

## Product datasheet for **RC214488**

### **KA1 (GRIK4) (NM\_014619) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KA1 (GRIK4) (NM_014619) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KA1
Synonyms:	EAA1; GluK4; GluK4-2; GRIK; KA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC214488 representing NM\_014619  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCCCGCTCTCGGCCTTTGGTGTGCTTCTCTCGCTGGCTCGTGATGGTCGCCTGCAGCCCGCACT  
 CCTTGAGGATCGCTGCTATCTTGACGACCCCATGGAGTGCAGCAGAGGGGAGCGGCTCTCCATCACCC  
 GGCCAAGAACCGCATCAACCGCGCTCTGAGAGGCTGGGCAAGGCCAAGGTCGAAGTGGACATCTTTGAG  
 CTTCTCAGAGACAGCGAGTACGAGACTGCAGAAACCATGTGTGAGATCCTCCCAAGGGGTGGTCGCTG  
 TCCTCGGACCATCGTCCAGCCAGCCTCCAGCTCCATCATCAGCAACATCTGTGGAGAGAAGGAGTCCC  
 TCACTTCAAAGTGGCCCCAGAGGAGTTCGTCAAGTTCAGTTCAGAGATTACAAACCTGAACCTCCAC  
 CCCAGCAACTGACATCAGCGTGGCTGTAGTGGGATCTGAACTTCTCAACTGCACCACCGCTGCC  
 TCATCTGTGCCAAAGCAGAATGCCTTTAAACCTAGAGAAGCTGCTCCGCAATTCCTTATCTCAAAGGA  
 CACGCTGTCCGTCCGATGCTGGATGACACCCGGGACCCACCCGCTCCTCAAGGAGATCCGGGACGAC  
 AAGACCGCCACCATCATCATCCACGCCAACGCCTCCATGTCCACACCATCCTCCTGAAGGCAGCCGAAC  
 TTGGGATGGTGTGAGCCTATTACACATACATCTTCACTAATCTGGAGTTCCTCACTCCAGAGAATGGACAG  
 CCTTGTGGATGATCGTGTCAACATCCTGGGATTTTCCATTTTCAACCAATCCCATGCTTTCTTCAAAGAG  
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 GGTTGGGATGGCGTGTACGGCTTCCGAGGCCAACGGCACCTGGACGGGAATGGTCGGGGAGCTGATC  
 GCTAGGAAAGCAGATCTGGCTGTGGCAGGCTCACCATTACAGCTGAACGGGAGAAGGTGATTGATTTCT  
 CTAAGCCATTGACTCTGGGAATTAGCATTCTTACCGGTTTCATATGGGACGCAAACCCGGCTATTT  
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 GCAACCTCCTGGTGAACCACTCCTCGGCAACAGCCTCTGGTTTCCGGTCCGGGGGTTTCATGCAGCA  
 AGGCTCCACCATCGCCCTCGCGCTTATCCACCCGCTGTGTGAGTGGCGTCTGGTGGGCATTACGCTG  
 ATCATCATCTCATCCTACACGGCCAACCTGGCAGCCTTCTGACCGTGCAGCGCATGGATGTGCCATTG  
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 CTTCTTCCAAAATCCCCTACCAGACCTACCAACGCATGTGGAATTACATGTATTCCAAGCAGCCAGC  
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 CAGGAGAACAACCGCCTGGAGATCCTGAAGCGCAATGGTGGGAAGGAGGGAAGTCCCAAGGAGGAAG  
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 GGCGCGCCGAGTCCCGCCGCCCGGCCCCATCCCGAGGAGCGCCGACCGGGGGCACGGCGACGCT  
 CAGCAACGGGAAGCTGTGCGGGGACGGGAGCCCGACAGCTCGCGCAGAGACTGGCGCAGGAGGCCGCC  
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 GGCGTCCCGCCCGCAGCGAGGAGAGCTGGAGTGGGAGAAAACCAACAGCAGCGAGCCCGAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC214488 representing NM\_014619  
 Red=Cloning site Green=Tags(s)

