

## Product datasheet for **SC120401**

### **GRIK5 (NM\_002088) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GRIK5 (NM_002088) Human Untagged Clone
Tag:	Tag Free
Symbol:	GRIK5
Synonyms:	EAA2; GluK5; GRIK2; KA2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_002088, the custom clone sequence may differ by one or more nucleotides

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ATGCCGGCTGAGCTGCTGCTGCTGATTGTTGCCCTTCGCCAGCCCAGCTGCCAGGTGCTCTCATCAC
TGCCGATGGCTGCAATCCTGGATGATCAGACAGTGTGTGGCCCGGTGAGCGTCTGGCCTTGGCCTTGGC
CCGGGAGCAGATCAACGGGATCATCGAGGTCCCAGCCAAGGCCCGAGTGAAGTAGACATCTTTGAGCTG
CAGCGGGACAGCCAGTACGAGACCACGGACACCATGTGTGATCTTACCCAAAGGGTTGTGCTGTCC
TTGGGCCCTCCTCTAGCCAGCATCTGCCTCCACCGTGAGCCATATCTGTGGAGAGAAGGAGATCCCCCA
CATCAAGTGGGTCCCGAGGAGACACCCGCCCTCAGTACCTTCGCTTCGCGTCTGTGAGCCTGTACCCC
AGTAACGAGGACGTGAGCTTGGCGGTCTCCCGAATCCTCAAGTCTTCAACTACCCCTCGGCCAGCCTCA
TCTGCGCAAGGCTGAGTGCCTGCTGCGATTGGAGGAAGTGGTGCCTGGCTTCTCATCTCCAAGGAGAC
GCTGTGAGTGGATGTTGGACGACAGCCGGGACCCACACCACTGCTCAAGGAGATCCGTGATGACAAG
GTGTCCACCATCATCATCGACGCCAACGCCTCCATCTCCACCTCATCTCCGTAAGGCCTCGGAAGTGG
GAATGACCTCAGGTTTTACAAGTACATCTCACCACCATGGACTTCCCATCTGCATCTGGACGGTAT
TGTGGAGGACTCCTCAACATCCTGGGCTTCTCCATGTTCAACAGTCCACCCCTTCTACCCCTGAGTTT
GTCCGCAGCCTCAACATGCTCCTGGAGGGAGAAGTGTGAAGCCAGCACCTACCTGGGCCCTGCGTGTGAG
CCGCCCTGATGTTTACGCCGTGACAGTGGTGGTGGAGCGTGTCCGAGAGCTGAACCGCAGCCAGGAGAT
CGGTGTGAAGCCTCTGGCCTGTACATCGGCCAACATTTGGCCCCACGGGACCAGCCTCATGAAGTACCTG
CGCATGGTAGAGTATGATGGGCTGACCGGGCGGGTCGAGTTCAACAGCAAAGGGCAGAGAACCAACTACA
CCCTGCGCATCTAGAAAAGTCCCGCAGGGCCACCGTGGAGATTGGGGTGGTACTCTAACCGCACCT
GGCCATGAATGCCACCACCTGGACATCAACCTGTGCGAGACACTGGCCAACAAGACCCTGGTGGTCACA
ACCATCTGGAGAACCATAAGTCAATGCGCCGCCAACCTTCCAGGCCCTGTGGGGGAACGAACGCTTTCG
AGGGCTTCTGCGTGGACATGCTGCGGGAGCTGGCCGAGCTGCTGCGCTTCCGCTACCGCCTGCGGTTGGT
GGAGGATGGGCTGTACGGGGCGCCGAGCCAACGGCTCCTGGACGGGCATGTTGGCGAGCTCATCAAC
CGGAAGGCAGACCTGGTGTGGCCGCCCTCACCATCACAGCTGAGCGGGAGAAGTGCATGACTTTTCCA
AGCCCTTATGACCCCTGGGGATCAGCATCTCTACCGAGTGCACATGGGCCGCAAGCCTGGTACTTCTC
TTCTGGACCCCTTCTCCCTGCTGTGGCTTTCATGCTTCTTGCCTACCTGGCTGTGAGTGCCTGCTC
CTGTTTCTGGCTGCCAGGCTGAGCCCTATGAGTGGTATAACCCACACCCATGCCTGCGGGCAGCCCCC
