

## Product datasheet for **RC223525**

### **GRIA1 (NM\_000827) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GRIA1 (NM_000827) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRIA1
Synonyms:	GluA1; GLUH1; GLUR1; GLURA; HBGR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC223525 representing NM\_000827  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGCACATTTTGCCTTCTTCTGCACCGGTTCTAGGCGCGGTAGTAGGTCCAATTTCCCAACA  
 ATATCCAGATCGGGGATTATTTCCAAACCAGCAGTCACAGGAACATGCTGCTTTTAGATTTGCTTTGTC  
 GCAACTCACAGAGCCCCGAAGCTGCTCCCCAGATTGATATTGTGAACATCAGCGACAGCTTTGAGATG  
 ACCTATAGATTCTGTTCCAGTCTCCAAAGGAGTCTATGCCATCTTTGGGTTTTATGAACGTAGGACTG  
 TCAACATGCTGACCTCTTTTGTGGGGCCTCCACGTCTGCTTATTACGCCGAGCTTTCCCGTTGATAC  
 ATCCAATCAGTTTGTCTTCAGCTGCGCCTGAACTGCAGGATGCCCTCATCAGCATCATTGACCATTAC  
 AAGTGGCAGAAATTTGTCTACATTTATGATGCCGACCGGGGCTTATCCGCTCCTGCAGAAAGTCTGGATA  
 CAGCTGCTGAGAAGAACTGGCAGGTGACAGCAGTCAACATTTTGACAACCACAGAGGAGGGATACCGGAT  
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 GCTATCTTGGGCCAGATTATAAAGCTAGAGAAGAAATGGCATCGGCTACCACTACATTCTTGCAAATCTGG  
 GCTTCATGGACATTGACTTAAACAAATCAAGGAGAGTGGCGCAATGTGACAGGTTTCCAGCTGGTGAA  
 CTACACAGACACTATCCGGCCAAGATCATGCAGCAGTGGAGAATAGTGATGCTCGAGACCACACACGG  
 GTGGACTGGAAGAGACCAAGTACACCTCTGCGCTCACCTACGATGGGGTGAAGGTGATGGCTGAGGCTT  
 TCCAGAGCCTGCGGAGGCAGAGAATTGATATATCTCGCCGGGGGAATGCTGGGGATTGTCTGGCTAACCC  
 AGCTGTTCCCTGGGGCCAAGGGATCGACATCCAGAGAGCTCTGCAGCAGGTGCGATTTGAAGTTTAAACA  
 GAAACGTGCAGTTTAAATGAGAAAGGACGCCGACCAACTACACGCTCCACGTGATTGAAATGAAACATG  
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 AGACCCTGACACGAAGCCTGGAATGGCATGGTGGGAGAGCTGGTCTATGGAAGAGCAGATGTGGCTGTG  
 GCTCCCTAACTATCACTTTGGTCCGGGAAGAAGTTATAGATTTCTCCAAACATTTATGAGTTTGGGGA  
 TCTCCATCATGATTAACCAACACAGAAATCCAAGCCGGGTGCTTCTCCTTCTGTATCCTTTGGCTTA  
 TGAGATTTGGATGTGCATTGTTTTTGCCTACATTTGGAGTGAAGTGTGCTCTTCTTCTGGTCAGCCGCTT  
 AGTCCCTATGAATGGCACAGTGAAGAGTTTGGGAAGGACGGGACCAGACAACCAGTGACCAGTCCAATG  
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 CAGGTCCTGTCTGGTCCGATCGTTGGTGGCGTCTGGTGGTTCTTACCTTAATCATCATCTCCTCATAT  
 ACAGCCAATCTGGCCGCTTCTGACCGTGGAGAGGATGGTGTCTCCATTGAGAGTGCAGAGGACCTAG  
 CGAAGCAGACAGAAATTCCTACGGGACGCTGGAAGCAGGATCTACTAAGGAGTTCTTACGAGGCTAA  
 AATTGCTGTGTTGAGAAGATGTGGACATACATGAAGTCAAGCAGAGCCATCAGTTTTTGTGCGGACCACA  
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 CATTGCAACACCCAAGGGGTCTGCCCTGAGAAATCCAGTAAACCTGGCAGTGTAAAACCTGAACGAGCAG  
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 TGGACTAGCCATGCTGGTTGCCTTAATCGAGTTCTGCTACAAATCCCGTAGTGAATCCAAGCGGATGAAG  
 GGTTTTTGTTTATCCCACAGCAATCCATCAACGAAGCCATACGGACATCGACCTCCCCCGCAACAGCG  
 GGGCAGGAGCCAGCAGCGCGGCGAGTGGAGAGAATGGTCGGTGGTCAAGCATGACTTCCCCAAGTCCAT  
 GCAATCGATTCTTGCATGAGCCACAGTTCAGGGATGCCCTTGGGAGCCACGGGATTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC223525 representing NM\_000827  
 Red=Cloning site Green=Tags(s)