MPRVSAPLVLLPAWLVMVACSPHSLRIAAILDDPMECSRGERLSITLAKNRINRAPERLGKAKVEVDIFE  
 LLRDSEYETAETMCQILPKGVAVLGPSSSPASSSIISNICGEKEVPHFKVAPEEFVKFQFRFTTLNLH  
 PSNTDISVAVAGILNFFNCTTACLICAKAECLLNLEKLLRQFLISKDTLSVRMLDDTRDPTLLKEIRDD  
 KTATIIIHANASMSHTILLKAAELGMVSAYYTYIFTNLEFSLQRMDSLVDDRNVILGFSIFNQSHAFFQE  
 FAQSLNQSWQENCDHVPFTGPALSSALLFDAVYAVVTAVQELNRSQEIGVKPLSCGSAQIWQHTSLMNY  
 LRMVELEGLTGHIEFNSKGQRSNYALKILQFTRNGFRQIGQWHVAEGLSMDSHLYASNISDTLFNTTLVV  
 TTILENPYMLKGNHQEMEGNDRYEGFCVDMLKELAEILRFNYKIRLVGDGVYGVPEANGTWTGMVGEI  
 ARKADLAVAGLTITAEREKVIDFSKPFMTLGISILYRVHMGRKPGYFSLDPFSPGVWLFMLLAYLAVSC  
 VLFLVARLTPYEWYSPHPCAQGRCNLLVNQYSLGNSLWFPVGGFMQQGSTIAPRALSTRCVSGVWVAFTL  
 IISSTYANLAAFLTQVRMDVPIESVDDLADQTAIEYGTIHGGSSMTFFQNSRYQTYQRMWNYMYSKQPS  
 VFVKSTEEGIARVLNSNYAFLEESTMNEYRQRNCNLQIGLLDTKGYGIGMPVGSVFRDEFDLAILQL  
 QENNRLEILKRKWWEGGKCPKEEDHRAKGLGMENIGGIFVVLICGLIVAIFMAMLEFLWTLRHSEATEVS  
 VCQEMVTELRSIILCQDSIHPRRRRAAVPPRRRPIPEERRPRGTATLSNGKLCGAGEPDQLAQRLAQEA  
 LVARGCTHIRVCECRRFQGLRARPSPARSEESLEWEKTTNSSEPE

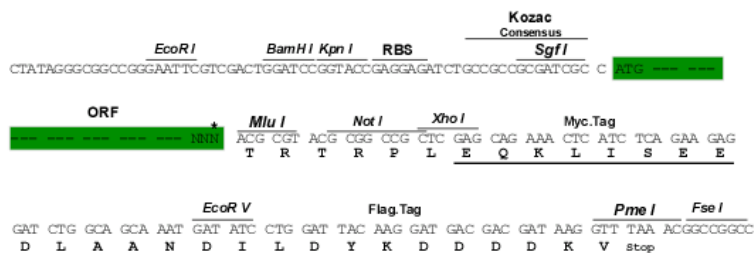
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6813\\_b03.zip](https://cdn.origene.com/chromatograms/mk6813_b03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

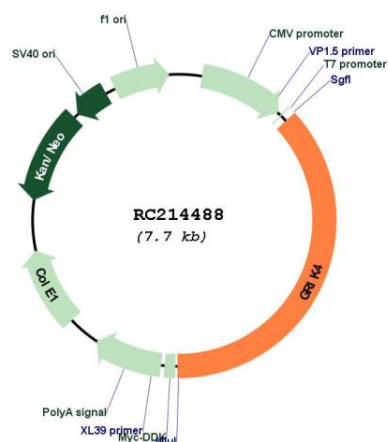


\* The last codon before the Stop codon of the ORF

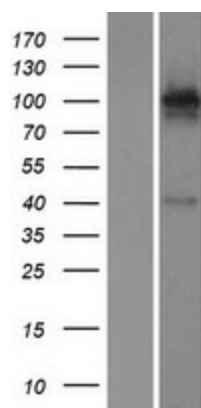
**ACCN:** NM\_014619

**ORF Size:** 2868 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>	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
<b>Components:</b>	<p>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).</p>
<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_014619.5</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
<b>MW:</b>	107.3 kDa
<b>Gene Summary:</b>	<p>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]</p>

**Product images:**


Circular map for RC214488



Western blot validation of overexpression lysate (Cat# [LY415171]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214488 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).