ACATCCTGGAGAACCAGTACACGCTGGGCAACAGCCTGTGGTTTCCCGTGGGGGCTTCATGACGAGGG
CTCGGAGATCATCCCCGGCGTGTCCACGCGTGTGTGAGCGGAGTCTGGTGGCCTTACCTTGATC
ATCATCTCCTACACGGCCAACCTGGCCGCTTCTCACCGTGCAGCGCATGGAGGTGCTGTGGAGT
CGGCCGATGACCTGGCAGATCAGACCAACATCGAGTATGGCACCATCCACGCCGGCTCCACCATGACCTT
CTTCCAGAATTCAGGTACCAAACGTACCAGCGCATGTGGAATACATGCAGTGAAGCAGCCAGCGTG
TTCGTCAAGAGCACAGAAGAGGGCATTGCCCGCTCCTCAACTCCCGCTACGCTTCTGCTCGAGTCCA
CCATGAACGAATACCACCGGCGCCTCAACTGCAACCTCACCCAGATCGGGGACTCCTCGACACCAAGGG
CTACGGCATTGGCATGCCGCTGGGCTCCCGTTCGGGATGAGATCACTGGCCATCTGCAGCTTCA
GAGAACAACCGGCTGGAGATCTGAAGCGCAAGTGGTGGGAGGGGGCCGGTCCCAAGGAGGAGGACC
ATCGAGCTAAAGGTTTGGCATGGAGAACATTGGTGGCATTATATCGTGTCTCATCTGTGGCCTCATCAT
TGCTGTCTTCGTGGCGGTGATGGAATTCATATGGTCCACACGGAGGTGAGTCCGAGGAGGTGTCG
GTGTGCCAGGAGATGCTGACAGGAGTGCGCCACGCGTTTCTTGGCGAAGACGTGCGTTCGCCCGGC
GCCGACGCCCGGGCGCCGAGCCGGGCTGCTGCTACTGCGCGCGGTCCGCGAGATGCGCCTCAGCAA
CGGCAAGCTCTACTCGGCCGGCGGGCGGGGATGCGGGCAGCGCACGGGGGCCCGCAGCGCCTCCTG
GACGACCCGGGGCCCCCAGCGGAGCCGACCCGCGCCCCACCCCTGCACCCACGTGCGGCTGTGCC
AGGAGTCCGGCGCATCCAGGCGCTGCGGGCTCGGGGGCCGGCGCGCTCCGCTGGCCTGGGCGTCCC
CGCCGAAGCCACCAGCCGCCCGCGGCTGGCCCCGCGGCCCGGGAGCTGGCGGAGCAGCAG
TGA
    
```

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_002088 unedited  
TACGACTCACTATAGGCGGCCGCGNATTCGGCACGAGGCTCTTCCCCTGTCTTCTCTCCC  
TGCTCCTGTGGAGCCACCGTTTTGGATTAGTTGGGAGCCCCCGCGCGGNGGAGGGGGC  
CCTGTGGACTGCCTCTCCCCCGCCAGCCCCACCACCACCCAGCGCCAGAGCACCTCC  
CGCTGTCGGTCTTCGGGCTCGAGGGAGCCAGCCCTCCGTCCCACCAGGATCCGTGGCG  
AGTGGGGGCCCGGCAGCTGCGTCCCCATGAGGAGGGGAGGAAGATGCCGGCTGAGCTGC  
TGCTGCTGCTGATTGTTGCCTTCGCCAGCCCCAGCTGCCAGGTGCTCTCATCACTGCGCA  
TGGCTGCAATCCTGGATGATCAGACAGTGTGTGGCCGCGGTGAGCGTCTGGCCTTGGCCT  
TGGCCCGGAGCAGATCAACGGGATCATCGAGGTCCCAGCCAAGGCCGAGTGGAAGTAG  
ACATCTTTGAGCTGCAGCGGGACAGCCAGTACGAGACCACGGACACCATGTGTGAGATCT  
TACCCAAAGGGTTGTGTCTGTCTTGGGCCCTCTCTAGCCCAGCATCTGCCTTACC  
TGAGCCATATCTGTGGAGAGAAGGAGATCCCCACATCAAGGTGGGTCCCAGGAGACAC  
CCCGCCTTCAGTACCTTCGCTTCGCGTCTGTGAGCCTGTACCCANTAACGAGGACGTGA  
GCTTGGCGGCTCCCGAATCCTAAGTCTTCAACTACCCTGGGCAGCCTCATTGCCAGG  
CCTATTGCCGTTGGAATGGAGGACTGGGGCGGGCTTCTATCTCCAAGACAGCTGGTTTG  
AAGATGTTGACCACAGCGGACCCAAACCCTGTCAAGAAATCGGATTCAGGGTCCCATTTT  
TTGAGGCATGCCTCTATCCACATCCCTTAGGGGAGAATGGAAGCCTAATGTTAAACCAC  
