTGTCTAAATTTATAGAAAGATGGTCAACACTC  
 GAAGAGAAAGAATACCCTGGAGCACACACAGCGACAATTAAGTATACTTCGGCCCTGACTTATGATGCTG  
 TCCAAGTGATGACTGAAGCATTCCGCAATCTTCGGAAGCAGAGGATTGAAATCTCCAGGAGAGGAAATGC  
 AGGAGATTGTTGGCCAACCCAGCTGTGCCTTGGGACAAGGCGTGGAAATAGAAAGGGCCCTCAAGCAG  
 GTTCAAGTTGAAGTCTCTCTGAAATATAAAATTTGACCAGAACGAAAAACGAATAAATACACAATTA  
 ACATCATGGAGCTCAAAACAAATGGACCCCGAAGATTGGGTACTGGAGTGAAGTGGATAAAATGGTTGT  
 CACCCTAACCGAGCTCCCTCTGAAATGACACATCTGGGCTTGAACAAAACTGTGGTTGTCACCACA  
 ATATTGGAATCTCCATATGTTATGATGAAGAAAAATCATGAAATGCTTGAAGGGAATGAGCGTTATGAGG  
 GCTACTGTGTTGACTTAGCTGCAGAAATGGCAAACATTGTGGATTCAAGTACAAGCTGACTATTGTTGG  
 GGATGGCAAGTATGGGGCCAGGGATGCAGACACCAAAATTTGGAATGGTATGGTTGGAGAACTTGTATAT  
 GGGAAAGCTGATATTGCCATTGCTCCATTAACATCACTCTCGTGAGAGAAGAGGTGATTGACTTCTCGA  
 AGCCATTCATGAGCCTTGAATCTCTATCATGATCAAGAAGCCTCAGAAGTCAAACCAGGAGTGTTTTC  
 CTTTCTTGATCCTTAGCCTATGAGATCTGGATGTGCATTGTGTTTGCCTACATTGGGGTCACTGTAGTT  
 TTATTCCTGGTCAGCAGATTTAGCCCTACGAGTGGCACACTGAGGAATTTGAAGATGGAAGAGAAACAC  
 AAAGTAGTGAATCAACTAATGAATTTGGGATTTTTAATAGTCTCTGGTTTTCTTGGGTGCCTTTATGCG  
 GCAAGGATGCGATATTTGCGCAAGATCTCTCTCTGGGCGCATTGTTGGAGGTGTGTGGTGGTTCTTTACC  
 CTCATCATCATCTCCTCTACACGGCTAACTTAGCTGCCTTCTGACTGTAGAGAGGATGGTGTCCGCCA  
 TCGAAAGTGTGAGGATCTGTCTAAGCAAACAGAAATGCTTATGGAACATTAGACTCTGGCTCCACTAA  
 AGAGTTTTTCAGGAGATCTAAAATTCAGTGTGTTGATAAAATGTGGACTTATATGAGGAGTGCAGAGCCC  
 TCTGTGTTGTGAGGACTACGGCAGAAGGAGTAGCCAGAGTCAGGAAATCCAAAGGGAAGTATGCCTACT  
 TGCTGGAGTCCACAATGAATGAGTACATCGAGCAGAGGAAGCCTTGGCACACCATGAAAGTGGCGGCAA  
 CCTGGATTCCAAAGGCTACGGCATCGCCACACCTAAAGGATCCTCATTAAAGAAATGCGGTTAACCTCGCA  
 GTACTAAAATGAATGAACAAGGCTGTTGGACAATTTGAAAAACAAATGGTGGTACGACAAAGGAGAGT  
 GCGGCAGCGGGGAGGTGATTCCAAGGAAAAGACCAGTGCCTCAGTCTGAGCAACGTTGCTGGAGTATT  
 CTACATCCTTGTGCGGGCCTTGGTTTGGCAATGCTGGTGGCTTTGATTGAGTTCTGTTACAAGTCAAGG  
 GCCGAGGCGAAACGAATGAAGGTGGCAAAGAATGCACAGAATATTAACCCATCTTCTCGCAGAATTCCC  
 AGAATTTTGAACCTATAAGGAAGGTTACAACGTATATGGCATCGAGAGTGTAAATTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR227065 representing NM\_013540  
 Red=Cloning site Green=Tags(s)

