

Product datasheet for RC226377

NMDAR2A (GRIN2A) (NM_001134408) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NMDAR2A (GRIN2A) (NM_001134408) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRIN2A
Synonyms:	EPND; FESD; GluN2A; LKS; NMDAR2A; NR2A
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC226377 representing NM_001134408 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGCAGAGTGGGCTATTGGACCCTGCTGGTGTGCCGGCCCTTCTGGTCTGGCGGGTCCGGCGCGGA
GCGCGGGCGGGAGAAGGGTCCCCCGCGCTAAATATTGCGGTGATGCTGGGTACAGCCACGACGTGAC
AGAGCGCGAACTTCGAACACTGTGGGGCCCCGAGCAGGCGGGGGCTGCCCTGGACGTGAACGTGGTA
GCTCTGTGATGAACCGCACCGACCCAAAGAGCCTCATCACGCACGTGTGCGACCTCATGTCCGGGGCAC
GCATCCACGGCCTCGTGTGGGGACGACACGGACCAGGAGGCCGTAGCCAGATGCTGGATTTATCTC
CTCCACACCTTCGTCGCCATCTTGGGCATTATGGGGGCGCATCTATGATCATGGCTGACAAGGATCCG
ACGTCTACCTTCTCCAGTTTGGAGCGTCCATCCAGCAGCAAGCCACGGTCATGCTGAAGATCATGCAGG
ATTATGACTGGCATGTCTTCCCTGGTGACCACTATCTCCCTGGTACAGGGAATTCATCAGCTTCGT
CAAGACCACAGTGGACAACAGCTTTGTGGGCTGGGACATGCAGAAATGTGATCACACTGGACACTTCCCTT
GAGGATGCAAAGACACAAGTCCAGCTGAAGAAGATCCACTTTCTGTCTTGTCTACTGTTCCAAAG
ACGAGGCTGTTCTCATTCTGAGTGAGGCCCGCTCCCTTGCCCTCACCGGGTATGATTTCTCTGGATTGT
CCCCAGCTTGGTCTCTGGGAACCGGAGCTCATCCAAAAGAGTTTCCATCGGGACTCATTCTGTCTCC
TACGATGACTGGGACTACAGCCTGGAGGCGAGAGTGAGGGACGGCATTGGCATCCTAACCACCGCTGCAT
CTTCTATGCTGGAGAAGTTCTCCTACATCCCCGAGGCCAAGGCCAGCTGTACGGGCAGATGGAGAGGCC
AGAGGTCCCGATGCACACCTTGCACCCATTTATGGTCAATGTTACATGGGATGGCAAAGACTTATCCTTC
ACTGAGGAAGGCTACCAGGTGCACCCAGGCTGGTGGTATTGTGCTGAACAAAGACCGGGAATGGGAAA
AGGTGGCAAGTGGGAGAACCATACGCTGAGCCTGAGGCACGCCGTGGCCAGGTACAAGTCTTCTC
CGACTGTGAGCCGGATGACAACCATCTCAGCATCGTACCCTGGAGGAGGCCCATTCGTCATCGTGGAA
GACATAGACCCCTGACCAGACGTGTGTGAGGAACACCGTGCCATGTGCGAAGTTCGTCAAAATCAACA
ATTCAAACCAATGAGGGGATGAATGTGAAGAAATGCTGCAAGGGTTCTGCATTGATATTCTGAAGAAGCT
TTCCAGAAGTGTGAAGTTTACTTACGACCTCTATCTGGTGACCAATGGGAAGCATGGCAAGAAAGTTAAC
AATGTGTGGAATGGAATGATCGGTGAAGTGGTCTATCAACGGGCAGTCATGGCAGTTGGCTCGCTACCA



[View online >](#)