C

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_002088 unedited  
NNTTTTAGCTATGNNACCGCGGCCGATNCTAGNGATCGAGTTTTTTTTTTTTTTTTTTT  
GGGTTTTGTTCTTTTTTTTATTCCAACAGGGGCTGCGATGTGGCAAGGGGAGGGATGGGG  
GCCCAACTGACCCCTCCCTGGGGGAGGTCTCATAGAAATTCGAGGTTTCTCCCCCAA  
AAAAGAGAGGAAGAGAAGAGTGGAGGGGACACCAGGGGACCCATCTGTCCAGAGGCCCT  
CCCCACCTCCAGAAGCGTGGGGGCTGCGTCAAGTCTTGGGGAGCCTGAGCAGTCCCAGA  
ATGGGGTCTCTCCGCTGACTGCTTTCCGCTTCCCAGAGCCGCCCCGAAGTCCCAGCC  
CCTGGAGTCTCGGTTCTGCGCCCTTCTCGCCCGCGCACCCCTCTCGCGAGTCCACTGG  
GGGGCGCAGGCGGGCTCCAGAGCCAGGCCTCGGACTTCGCGGGGAACCAAAGGCAAATC  
GCGGCGTCCGGGGCGCCGGCGCACAAAGTTCTGTCCCGCGCCCGTGCAGGAGCGGATACT  
GCTGCGGCTGGGGCGGTCCCCGTCTTCCGCCATCCCCGTTGCCCCACTACCTCGC  
ATGCGCCCCCTTTTTCTCCCTCATCCTTCCGGGCCCTCCCCACCAGCCCCAGGTAANNT  
CCCACTCGCCCGCCCTTCCGGGCCATCCTATACGCGTCCGCCCTCGCGTCCACCAGT  
CCACCTACCTGTCCAACCCTCTCCCTTCCCTTACCCCCCGCCTCCCTCCCGCT  
CCCAACCCCTTTCCCGACCTACTTCTCCCCCCCCACATCCGTCCGCAACTGTGAC  
CTACCGCGCACTCTCCCTTCTTACCCCCCTTTTTCCGTCTGTACCACGTCCGCTC  
CCCACCAATACCC

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002088

**Insert Size:**

3900 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\\_002088.3](#), [NP\\_002079.3](#)

**RefSeq Size:** 3551 bp

**RefSeq ORF:** 2943 bp

**Locus ID:** 2901

**UniProt ID:** [Q16478](#)

**Cytogenetics:** 19q13.2

**Domains:** lig\_chan, ANF\_receptor

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

**Protein Pathways:** Neuroactive ligand-receptor interaction

**Gene Summary:** This gene encodes a protein that belongs to the glutamate-gated ionic channel family. Glutamate functions as the major excitatory neurotransmitter in the central nervous system through activation of ligand-gated ion channels and G protein-coupled membrane receptors. The protein encoded by this gene forms functional heteromeric kainate-preferring ionic channels with the subunits encoded by related gene family members. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]  
 Transcript Variant: This variant (2) contains an alternate 3' terminal exon, resulting in a novel 3' coding region and 3' UTR. It encodes isoform 2, which is shorter than isoform 1.