

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:	GRIA2
Synonyms:	GluA2; gluR-2; gluR-B; GluR-K2; GLUR2; GLURB; HBGR2; NEDL1B
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>OriGene sequence for NM_000826 edited

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CTGGGAAATAGGGATTCTTCTGCCTCCACTTCAGGTTTTAGCAGCTTGGTGCTAAATTGC
TGTCTCAAAATGCAGAGGATCTAATTTGCAGAGAAAACAGCCAAAGAAGGAAGAGGAGG
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GATCAAGAAGCCTCAGAAGTCCAAACCAGGAGTGTTCCTTTCTTGATCCTTTAGCCTA
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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.

RefSeq: [NM_000826.2](#), [NP_000817.2](#)

RefSeq Size: 5644 bp

RefSeq ORF: 2652 bp

Locus ID: 2891

UniProt ID: [P42262](#)

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: 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]

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.