

## Product datasheet for **RG222898**

### **GRIK1 (NM\_000830) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GRIK1 (NM_000830) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GRIK1
Synonyms:	EAA3; EEA3; GLR5; GluK1; gluR-5; GLUR5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG222898 representing NM\_000830  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGCACGGCACACTCCTCGCCAGCCCGGGCTCTGGACCAGGGACACCAGCTGGGCACTCCTCTATT  
 TCCTCTGTATATCCTCCCTCAGACCGCCCGCAAGTACTCAGGATCGGAGGGATTTTTGAAACAGTGGA  
 AAATGAGCCTGTTAATGTTGAAGAATTAGCTTTCAAGTTGCAAGTACCAGCATTAAACAGAAACCGAAC  
 CTGATGCCTAACACCACATTAACCTATGACATCCAGAGAATTAACCTTTTTGATAGTTTTGAAGCCTCGC  
 GGAGAGCATGTGACCAGCTGGCTCTTGGTGTGGCTGCTCTCTTTGGCCCTTCCATAGCTCCTCCGTCAG  
 TGCTGTGCAGTCTATTTGCAATGCTCTCGAAGTCCACACATACAGACCCGCTGGAACACCCCTCGGTG  
 GACAACAAAGATTTGTTTTACATCAACCTTTACCCAGATTATGCAGCTATCAGCAGGGCGATCCTGGATC  
 TGGTCTCTATTACAACGGAAAACAGTGACAGTGGTGTATGAAGACAGCACAGGTCTAATTCGTCTACA  
 AGAGCTCATCAAAGCTCCCTCCAGATAAATATAAAATCAAAATCCGCCAGCTGCCCTCTGGGAATAAA  
 GATGCCAAGCCTTACTCAAGGAGATGAAGAAAGCAAGGAGTTCTATGTGATATTTGATTGTTACATG  
 AAACAGCCGCTGAAATCCTTAAGCAGATTCTGTTTCATGGGCATGATGACCAGTACTATCACTACTTTTT  
 CACAACCTGGACTTATTTGCTTTGGATCTGGAACCTATAGGTACAGTGGCGTAAACATGACCGGGTTT  
 CGGCTGCTTAACATTGACAACCTCACGTGTATCCATCATTGAGAAGTGGTCCATGGAGAGACTGCAGG  
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 CATAAGCCATGGCGCCTCGACCCAGATTTATGAACCTGATCAAAGAGGCCCGGTGGGATGGCTTGACTG  
 GGCATATCACCTTTAATAAAACCAATGGCTTGAGGAAGGATTTTGTCTGGACATTATTAGTCTCAAAGA  
 GGAAGGAACTGAAAAGGCTGCTGGCGAAGTGTCTAAACACTTGTATAAAGTGTGGAAGAAGATTGGGATT  
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 GGTTCATTTATGATGTTAAACTAGTCCCGATGGCAAATATGGGGCCAGAATGACAAAGGGGAGTGGA  
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 CTATTGCTATTCTTCAACTCCAAGAAGAAGGGAAGCTGCATATGATGAAAGAGAAGTGGTGGCGTGGGAA  
 TGGCTGCCCGAGGAAGACAACAAGAAGCCAGTGCCCTGGGAGTGGAAAATATTGGAGGCATCTTCATT  
 GTTCTGGCTGCCGACTGGTCTTTCTGTATTTGTAGCTATTGGAGAATTCATATACAAATCACGGAAGA  
 ATAATGATATTGAACAGGCTTTTTGTTTCTTTATGGACTGCAATGTAAGCAAACCCATCCAACCAACTC  
 CACTTCTGGAACACTTTATCTACGGATTTAGAATGTGGTAAATTAATTCGAGAGGAGAGGGATTCTGA  
 AAACAGTCCTCAGTTCATACTGTG

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG222898 representing NM\_000830  
 Red=Cloning site Green=Tags(s)

```
MEHGTLAQPGLWTRDTSWALLYFLCYILPQTAPQVLRIGGIFETVENEPVNVVEELAFKFAVTSINRRT
LMPNTTLTYDIQRINLFDSEARRACDQLALGVAALFGPSHSSVSVAVQSIcNALEVPHIQTRWKHPSV
DNKDLFYINLYPDYAAISRILDLVLYNWKTVTVVYEDSTGLIRLQELIKAPSRYNIKIKIRQLPSGNK
DAKPLLKEMKKGKEFYVIFDCSHETAAEILKQILFMGMMTEYYHYFFTTLDLFDLDELRYRSGVNMTGF
RLLNIDNPHVSSIEKWSMERLQAPRPETGLLDGMMTTEAALMYDAVYMVAIASHRASQLTVSSSLQCHR
HKPWRLGPRFMNLKEARWDGLTGHITFNKTNGLRKDFDLDIISLKEEGTEKAAGEVSKHLKYVWKKIGI
WNSNSGLNMTDSNKDKSSNITDSLNRTLIVTTILEEPPYVMYRKSdkPLYGNDRFEGYCLDLLKELSNIL
GFIDYDKLVDPDGKYGAQNDKGEWNGMVKELIDHRADLAVAPLTITYVREKVIDFSKPFMTLGISILYRKP
NGTNPGVFSFLNPLSPDIWMYVLLACLGVSCVLFVIARFTPYEYWNPHPCNPDSDDVVENNFTLLNSFWFG
VGLMQQGSSELMPKALSTRIVGGIWWFFTLIISSYANLAAFLTVERMESPIDSAADLAKQTKIEYGAV
RDGSTMTFFKKSISTYEKMWAFMSSRQQTALVRNSDEGIQRVLTDDYALLMESTSIEYVTQRNCNLTQI
GGLIDSKGYGVGTPIGSPYRDKITIAILQLQEEGKLMHMKKEKWWRGNGCPEEDNKEASALGVENIGGIFI
VLAAGLVLSVFAIGEFIYKSRKNNDIEQAFCFYGLQCKQTHPTNSTSGTTLSTDLECGKLIREERGIR
KQSSVHTV
```

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

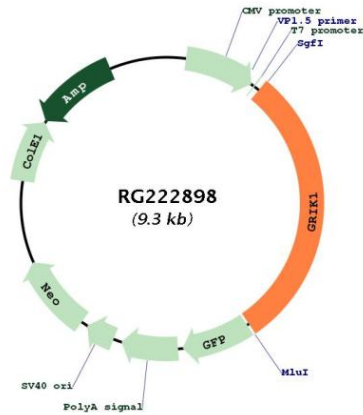


**ACCN:** NM\_000830

<b>ORF Size:</b>	2754 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_000830.5</a>
<b>RefSeq Size:</b>	3231 bp
<b>RefSeq ORF:</b>	2757 bp
<b>Locus ID:</b>	2897
<b>UniProt ID:</b>	<a href="#">P39086</a>
<b>Cytogenetics:</b>	21q21.3
<b>Domains:</b>	lig_chan, ANF_receptor
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
<b>Protein Pathways:</b>	Neuroactive ligand-receptor interaction

**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 the kainate family of glutamate receptors, which are composed of four subunits and function as ligand-activated ion channels. The subunit encoded by this gene is subject to RNA editing (CAG->CGG; Q->R) within the second transmembrane domain, which is thought to alter the properties of ion flow. Alternative splicing, resulting in transcript variants encoding different isoforms, has been noted for this gene. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for RG222898