TCAATGAGGAACGTTCTGAAGTGGTGGACTTCTCTGTGCCCTTTGTGAAACGGGAATCAGTGTCATGGT
TTCAAGAAGTAATGGCACCGTCTCACCTTCTGCTTTTCTAGAACCATTACAGCGCCTCTGTCTGGGTGATG
ATGTTTGTGATGCTGCTCATTGTTTCTGCCATAGCTGTTTTGTCTTTGAATACTTCAGCCCTGTTGGAT
ACAACAGAAACTTAGCCAAAGGGAAAGCACCCCATGGGCCTTCTTTACAATTGGAAAAGCTATATGGCT
TCTTTGGGCCTGGTGTCAATAACTCCGTGCCTGTCCAGAATCCTAAAGGGACCACCAGCAAGATCATG
GTATCTGTATGGGCCTTCTTCGCTGTCAATTCCTGGCTAGCTACACAGCCAATCTGGCTGCCTTCATGA
TCCAAGAGGAATTTGTGGACCAAGTGACCGGCCTCAGTGACAAAAAGTTTCAGAGACCTCATGACTATTC
CCCACCTTTTCGATTTGGGACAGTGCCTAATGGAAGCACGGAGAGAAACATTCGGAATAACTATCCCTAC
ATGCATCAGTACATGACCAAATTAATCAGAAAAGGAGTAGAGGACGCCTTGGTCAGCCTGAAAACGGGGA
AGCTGGACGCTTTCATCTACGATGCCGCAGTCTTGAATTAACAAGGCTGGGAGGGATGAAGGCTGCAAGCT
GGTGACCATCGGGAGTGGGTACATCTTTGCCACCACCGGTTATGGAATTGCCCTTCAGAAAAGGCTCTCCT
TGGAAGAGGCAGATCGACCTGGCCTTGCTTCACTTTGTGGGTGATGGTGAGATGGAGGAGCTGGAGACCC
TGTGGCTCACTGGGATCTGCCACAACGAGAAGAACGAGGTGATGAGCAGCCAGCTGGACATTGACAAAT
GGCGGGCGTATTCTACATGCTGGCTGCCCCATGGCCCTTAGCCTCATCACCTTCATCTGGGAGCACCTC
TTCTACTGGAAGCTGCGCTTCTGTTTCAGGGCGTGTGCTCCGACCGGCCTGGGTTGCTCTCTCCATCA
GCAGGGGCATCTACAGCTGCATTGAGTGCACATTGAAGAAAAGAAGAGTCCAGACTTCAATCT
GACGGGATCCCAGAGCAACATGTTAAAACCTCCTCCGGTCAGCCAAAAACATTTCCAGCATGTCCAACATG
AACTCCTCAAGAATGGACTCACCCAAAAGAGCTGCTGACTTATCCAAAGAGGTTCCCTCATCATGGACA
TGGTTTCAGATAAAGGGGAATTTGATGTACTCAGACAACAGGTCTTTTCAGGGGAAAGAGAGCATTTTTGG
AGACAACATGAACGAACCTCAAACATTTGTGGCCAACCGGCAGAGGATAACCTCAATAACTATGTATTC
CAGGGACAACATCCTCTTACTCTCAATGAGTCCAACCCTAACACGGTGGAGGTGGCCGTGAGCACAGAAT
CCAAAGCGAACTCTAGACCCCGGCAGCTGTGGAAGAAATCCGTGGATTCCATACGCCAGGATTCACTATC
CCAGAATCCAGTCTCCAGAGGGATGAGGCAACAGCAGAGAATAGGACCCACTCCCTAAAGAGCCCTAGG
TATCTTCCAGAAGAGATGGCCCACTCTGACATTTAGAAAACGTCAAATCGGGCCACGTGCCACAGGGAAC
CTGACAACAGTAAGAACCACAAAACCAAGGACAACCTTTAAAAGGTCAGTGGCCTCCAAATACCCCAAGGA
CTGTAGTGAGGTCGAGCGCACCTACCTGAAAACCAAATCAAGCTCCCCTAGAGACAAGATCTACACTATA
GATGGTGAGAAGGAGCCTGGTTTCACTTAGATCCACCCAGTTTGTGAAAATGTGACCCTGCCCGAGA
ACGTGGACTTCCCGGACCCCTACCAGGATCCCAGTGAAAACCTCCGCAAGGGGGACTCCACGCTGCCAAT
GAACCGGAACCCCTTGCATAATGAAGAGGGCTTTCCAACAACGACCAGTATAAACTCTACTCCAAGCAC
TTCACCTTGAAAGACAAGGTTCCCGCACAGTGAGACCAGCGAGCGATACCGGCAGAACTCCACGCACT
GCAGAAGCTGCCTTTCCAACATGCCACCTATTCAGGCCACTTCACCATGAGGTCCCCTTCAAGTGCGA
TGCTTGCCTGCGGATGGGGAACCTCTATGACATCGATGAAGACCAGATGCTTCAGGAGACAGGGATGACC
AACGCTTGGTTATTGGGAGATGCCCTCGGACCCTTACAAACACTCGTTGCCATCCCAGGCGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226377 representing NM_001134408
 Red=Cloning site Green=Tags(s)

