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Product datasheet for SC316072

Ionotropic Glutamate receptor 2 (GRIA2) (NM_001083620) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ionotropic Glutamate receptor 2 (GRIA2) (NM_001083620) Human Untagged Clone
Tag:	Tag Free
Symbol:	GRIA2
Synonyms:	GluA2; gluR-2; gluR-B; GluR-K2; GLUR2; GLURB; HBGR2; NEDLIB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>SC316072 representing NM_001083620.
Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGTTCAGTTTTCCACTTCGGAGTTCAGACTGACACCCCACATCGACAATTTGGAGGTGGCAAACAGC
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CTGGACTGTGAAAGGGATAAAGTAAACGACATTGTAGACCAGGTTATTACCATTGGAAAACATGTTAAA
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GCAAATGTCTCTGGATTTCAGATAGTGGACTATGATGATTCGTTGGTATCTAAATTTATAGAAAGATGG
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CCTTGCGACACCATGAAAGTTGGTGGAAACCTGGATTCCAAAGGCTATGGCATCGCAACACCTAAAGGA
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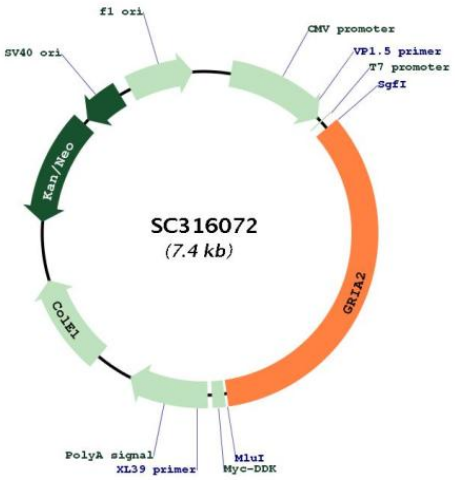
TATGGCATCGAAAGTGTTAAAATTTAG
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

Restriction Sites:

SgfI-MluI

Plasmid Map:



ACCN:	NM_001083620
Insert Size:	2511 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_001083620.1
RefSeq Size:	5266 bp
RefSeq ORF:	2511 bp
Locus ID:	2891
UniProt ID:	P42262
Cytogenetics:	4q32.1

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
MW:	93.8 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 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 (3) contains a different 5' end exon compared to transcript variant 1, resulting in translation initiation from an in-frame downstream AUG, and an isoform (3) with a shorter N-terminus compared to isoform 1. RNA editing (CAG->CGG) changes aa Gln560Arg. 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.