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Product datasheet for RR217297

Gria2 (NM_001083811) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gria2 (NM_001083811) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gria2
Synonyms:	GluA2; gluR-B; GluR-K2; GluR2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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ORF Nucleotide Sequence:

>RR217297 representing NM_001083811
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAAAAGATTATGCATATTTCTGTCCTCCTTTCTCCTGTTTTATGGGGACTGATTTTTGGTGTCTCTT
CTAACAGCATACAGATAGGGGGGCTATTTCCAAGGGGCGCTGATCAAGAATACAGTGCATTTCGGGTAGG
GATGGTTCAGTTTTCCACTTCGGAGTTCAGACTGACACCCCATATCGACAATTTGGAGGTAGCCAACAGT
TTCGCAGTCACCAATGCTTTCTGCTCCCAGTTTTCAAGAGGAGTCTACGCAATTTTTGGATTTTATGACA
AGAAGTCTGTAAATACCATCACATCATTCTGTGGGACACTCCATGTGTCCTTCATCACACCTAGCTTCCC
AACAGATGGCACACATCCATTTGTCATCCAGATGCGACCTGACCTCAAAGGAGCACTCCTTAGCTTGATT
GAGTACTACCAATGGGACAAGTTCGCATACCTCTATGACAGTGACAGAGGCTTATCAACACTGCAAGCTG
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TGTGAAAGGGATAAAGTAAATGACATTGTGGACCAGGTTATTACCATTGGAAAACATGTTAAAGGGTACC
ATTATATCATTGCAAATCTGGGATTCACTGATGGGGACCTGCTGAAAATTCAGTTTGGAGGAGCAAATGT
CTCTGGATTTCAGATTGTAGACTACGACGATTCCCTGGTGTCTAAATTTATAGAAAGATGGTCAACACTG
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GTTCAAGTTGAAGGCCTCTCTGGAAATATAAAGTTTGACCAGAATGGAAAACGAATAAACTACACAATTA
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AGCCCTTCATGAGTCTTGGAATCTCTATCATGATCAAGAAGCCTCAGAAGTCCAAACCAGGAGTGTTTTC
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GTACTAAAACTGAATGAACAAGGCCTGTTGGACAAATTGAAAAACAAATGGTGGTACGACAAAGGAGAGT
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CTACATCCTTGTCGGGGGCCTTGGTTTGGCAATGCTGGTGGCTTTGATTGAGTTCTGTTACAAGTCAAGG
GCCGAGGCGAAACGAATGAAGGTGGCAAAGAATCCACAGAATATTAACCCATCTTCCTCGCAGAATTCCC
AGAATTTTGCAACTTATAAGGAAGGTTACAACGTATATGGCATCGAGAGTGTTAAAATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

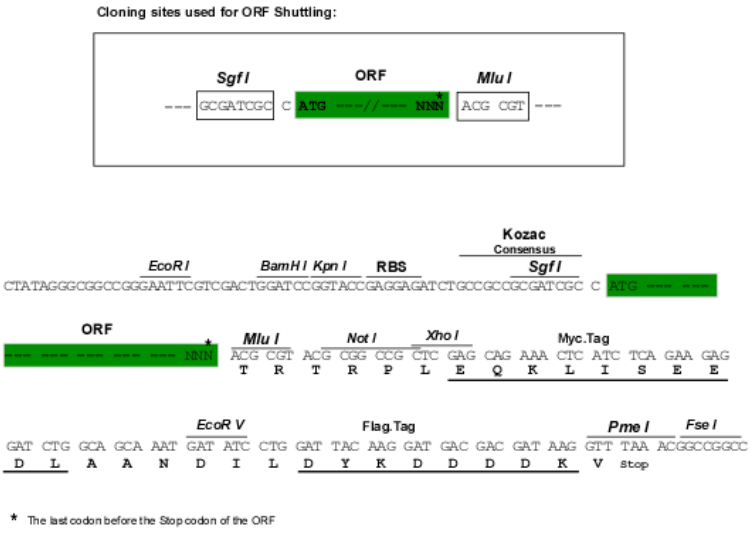
>RR217297 representing NM_001083811
Red=Cloning site Green=Tags(s)

MQKIMHISVLLSPVLWGLIFGVSSNSIQIGGLFPRGADQEYSAFRVGMVQFSTSEFRLTPHIDNLEVANS
FAVTNAFCSQFSRGVYAIFGFYDKKSVNTITSFCGTLHVSFITPSFPTDGTHPFVIQMRPDLKGALLSLI
EYYQWDKFAYLYDSDRGLSTLQAVLDSAAEKKWQVTAINVGNINNDKKDETYRSLFQDLELKKERRVILD
CERDKVNDIVDQVITIGKHVKGYHYIIANLGFTDGDLLKIQFGGANVSGFQIVDYDDSLVSKFIERWSTL
EEKEYPGAHTATIKYTSALTYDAVQVMTEAFRNLRKQRIEISRRGNAGDCLANPAVPWGQGVEIERALKQ
VQVEGLSGNIKFDQNGKRINYTINIMELKTNGPRKIGYWSEVDKMVVTLTELPSGNDTSGLENKTVVVTT
ILESPYVMMKKNHEMLEGNERYEGYCVDLAAEIAKHCGFKYKLTIVGDGKYGARDADTKIWNGMVGELVY
GKADIAIAPLTITLVREEVIDFSKPFMSLGISIMIKKPQKSKPGVFSFLDPLAYEIWMCIVFAYIGVSVV
LFLVSRFSPYEWHTEEFEDGRETQSSESTNEFGIFNSLWFSLGAFMRQGCDISPRSLSGRIVGGVWWFFT
LIIISSYTANLAAFLTVERMVSPIESAEDLSKQTEIAYGTLDSGSTKEFFRRSKIAVFDKMWTYMRSAEP
SVFVRTTAEGVARVRKSKGKYAYLLESTMNEYIEQRKPCDTMKVGGNLDSKGYGIATPKGSSLGNAVNLA
VLKLNEQGLLDKLKNKWWYDKGECGSGGGDSKEKTSALSLSNVAGVFYILVGGLGLAMLVALIEFCYKSR
AEAKRMKVAKNPQNINPSSSQNSQNFATYKEGYNVYGIESVKI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

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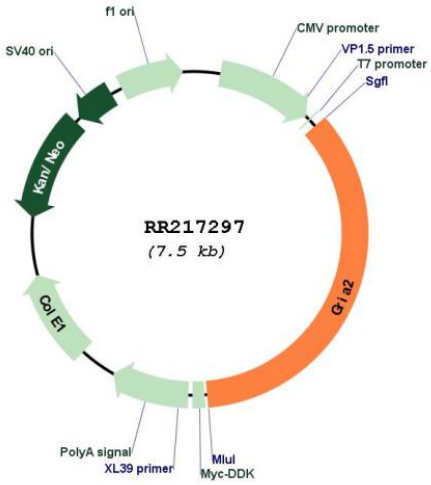
Plasmid Map:



ACCN:	NM_001083811
ORF Size:	2649 bp
OTI Disclaimer:	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_001083811.1, NP_001077280.1
RefSeq Size:	6745 bp
RefSeq ORF:	2652 bp
Locus ID:	29627
UniProt ID:	P19491
Cytogenetics:	2q33

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MW: 98.7 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 (Q/R and R/G), which is thought to render the channels impermeable to Ca(2+), and to affect the kinetic aspects of these channels in rat brain. Alternative splicing, resulting in transcript variants encoding different isoforms (flip and flop), has been noted for this gene. [provided by RefSeq, Jul 2008]

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