MQKIMHISVLLSPVLWGLIFGVSSNSIQIGLFPFGADQEYSAFRVGMVQFSTSEFRLTPHIDNLEVANS  
 FAVTNAFCSQFSRGVYAIFGFYDKKSVNTITSFCGTLHVSFITPSFPTDGTTHPFVIQMRPDLKGALLSLI  
 EYYQWDFAYLYDSRGLSTLQAVLDSAAEKWQVTAINVGNINNDKKDETYRSLFQDLELKKERRVILD  
 CERDKVNDIVDQVITIGKHVKGYHYIIANLGFDTGDLKIQFGGANVSGFQIVDYDDSLVSKFIERWSTL  
 EEKEYPGAHTATIKYTSALTYDAVQVMTEAFRNLKQRIEISRRGNAGDCLANPAVPWGQVEIERALKQ  
 VQVEGLSGNIKFDQNGKRINYTIMELKTNGPRKIGYWEVDKMMVVTTELPSGNDTSGLENKTVVVT  
 ILESPYMMKKNHEMLEGNERYEGYCVDLAAEIAKHCGFKYKLTIVGDGKYGARDADTKIWNMVGELVY  
 GKADIAIAPLTITLVREEVIDFSKPFMSLGISIMIKKPKQSKPGVFSFLDPLAYEIWMCIVFAYIGVSVV  
 LFLVSRFSPEYWHTEEFEDGRETQSSESTNEFGIFNSLWFSLGAFMRQGCDSRSLSGRIVGGVWFFFT  
 LIISSYANLAAFLTVERMVSPIESAEDLSKQTEIAYGTLDSGSTKEFFRRSKIAVFDKMWTYMRSAEP  
 SVFVRTTAEGVARVRKSKGYAYLLESTMNEYIEQRKPCDTMKVGGNLDISKGYGIATPKGSSLRNAVNLA  
 VLKLNQGLLDKLNKWWYDKGECGSGGDSKEKTSALSLSNVAGVFYILVGGGLAMLVALIEFCYKSR  
 AEAKRMKVAKNAQNINPSSSQNSQNFATYKEGYNVYGIESVKI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9003\\_d08.zip](https://cdn.origene.com/chromatograms/mm9003_d08.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

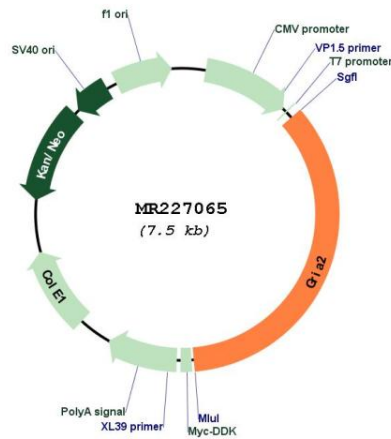


\* The last codon before the Stop codon of the ORF

|                               |  |
|-------------------------------|--|
| <b>ACCN:</b>                  | NM_013540  |
| <b>ORF Size:</b>              | 2649 bp  |
| <b>OTI Disclaimer:</b>        | <p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p> |
| <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_013540.3</a>  |
| <b>RefSeq Size:</b>           | 6841 bp  |
| <b>RefSeq ORF:</b>            | 2652 bp  |
| <b>Locus ID:</b>              | 14800  |
| <b>Cytogenetics:</b>          | 3 35.5 cM  |
| <b>MW:</b>                    | 99.2 kDa   |

**Gene Summary:**

Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. This gene product belongs to a family of glutamate receptors that are sensitive to alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA), and function as ligand-activated cation channels. These channels are assembled from 4 related subunits, Gria1-4. The subunit encoded by this gene (Gria2) is subject to RNA editing (CAG->CGG; Q->R) within the second transmembrane domain, which is thought to render the channel impermeable to Ca<sup>2+</sup>. Alternative splicing, resulting in transcript variants encoding different isoforms, (including the flip and flop isoforms that vary in their signal transduction properties), has been noted for this gene. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for MR227065