MGRVGYWTL L V L P A L L V W R G P A S A A A E K G P P A L N I A V M L G H S H D V T E R E L R T L W G P E Q A A G L P L D V N V V
 A L L M N R T D P K S L I T H V C D L M S G A R I H G L V F G D D T D Q E A V A Q M L D F I S S H T F V P I L G I H G G A S M I M A D K D P
 T S T F F Q F G A S I Q Q Q A T V M L K I M Q D Y D W H V F S L V T T I F P G Y R E F I S F V K T T V D N S F V G W D M Q N V I T L D T S F
 E D A K T Q V Q L K K I H S S V I L L Y C S K D E A V L I L S E A R S L G L T G Y D F F W I V P S L V S G N T E L I P K E F P S G L I S V S
 Y D D W D Y S L E A R V R D G I G I L T T A A S S M L E K F S Y I P E A K A S C Y G Q M E R P E V P M H T L H P F M V N V T W D G K D L S F
 T E E G Y Q V H P R L V V I V L N K D R E W E K V G K W E N H T L S L R H A V W P R Y K S F S D C E P D D N H L S I V T L E E A P F V I V E
 D I D P L T E T C V R N T V P C R K F V K I N N S T N E G M N V K C C K G F C I D I L K K L S R T V K F T Y D L Y L V T N G K H G K K V N
 N V W N G M I G E V V Y Q R A V M A V G S L T I N E E R S E V V D F S V P F V E T G I S V M V S R S N G T V S P A F L E P F S A S V W M
 M F V M L L I V S A I A V F V F E Y F S P V G Y N R N L A K G K A P H G P S F T I G K A I W L L W G L V F N N S V P V Q N P K G T T S K I M
 V S V W A F F A V I F L A S Y T A N L A A F M I Q E E F V D Q V T G L S D K K F Q R P H D Y S P P F R F G T V P N G S T E R N I R N N Y P Y
 M H Q Y M T K F N Q K G V E D A L V S L K T G K L D A F I Y D A A V L N Y K A G R D E G C K L V T I G S G Y I F A T T G Y G I A L Q K G S P
 W K R Q I D L A L L Q F V G D G E M E E L T L W L T G I C H N E K N E V M S S Q L D I D N M A G V F Y M L A A A M A L S L I T F I W E H L
 F Y W K L R F C F T G V C S D R P G L L F S I S R G I Y S C I H G V H I E E K K S P D F N L T G S Q S N M L K L L R S A K N I S S M S N M
 N S S R M D S P K R A A D F I Q R G S L I M D M V S D K G N L M Y S D N R S F Q G K E S I F G D N M N E L Q T F V A N R Q K D N L N N Y V F
 Q Q H P L T L N E S N P N T V E V A V S T E S K A N S R P R Q L W K K S V D S I R Q D S L S Q N P V S Q R D E A T A E N R T H S L K S P R
 Y L P E E M A H S D I S E T S N R A T C H R E P D N S K N H K T K D N F K R S V A S K Y P K D C S E V E R T Y L K T K S S S P R D K I Y T I
 D G E K E P G F H L D P P Q F V E N V T L P E N V D F P D P Y Q D P S E N F R K G D S T L P M N R N P L H N E E G L S N N D Q Y K L Y S K H
 F T L K D K G S P H S E T S E R Y R Q N S T H C R S C L S N M P T Y S G H F T M R S P F K C D A C L R M G N L Y D I D E D Q M L Q E T G M T
 N A W L L G D A P R T L T N T R C H P R R

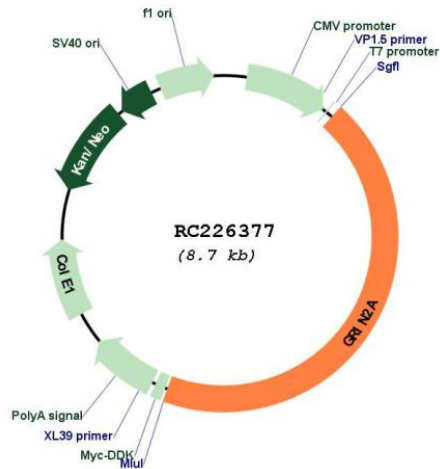
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001134408

ORF Size: 3843 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_001134408.2](#)

RefSeq ORF:	3846 bp
Locus ID:	2903
UniProt ID:	Q12879
Cytogenetics:	16p13.2
Protein Families:	Druggable Genome, Ion Channels: Glutamate Receptors, Ion Channels: Sodium, Transmembrane
Protein Pathways:	Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Calcium signaling pathway, Long-term potentiation, Neuroactive ligand-receptor interaction, Systemic lupus erythematosus
MW:	144.43 kDa
Gene Summary:	<p>This gene encodes a member of the glutamate-gated ion channel protein family. The encoded protein is an N-methyl-D-aspartate (NMDA) receptor subunit. NMDA receptors are both ligand-gated and voltage-dependent, and are involved in long-term potentiation, an activity-dependent increase in the efficiency of synaptic transmission thought to underlie certain kinds of memory and learning. These receptors are permeable to calcium ions, and activation results in a calcium influx into post-synaptic cells, which results in the activation of several signaling cascades. Disruption of this gene is associated with focal epilepsy and speech disorder with or without cognitive disability. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]</p>