MQHIFAFFCTGFLGAVVGANFPNNIQIGGLFPNQSQEHAARFALSQLEPPKLLPQIDIVNISDSFEM  
 TYRFCSQFSKGVYAIIFGFYERRTVNMLTSFCGALHVCFITPSFPVDTSNQFVLQLRPELQDALISIIDHY  
 KWQKFVYIYDADRGLSVLQKVLDTAAEKNWQVTAVNILTTTEEGYRMLFQDLEKKKERLVVVDCESERLN  
 AILGQIIKLEKNGIGYHYILANLGFMDIDLNKFKESSGANVTGFQLVNYTDTIPAKIMQQWKNSDARDHTR  
 VDWRPKYTSALTYDGVKVMAEAFQSLRRQRIDISRRGNAGDCLANPAVPWQGQIDIQRALQQVRFEGLT  
 GNVQFNEKGRRTNYTLHVIEMKHDGIRKIGYWNEDDKFVPAATDAQAGDNSSVQNRTYIVTTILEDPYV  
 MLKKNANQFEGNDRYEGYCVELAAEIAKHVGYRLEIVSDGKYGARDPDTKAWNGMVGELVYGRADVAV  
 APLTITLVREEVIDFSKPFMSLGISIMIKKPKQSKPGVFSFLDPLAYEIWMCIVFAYIGVSVVFLVSRF  
 SPYEWHSSEEFEEGRDQTSDQSNEFGIFNSLWFSLGAFMQGCDISPRSLSGRIVGGVWFFTLIIISSY  
 TANLA AFLTVERMVSPIESAEDLAKQTEIAYGTLEAGSTKEFFRRSKIIVFEKMWYMKSAEPSVFRVT  
 EEGMIRVRKSKGKYAYLLESTMNEYIEQRKPCDTMKVGGNLDKSGYGIATPKGSALRNPVNLAVLKLNEQ  
 GLLDKLKNKWWYDKGECGSGGGDSKDKTSALSLSNVAGVFYILIGGLGLAMLVALIEFCYKSRSESKRMK  
 GFCLIPQQSINEAIRTSTLPRNSGAGASSGGSGENGRVVSDFPKSMQSI PCMSHSSGMPLGATGL

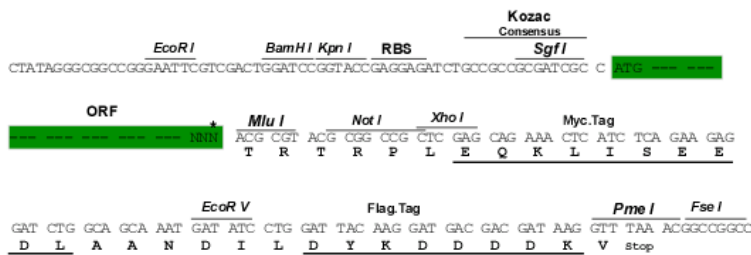
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2648\\_e05.zip](https://cdn.origene.com/chromatograms/mg2648_e05.zip)

**Restriction Sites:** SgfI-MluI

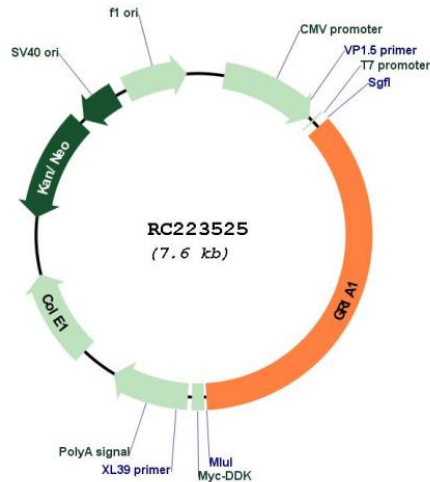
**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

## Plasmid Map:



ACCN: NM\_000827

ORF Size: 2718 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\\_000827.4](#)

RefSeq Size: 3242 bp

RefSeq ORF: 2721 bp

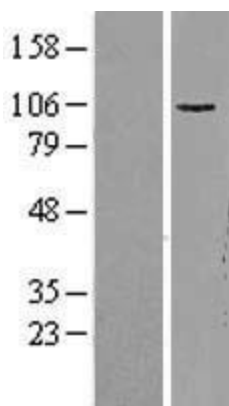
Locus ID: 2890

UniProt ID: [P42261](#)

Cytogenetics: 5q33.2

<b>Domains:</b>	lig_chan, ANF_receptor
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
<b>Protein Pathways:</b>	Amyotrophic lateral sclerosis (ALS), Long-term depression, Long-term potentiation, Neuroactive ligand-receptor interaction
<b>MW:</b>	101.3 kDa
<b>Gene Summary:</b>	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 with multiple subunits, each possessing transmembrane regions, and all arranged to form a ligand-gated ion channel. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. This gene belongs to a family of alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA) receptors. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

### Product images:



Western blot validation of overexpression lysate (Cat# [LY400293]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223525 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).