

## Product datasheet for **SC304142**

### KA1 (GRIK4) (NM\_014619) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KA1 (GRIK4) (NM_014619) Human Untagged Clone
Tag:	Tag Free
Symbol:	KA1
Synonyms:	EAA1; GluK4; GluK4-2; GRIK; KA1
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:**

>OriGene sequence for NM\_014619 edited  
 GGTACCATGCCCCGCGTCTCGGCGCCTTTGGTGTGCTTCTGCGTGGCTCGTGATGGTC  
 GCCTGCAGCCCGCACTCCTTGAGGATCGCTGCTATCTTGGACGACCCCATGGAGTGCAGC  
 AGAGGGGAGCGGCTCTCCATCACCTGGCCAAGAACC GCATCAACCGCGCTCCTGAGAGG  
 CTGGGCAAGGCCAAGGTGCAAGTGGACATCTTTGAGCTTCTCAGAGACAGCGAGTACGAG  
 ACTGCAGAAACCATGTGTGATCCTCCCAAGGGGGTGGTGCCTGTCTCGACCATCG  
 TCCAGCCAGCCTCCAGCTCCATCATCAGCAACATCTGTGGAGAGAAGGAGGTCCCTCAC  
 TTCAAAGTGGCCCCAGAGGAGTTCGTCAAGTTCAGTTCAGAGATTACAAACCCCTGAAC  
 CTCACCCCGAGCAACTGACATCAGCGTGGCTGTAGCTGGGATCCTGAACCTTCTCAAC  
 TGCACCACCGCTGCCTCATCTGTGCCAAAGCAGAATGCCTTTTAAACCTAGAGAAGCTG  
 CTCCGGCAATTCTTATCTCCAAGGACACGCTGTCCGTCGCGATGCTGGATGACACCCGG  
 GACCCACCCCGCTCCTCAAGGAGATCCGGGACGACAAGACCGCCACCATCATATCCAC  
 GCCAACGCCTCCATGTCCACACCATCCTCCTGAAGGCAGCCGAACCTGGGATGGTGTCA  
 GCCTATTACACATACATTTCACTAATCTGGAGTCTCACTCCAGAGAATGGACAGCCTT  
 GTGGATGATCGTGTCAACATCCTGGGATTTTCCATTTTCAACCAATCCCATGCTTTCTTC  
 CAAGAGTTTGCCAGAGCCTCAACCAGTCTGGCAGGAGAAGTGTGACCATGTGCCTTC  
 ACTGGGCTGCGCTCTCCTCGGCCCTGCTGTTGATGCTGTCTATGCTGTGGTACTGCG  
 GTGCAGGAACTGAACCGGAGCCAAGAGATCGGCGTGAAGCCCTTGTCTGCGGCTCGGCC  
 CAGATCTGGCAGCACGGCACCAGCCTCATGAACTACCTGCGCATGGTAGAATTGGAAGGT  
 CTTACCGGCCACATTGAATTCACAGCAAAGGCCAGAGGTCCAACCTACGCTTTGAAAATC  
 TTACAGTTCACAAGGAATGGTTTTCGGCAGATCGGCCAGTGGCACGTGGCAGAGGGCCTC  
 AGCATGGACAGCCACCTCATGCCTCCAACATCTCGGACACTCTTTCAACACCACCCTG  
 GTCGTCACCACCATCCTGGAAAACCCATATTTAATGCTGAAGGGGAACCCAGGAGATG  
 GAAGGCAATGACCGCTACGAGGGCTTCTGTGGACATGCTCAAGGAGCTGGCAGAGATC  
 CTCGGATTCAACTACAAGATCCGCCTGGTTGGGATGGCGTGTACGGCGTTCGCGAGGCC  
 AACGGCACCTGGACGGGAATGGTCGGGGAGCTGATCGCTAGGAAAGCAGATCTGGCTGTG  
 GCAGGCCCTCACCATTACAGCTGAACGGGAGAAGGTGATTGATTTCTAAGCCATTATG  
 ACTCTGGGAATTAGCATTCTTTACCGGTTTATATGGGACGCAAACCCGGCTATTTCTCC  
 TTCCTGGACCCATTTTCTCGGGGCTCTGGCTCTTATGCTTCTAGCCTATCTGGCCGTC  
 AGCTGTGCTCTTCTGTTGGTCTGGTTGACGCCCTACGAGTGGTACAGCCACACCCA  
 TGTGCCAGGGCCGGTGAACCTCCTGGTGAACAGTACTCCCTGGGCAACAGCCTCTGG  
 TTTCCGGTCTGGGGGTTTATGCAGCAAGGCTCCACCATCGCCCTCGCGCCTTATCCACC  
 CGCTGTGTGAGTGGCGTCTGGTGGGCATTACGCTGATCATCATCTCATCCTACACGGCC  
 AACCTGGCAGCCTTCTGACCGTGCAGCGCATGGATGTGCCCATGAGTCAGTGGATGAC  
 CTGGGTGACCAGACCGCCATTGAATATGGCACAATTCACGGAGGCTCCAGCATGACCTTC  
 TTCCAAAATTCGCTACCAGACCTACCAACGCATGTGGAATTACATGTATTCCAAGCAG  
 CCCAGCGTGTTCGTGAAGAGCACAGAGGAGGGAATCGCCAGGGTGTGGAATTCAACTAC  
 GCCTTCTCCTGGAATCCACCATGAACGAGTACTATCGGCAGCGAACTGCAACCTCACT  
 CAGATTGGGGGCTGCTGGACACCAAGGGCTATGGGATTGGCATGCCAGTCCGCTCGGTT  
 TTCCGGGACGAGTTTATCTGGCCATTCTCCAGCTGCAGGAGAACAACCGCCTGGAGATC  
 CTGAAGCGCAAATGGTGGAAAGGAGGGAAGTGCCCAAGGAGGAAGATCAGAGCTAAA  
 GGCTGGGAATGGAGAATATTGGTGAATCTTTGTGGTCTTATTTGTGGCTTAATCGTG  
 GCCATTTTATGGCTATGTTGGAGTTTTTATGGACTCTCAGACACTCAGAAGCAACTGAG  
 GTGTCCGCTGCCAGGAGATGGTACCAGGCTGCGCAGCATTATCCTGTGTGAGGACAGT  
 ATCCACCCCGCGGGCGCGCGCAGTCCCAGCGCCCGGCCCCCATCCCCGAGGAG  
 CGCCGACCGGGGACGGCGACGCTCAGCAACGGGAAGCTGTGCGGGGACGGGGAGCCC  
 GACCAGCTCGCGCAGAGACTGGCGCAGGAGGCCCGCTGGTGGCCCGCGCTGCACGCAC  
 ATCCGCGTCTGCCCCAGTCCCGCGCTTCCAGGCGCTGCGGGCACGGCGCTCGCCCGCC  
 CGCAGCGAGGAGCCTGGAGTGGGAGAAAACCAACAGCAGCGAGCCGAGTGTCT  
 AGA

**Restriction Sites:**

Please inquire

<b>ACCN:</b>	NM_014619
<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>	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
<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_014619.2</a> , <a href="#">NP_055434.2</a>
<b>RefSeq Size:</b>	2871 bp
<b>RefSeq ORF:</b>	2871 bp
<b>Locus ID:</b>	2900
<b>UniProt ID:</b>	<a href="#">Q16099</a>
<b>Cytogenetics:</b>	11q23.3
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
<b>Protein Pathways:</b>	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. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2013]

Transcript Variant: This variant (2) differs in the 5' UTR and encodes the same isoform (1), compared to variant 1. 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.