

Product datasheet for **RC223571**

GRIK3 (NM_000831) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GRIK3 (NM_000831) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRIK3
Synonyms:	EAA5; GLR7; GluK3; GLUR7; GluR7a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC223571 representing NM_000831
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACCGCTCCCTGGCGGCGCTCCGGAGTCTGGTTTGGGAATACTGGGCGGGCTCCTCGTGTGCGCT
 TCTGGATCCCGGACTCGCGCGGATGCCACGTCATCCGGATCGGAGGAATCTTCGAGTATGCGGACGG
 CCCAACGCCAGGTCATGAATGCCGAGGAGCATGCCTTTCGATTTCTGCCAACATCATCAACAGGAAC
 AGGACTCTGTGCCAACACAACCTTGACCTATGACATACAGAGGATCACTTCCATGACAGCTTCGAGG
 CGACAAAAAGGCTGTGACCAGCTGGCACTGGGCGTGGTGGCGATCTTCGGCCCATCACAGGGCTCCTG
 CACCAATGCCGTCCAGTCCATCTGCAATGCCCTGGAGGTGCCACATCCAGCTGCGTTGGAAGCACCC
 CCGCTGGACAACAAGGACACCTTCTACGTGAACCTTACCCCGACTACGCTCGCTCAGCCATGCCATCC
 TCGACCTGGTCCAGTACCTCAAGTGGCGGTCCAGCACCCTGGTCTATGACGACAGTACAGGGCTCATCCG
 ACTGCAGGAGCTCATCATGGCCCATCAAGATAACAACATCCGCCGAAGATCCGTGAGCTCCCATCGAC
 TCTGACGACTCGCGCCCTTGTCAAGGAGATGAAGCGAGGCCGGGAATTCGCGATTATCTTCGACTGCA
 GCCACACTATGGCGGCCAGATCCTCAAGCAGGCCATGGCCATGGGCATGATGACTGAGTACTACCACT
 CATCTTACCCTCTGGATCTCTACGCTTTAGACCTGGAGCCCTACCGCTACTCAGGCGTGAACCTGACA
 GGATTCGGATTCTCAATGTGGACAACCCACACGCTCTCGGCCATTGTGGAGAAGTGGTCCATGGAGCGGC
 TGCAGGACAGTCCCGGTCCGAGTCTGGCTGTGGATGGAGTATGATGACTGATGCAGCCTTACTGTA
 CGACGCGTCCATATCGTGTCCGTGTCTACCAGCGGCCACCACAGATGACCGTGAACCTCCCTGCAGTGC
 CATCGGCACAAGGCTGGCGCTTGGCGGCCGCTTCATGAACTTCATCAAGGAGGCTCAATGGGAAGGAT
 TAATGGACGAATTGTTTTCAACAAAACCTAGTGGCTTGGGACGGATTTGATCTGGACATCATCAGCCT
 GAAAGAGGATGGCTGGAGAAGGTTGGGTGTGGAGTCCGCGACGGGCTCAACATCACTGAGGTTGCC
 AAAGGCCGAGGCCCTAATGTCACCGACTCTCTGACAAACAGATCACTCATTGTCACCACAGTGTGGAGG
 AGCCCTTCGTATGTTTTCGAAAACAGACAGGACGCTATACGGGAATGACCGGTTGAGGGCTACTGCAT
 CGACCTGCTAAAGGAGTGGCCACATCCTTGGTTTTCTCCTATGAGATCCGGTGGTGGAGGACGGCAAG
 TACGGGGCACAGGATGACAAGGGCCAGTGAACGGCATGGTCAAGGAGCTCATCGACCACAAGGCAGATC
 TGGCCGTGGCCCCCTGACCATACCCATGTTGAGAGAAGGCCATCGACTTCTCAAGCCCTTCATGAC
 ACTTGGTGTGAGCATCCTGTATCGAAAGCCCAATGGCACCAACCCAGCGTCTTCTCCTCTCAATCCC
 CTGTCCCAGACATCTGGATGTATGTTCTCCTCGCCTACCTGGGGTTCAGCTGTGTCTCTTCGTATCG
 CCAGGTTGAGCCCTTATGAGTGGTACGATGCTCACCCCTGCAACCCTGGCTCCGAGGTGGTGGAAAATA
 CTTCACTCTGCTTAACAGCTTCTGGTTTGAATGGGATCCCTGATGCAGCAAGGGTCTGAGCTGATGCC
 AAAGCCCTGTCCACAGCATCATTGGTGGCATCTGGTGGTTCTTACGCTCATCATCTCTTCTTACACA
 CGGCCAACCTGGCTGCCTTCTGACCGTGGAGCGCATGGAATCACCCATTGACTCTGCTGATGACCTGGC
 CAAGCAAACAAAATCGAGTATGGGGCTGTCAAGGATGGGGCCACCATGACCTTCTTCAAGAAATCCAAG
 ATCTCCACCTTCGAGAAGATGTGGGCTTCATGAGCAGCAAGCCATCGGCGCTGGTGAAGAACACGAGG
 AGGGATCCAGAGGGCCCTGACGGCCGACTACGCGCTGCTCATGGAGTCCACCACCATCGAGTACGTAC
 GCAGAGGAACTGCAACCTCACCCAGATCGGGGGCCTCATTGACTCCAAGGGTACGCGATCGGCACGCC
 ATGGGCTCCCATACCGGACAAGATACCCATCGCCATCCTGCAGCTTCAGGAGGAGGACAAGCTGCATA
 TCATGAAGGAGAAGTGGTGGCGGGCAGCGGTCTCTGAGGAGGAAAACAAAGAGGCCAGTGCCTGGG
 GATCCAGAAGATCGGGGCATCTTATTGTCTGGCCCGCGGGTGGTCTCTGTGTGGTGGCCGTG
 GGCGAGTTTGTGTACAAGCTCCGCAAAACAGCAGAGAGAGCAGCGTTCCTTCTGCAGCACCGTGGCCG
 ATGAGATCCGTTTCTCCCTTACCTGCCAGCGTCAAGCACAAGCCTCAGCCTCCCATGATGGTCAA
 GACTGACGCCGTCAACATGCACACATTCAATGACCGCGGCTTCCCGCAAGGACAGCATGGCCTGC
 AGCACATCCTTAGCCCTGTGTTCCC

ACGCGTACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC223571 representing NM_000831
 Red=Cloning site Green=Tags(s)

MTAPWRRRLRSLVWEYWAGLLVCAFWIPDSRGMPhVIRIGGIFeYADGPNAQVMNAEEHAFRFSANIINRN
 RTLLPNTTLTYDIQRIHFHDSFEATKKACDQLALGVVAIFGPSQGSCTNAVQSICNALEVPHIQLRWKHH
 PLDNKDTFYVNLYPDYASLSHAIDLVLQYLKWSATVVYDDSTGLIRLQELIMAPSRYNIRLKIRQLPID
 SDDSRPLLKEMKRGREFRIIFDCSHTMAAQILKQAMAMGMMTEYHFIFTTLDLYALDLEPYRYSGVNL
 GFRILNVDPHVSATIVEKWSMERLQAAPRSEGLLDGVMMDAALLYDAVHIVSVCYQRAPQMTVNSLQC
 HRHKAWRFGGRFMNFIKEAQWELTGRIVFNKTSGLRTDFDLDIISLKEDGLEKVGWSPADGLNITEVA
 KGRGPNVTDLSLNRSLIVTTVLEEFVVMFRKSDRTL YGNDRFEGYCIDLLKELAHILGFSYEIRLVEDGK
 YGAQDDKQWNGMVKELIDHKADLAVAPLTITHVREKAIDFSKPFMTLGVSYLYRKPNGTNPVSVFSFLNP
 LSPDIWMYVLLAYLGVSCVLFVIARFSPYEWYDAHPCNPGEVVENNFTLLNSFWFGMGSMLMQQSELMP
 KALSTRIGGIWFFTLIISSYTANLAAFLTVERMESPIDSADDLAKQTKIEYGAVKDGATMTFFKKS
 ISTFEKMWAFMSSKPSALVKNNEEGIQRAL TADYALLMESTTIEYVTQRNCNL TQIGGLIDSKGYIGTP
 MGSPYRDKITIAILQLQEEDKLHIMKEKWWRGSGCPEEENKEASALGIQKIGGIFIVLAAGLVLSVLVAV
 GEFVYKLRKTAEREQRSFCSTVADEIRFSLTCQRRVKHKPQPPMMVKTDVINMHTFNDRRLPGKDSMAC
 STSLAPVFP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8001_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_000831

ORF Size: 2757 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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_000831.4](#)

RefSeq Size: 3733 bp

RefSeq ORF: 2760 bp

Locus ID: 2899

UniProt ID: [Q13003](#)

Cytogenetics: 1p34.3

Domains: lig_chan, ANF_receptor

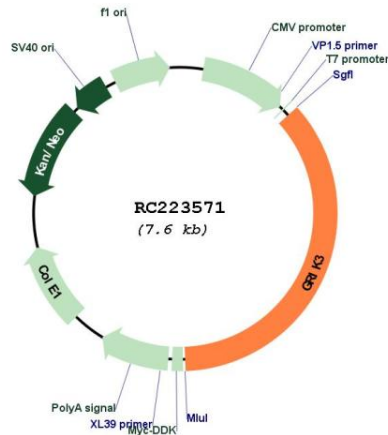
Protein Families: Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane

Protein Pathways: Neuroactive ligand-receptor interaction

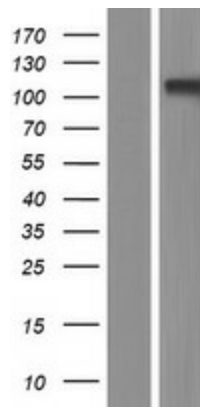
MW: 104.04 kDa

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. It is not certain if the subunit encoded by this gene is subject to RNA editing as the other 2 family members (GRIK1 and GRIK2). A Ser310Ala polymorphism has been associated with schizophrenia, and there are conflicting reports of its association with the pathogenesis of delirium tremens in alcoholics. [provided by RefSeq, Jul 2008]

Product images:


Circular map for RC223571



Western blot validation of overexpression lysate (Cat# [LY424496]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223571 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).