

## Product datasheet for **MC221425**

### **Gria2 (NM\_001039195) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gria2 (NM_001039195) Mouse Untagged Clone
Tag:	Tag Free
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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**Fully Sequenced ORF:** >MC221425 representing NM\_001039195  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCAAAAGATTATGCATATTTCTGTCCTCTTTCTCCTGTTTTATGGGACTGATTTTTGGTGTCTCTT  
 CTAACAGCATACAGATAGGGGGCTATTTCCAAGGGCGCTGATCAAGAATACAGTGCATTTCCGGTAGG  
 GATGGTTCAGTTTTCCACTTCGGAGTTCAGACTGACACCCCATATCGACAATTTGGAGGTAGCCAACAGT  
 TTCGCAGTCACCAATGCTTTCTGCTCCCAGTTTTCAAGAGGCGTCTATGCGATTTTTGGGTTTTACGACA  
 AGAAGTCTGTAATACCATCACATCATTCTGTGGGACTGTCATGTATCCTTCATCACACCAAGCTTCCC  
 AACAGATGGCAGCATCCATTTGTCATCCAGATGCGACCTGACCTCAAAGGAGCACTCCTTAGCTTGATT  
 GAGTACTACCAATGGGATAAGTTCGCATACCTCTATGACAGTACAGAGGCTTATCAACTGCAAGCTG  
 TGCTGGATTCTGCTGCGGAGAAGAAGTGGCAGGTGACTGCTATCAATGTGGGAACATTAACAATGACAA  
 GAAAGATGAGACCTACAGATCACTCTTTCAAGATCTGGAGTTAAAAAAGAACGGCGTGAATCCTTGAC  
 TGGCAAAGGGATAAAGTCAATGACATTTGGACCAAGGTTATTACCATTTGAAAGCATGTTAAAGGGTACC  
 ATTATATCATTGCAAATCTGGGATTTACTGATGGAGACCTGCTGAAAATTCAGTTTGGAGGAGCAATGT  
 CTCTGGATTTAGATTGTAGACTACGACGACTCCCTGGTGTCTAAATTTATAGAAAGATGGTCAACACTC  
 GAAGAGAAAGAATACCCTGGAGCACACACAGCGACAATTAAGTATACTTCGGCCCTGACTTATGATGCTG  
 TCCAAGTGATGACTGAAGCATCCGCAATCTTCGGAAGCAGAGGATTGAAATCTCCAGGAGAGGAAATGC  
 AGGAGATTGTTGGCCAAACCCAGCTGTGCCTTGGGACAAGGCGTGGAAATAGAAAGGCCCTCAAGCAG  
 GTTCAAGTTGAAGTCTCTCTGGAATATAAAATTTGACCAGAACGAAAAACGAATAAATACACAATTA  
 ACATCATGGAGCTCAAAACAAATGGACCCCGAAGATTGGGTACTGGAGTGAAGTGGATAAAATGGTTGT  
 CACCCTAACCGAGCTCCCTCTGGAATGACACATCTGGGCTTGAACAAAACTGTGGTTGTACCCACA  
 ATATTGGAATCTCCATATGTTATGATGAAGAAAAATCATGAAATGCTTGAAGGGAATGAGCGTTATGAGG  
 GCTACTGTGTTGACTTAGCTGCAGAAATGGCCAAACATTGTGGATTCAAGTACAAGCTGACTATTGTTGG  
 GGATGGCAAGTATGGGGCCAGGGATGCAGACACCAAAATTTGGAATGGTATGGTTGGAGAAGCTTGTATAT  
 GGGAAAGCTGATATTGCCATTGCTCCATTAACATCACTCTCGTGAGAGAAGAGGTGATTGACTTCTCGA  
 AGCCATTCATGAGCCTTGAATCTCTATCATGATCAAGAAGCCTCAGAAGTCAAACCAGGAGTGTTC  
 CTTTCTTGATCCTTAGCCTATGAGATCTGGATGTGCATTGTGTTTGCCTACATTGGGGTCAGTGTAGTT  
 TTATTCCTGGTCAGCAGATTTAGCCCTACGAGTGGCACACTGAGGAATTTGAAGATGGAAGAGAAACAC  
 AAAGTAGTGAATCAACTAATGAATTTGGGATTTTTAATAGTCTCTGGTTTTCTTGGGTGCCTTTATGCG  
 GCAAGGATGCGATATTTGCGCAAGATCTCTCTCTGGGCGCATTGTTGGAGGTGTGTGGTGGTTCTTTACC  
 CTCATCATCATCTCCTCTACACGGCTAACTTAGCTGCCTTCTGACTGTAGAGAGGATGGTGTGCGCCA  
 TCGAAAGTGTGAGGATCTGTCTAAGCAACAGAAATGCTTATGGAACATTAGACTCTGGCTCCACTAA  
 AGAGTTTTTCAGGAGATCTAAAATGTCAGTGTGATAAAATGTGGACTTATATGAGGAGTGCAGAGCCC  
 TCTGTGTTGTGAGGACTACGGCAGAAGGAGTACCCAGAGTCAGGAAATCCAAAGGGAAGTATGCCTACT  
 TGCTGGAGTCCACAATGAATGAGTACATCGAGCAGAGGAAGCCTTGGCACACCATGAAAGTGGCGGCAA  
 CCTGGATTCCAAAGGCTACGGCATCGCCACACCTAAAGGATCCTCATTAAAGTGGGTGGAATAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_001039195  
**Insert Size:** 2304 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](mailto: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](#)

**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\\_001039195.1](#), [NP\\_001034284.1](#)

**RefSeq Size:** 3491 bp

**RefSeq ORF:** 2304 bp

**Locus ID:** 14800

**Cytogenetics:** 3 35.5 cM

**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(2+). 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]

Transcript Variant: This variant (3) differs at the 3' end compared to transcript variant 1, and encodes a shorter isoform (3) with a distinct C-terminus compared to isoform 1. RNA editing (CAG->CGG) changes Gln607Arg. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.