

Product datasheet for SC119637

Ionotropic Glutamate receptor 2 (GRIA2) (NM_000826) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ionotropic Glutamate receptor 2 (GRIA2) (NM_000826) Human Untagged Clone
Tag:	Tag Free
Symbol:	Ionotropic Glutamate receptor 2
Synonyms:	GluA2; gluR-2; gluR-B; GluR-K2; GLUR2; GLURB; HBGR2; NEDL1B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_000826 edited
 CTGGGAAATAGGGATTCTTCTGCCTCCACTTCAGGTTTTAGCAGCTTGGTCTAAATTGC
 TGCTCAAATGCAGAGGATCTAATTTGCAGAGGAAAACAGCCAAAGAAGGAAGAGGAGG
 AAAAGGAAAAAAAAAGGGGTATATTGTGGATGCTCTACTTTTCTGGAAATGCAAAAAGAT
 TATGCATATTTCTGCTCCTCTTCTCCTGTTTTATGGGGACTGATTTTTGGTGTCTCTTC
 TAACAGCATACAGATAGGGGGCTATTTCTAGGGGCGCCGATCAAGAATACAGTGCATT
 TCGAGTAGGGATGGTTCAGTTTTCCACTTCGGAGTTCAGACTGACACCCACATCGACAA
 TTTGGAGGTGGCAAACAGCTTCGCAGTCACTAATGCTTTCTGCTCCAGTTTTCGAGAGG
 AGTCTATGCTATTTTGGATTTATGACAAGAAGTCTGTAATACCATCACATCATTTTTG
 CGGAACACTCCACGTCTCCTTCATCACTCCAGCTTCCCAACAGATGGCACACATCCATT
 TGTCAATCAGATGAGACCCGACCTCAAAGGAGCTCTCCTTAGCTTGATTGAATACTATCA
 ATGGGACAAGTTTGCATACCTCTATGACAGTGACAGAGGCTTATCAACACTGCAAGCTGT
 GCTGGATTCTGCTGCTGAAAAGAAATGGCAAGTACTGCTATCAATGTGGGAAACATTA
 CAATGACAAGAAAGATGAGATGTACCGTCACTTTTTCAAGATCTGGAGTTAAAAAGGA
 ACGGCGTGTAAATCTGGACTGTGAAAGGGATAAAGTAAACGACATTGTAGACCAGGTTAT
 TACCATTGGAAAACACGTTAAAGGGTACCACTACATCATTGCAAACTCTGGGATTTACTGA
 TGGAGACCTATTAATAATCCAGTTTGGAGGTGCAAAATGTCTCTGGATTTAGATAGTGA
 CTATGATGATTCGTTGGTATCTAAATTTATAGAAAAGATGGTCAACACTGGAAGAAAAAGA
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 TCAAGTGATGACTGAAGCCTTCGCAACCTAAGGAAGCAAGAATTGAAATCTCCCGAAG
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 AGAAAGGGCCCTCAAACAGGTTCAAGTTGAAGTCTCTCAGGAAATATAAAGTTTGACCA
 GAATGGAAAAAGAATAAACTATAACAATTAACATCATGGAGCTCAAACTAATGGGCCCG
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 TGGAAATGACACCTCTGGCTTGAGAATAAGACTGTTGTTGTACCACAATTTTGAATC
 TCCGTATGTTATGATGAAGAAAAATCATGAAATGCTTGAAGCAATGAGCGCTATGAGGG
 CTAAGTGTGTTGACCTGGCTGCAGAAATCGCCAAACATTGTGGGTTCAAGTACAAGTTGAC



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AATTGTTGGTGATGGCAAGTATGGGGCCAGGGATGCAGACACGAAAAATTTGGAATGGGAT
GGTTGGAGAAGCTTGTATATGGGAAAGCTGATATTGCAATTGCTCCATTAACCTATTACCT
TGTGAGAGAAGAGGTGATTGACTTCTCAAAGCCCTTCATGAGCCTCGGGATATCTATCAT
GATCAAGAAGCCCTCAGAAGTCCAAACCAGGAGTGTTCCTTTCTTGATCCTTTAGCCTA
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CAGCAGATTTAGCCCCTACGAGTGGCACACTGAGGAGTTTGAAGATGGAAGAGAAAACACA
AAGTAGTGAATCAACTAATGAATTTGGGATTTTTAATAGTCTCTGGTTTTCTTTGGGTGC
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TGGAGAAAATGGACGTGTTATGACTCCAGAATTTCCCAAAGCAGTGCATGCTGTCCCTTA
CGTGAGTCTGGCATGGGAATGAATGTGAGTGTGACTGATCTCTGTGATTGATAAGAAC
CTTTTGTGTCCTTACACAATGGTTTTCTTGTGTGTTATTGTCAAAGTGGTGGAGGCA
TCCAGTATCTTGAAGACTTTTCTTTCAGCCAAGAATTCTTAAATATGTGGAGTTCATCTT
GAATTGTAAGGAATGATTAATTAACCAACATCTTTTCTACTCGAGTTACAGACAAA
GCGTGGTGGACATGCACAGCTAACATGGAAGTACTATAATTTACCTGAAGCTTTGTACA
GACAACAAACCTGTTTCTGCAGCCACTATTGTTAGTCTCTTGATTATAATGACTTAAGC
ACACTTGACATCAACTGCATCAAGATGTGACATGTTTTATAAAAAAGGAAAAAAAAC
AGAC
    
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Restriction Sites: NotI-NotI

ACCN: NM_000826

Insert Size: 3500 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:	The ORF of this clone has been fully sequenced and found to be a perfect match to NM_000826.2.
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:	<ol style="list-style-type: none">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_000826.2 , NP_000817.2
RefSeq Size:	5644 bp
RefSeq ORF:	2652 bp
Locus ID:	2891
UniProt ID:	P42262
Cytogenetics:	4q32.1
Domains:	lig_chan, ANF_receptor
Protein Families:	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
Protein Pathways:	Amyotrophic lateral sclerosis (ALS), Long-term depression, Long-term potentiation, Neuroactive ligand-receptor interaction
Gene Summary:	<p>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 a family of glutamate receptors that are sensitive to alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA), and function as ligand-activated cation channels. These channels are assembled from 4 related subunits, GRIA1-4. The subunit encoded by this gene (GRIA2) is subject to RNA editing (CAG->CGG; Q->R) within the second transmembrane domain, which is thought to render the channel impermeable to Ca(2+). Human and animal studies suggest that pre-mRNA editing is essential for brain function, and defective GRIA2 RNA editing at the Q/R site may be relevant to amyotrophic lateral sclerosis (ALS) etiology. Alternative splicing, resulting in transcript variants encoding different isoforms, (including the flip and flop isoforms that vary in their signal transduction properties), has been noted for this gene. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1) encodes isoform 1 (also known as flip isoform). RNA editing (CAG->CGG) changes aa Gln607Arg. Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript matching the reference genomic sequence was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.</p>