

Product datasheet for **SC121962**

GRIK1 (NM_175611) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GRIK1 (NM_175611) Human Untagged Clone
Tag:	Tag Free
Symbol:	GRIK1
Synonyms:	EAA3; EEA3; GLR5; GluK1; gluR-5; GLUR5
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC121962 sequence for NM_175611 edited (data generated by NextGen Sequencing)

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ATGGAGCACGGCACACTCCTCGCCAGCCCGGGCTCTGGACCAGGGACACCAGCTGGGCA
CTCCTCTATTTCTCTGTATATCTCCCTCAGACCGCCCGCAAGTACTCAGGATCGGA
GGGATTTTTGAAACAGTGGAAAAAGAGCCTGTTAATGTTGAAGAATTAGCTTTCAAGTTT
GCAGTCACCAGCATTAAACAGAAACCGAACCCCTGATGCCTAACACCACATTAACCTATGAC
ATCCAGAGAATTAACCTTTTTGATAGTTTTGAAGCCTCGCGGAGAGCATGTGACCAGCTG
GCTCTTGGTGTGGCTGCTCTCTTTGGCCCTTCCATAGCTCCTCCGTCACTGTGTGCAG
TCTATTTGCAATGCTCTCGAAGTTCCACACATACAGACCCGCTGGAAACACCCCTCGGTG
GACAACAAAGATTTGTTTACATCAACCTTTACCCAGATTATGCAGTATCAGCAGGGCG
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AAAATCCGCCAGCTGCCCTCTGGGAATAAAGATGCCAAGCCTTTACTCAAGGAGATGAAG
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GACTTATTTGCTTTGGATCTGGAACCTATAGGTACAGTGGCGTAAACATGACCCGGTTT
CGGCTGCTTAACATTGACAACCCCTCACGTGTCATCCATCATTGAGAAGTGGTCCATGGAG
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ACTAAGGGGAAATCTTCTTCAAGATATCCTTACTTGTATCAGAGACGAACTCAGAGA
AAAGAGACTGTGGCGTGA

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Clone variation with respect to NM_175611.2
522 a=>c;1173 c=>t

5' Read Nucleotide Sequence: >OriGene 5' read for NM_175611 unedited
 GCTTGCTCAGAGCCCCTGCACCAACTCACCTGTACCCTCTCTCCTTCTTCGTTAGTCTT
 CTTTCCCCCTTTTCCCTCCTGTCTGTGCCTATCCCCGACTTTTGCATCTGACCAAAG
 GACGAATGAGGGAGACGTTTCTGCAGATCGGGGACGCAACTTTCCTCAGCTGGTCTCTGG
 GCTCCGGGAGCCAGAGAGCGTGATCCTCCGCGGTCTGCGGCCATGGAAGAGGAGGAGG
 AGGAGCCGTGATGGGCTAGCGACAGCACTGAGGAGCCCCGAGAGAGCTCAGCCTTGCCAG
 CCAGCTCCGCGGTCCCACGCGGGTTCCCTCGAGCTCGCTCCGTGGGGAGCGCGCAGCGTG
 CTTGGAACCGGAGCATCCAGAGAGGATGAGGCGGGGACCCGCCCCAAGTTGGGTGCATCT
 CTCGGGCGTCCGGCAGCGGCTGTATCTCGGCATGAATTAAGAAGCTAGGAAGATGGAGCA
 CGGNACACTCCTCGCCAGCCCGGGCTCTGGACCAGGGACACCAGCTGGGCACTCCTCTA
 TTTCTCTGCTATATCCTCCCTCAGACCGCCCCGNAGTACTCAGGATCGGAGGGATTTT
 TGAAACAGTGAAAAATGAGCCTGTTAATGGTAAAAGAATAGCTTTCAAGTTTGCAGTCAC
 CAGCATTAAACAGAAACCCGACCCTGATGCCCTACACCACATTAACCTATGACATCCAGAG
 AATTACCTTTTTGATAGTTTTGAAACCTGCCGAGAGCATGTGACCAGCTGGGCTCTGTGG
 GGCTGCTCTCTTTGGCCCTTCCATAACTCCTCCGTCATGCTGGGCAGNCTATTG

3' Read Nucleotide Sequence: >OriGene 3' read for NM_175611 unedited
 TAAAAACCTGTTGTTTTTATTATTATTTAGNAAGGCACACACAACAATTTATTGGGGGAA
 AAAGAAAAATGCAAAAATAATTGAGCATACAAATTTATTTTAAAAGAACTGGTGTCACTT
 CCCAAGTCATATCTATGTGAGCTTTTTAACTTTTGTATTTCTTATATCTGTATTCAA
 TCAGAGTTATGGATATAGATATATGGAAACACATCACACTCCTCAGAAATCCTTTCTC
 CAAAAATCTGTAGGAATGCATCCTTTTTCTTCTACAGGCGTTTCTTTGGATCACGCCA
 CAGTCTCTTTTCTGAGTTCGTCTCTGATGACAAGTAAGGATACTTGTGAAGGAAGATT
 TCCCCTTAGTTCTTGACTTTTTCTTATTTTTTTCTGATTCTTCAGTGAGATTCCCAGTT
 CTTCCATGATAGCGTTGAAAGAGAGACTGTTCAATATCATTATTCTTCCGTGATTTGT
 ATATGAATTTCCAATAGCTACAAATACAGAAAGGACCAGTCCGGCAGCCAGAACAATGA
 AGATGCCTCCAATATTTTCCACTCCCAGGGCACTGGCTTCTTTGTGTCTTCTCGGGGC
 AGCCATTTCCACGCCACCACTTCTTTTCATCATATGCAGCTTCCCTTCTTCTGGAGTT
 GAAGAAATAGCATAGTAATNTATCCCAGGTAGGAGAACCAATAGGTGTTCCACTNCCG
 TACCTTTGNAGTAATGAGGCCCCCGATCTGAGTGAGGTTGCAGTTTCTCTGCGTCACATA
 CTC AATGCTGGTGGACTNCATCAGCAGCGGTAGTCTGTGGTGAGCACTCTCTGGATCCC
 CTCATCACTGTTTCTTACCAGGGCGGTCTGCTGCCTGCTGCTCATGAAAGCCACATCTTC
 TNATAGGTGGAGAATTTGATTTCTTGAAGAAGTCATTGTG

Restriction Sites: NotI-NotI
ACCN: NM_175611
Insert Size: 3870 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 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_175611.2](#), [NP_783300.1](#)

RefSeq Size: 3489 bp

RefSeq ORF: 2718 bp

Locus ID: 2897

UniProt ID: [P39086](#)

Cytogenetics: 21q21.3

Protein Families: Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane

Protein Pathways: 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]

Transcript Variant: This variant (2), also known as EAA3A, lacks an alternate in-frame exon in the 3' coding region compared to variant 3. It encodes isoform 2, which is shorter than isoform 3.