

Product datasheet for RC214449

GRID2 (NM_001510) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GRID2 (NM_001510) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRID2
Synonyms:	GluD2; SCAR18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214449 representing NM_001510 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGTTTTCCCTTTCTCTTGGTTTTGTCCGTCTGGTGGTCTCGAACCTGGGACTCGGCGAATGCGG
ATTCGATCATTACATCGGAGCAATTTTTGATGAATCTGCCAAAAGGATGATGAGGATTTTCGCACTGC
GGTTGGTACCTTAACCAGAATGAGGAGATCTTACAGACTGAGAAAATCACATTTTCAGTGACGTTTGT
GATGGCAACAACCTTTCAAGCAGTTCAAGAAGCCTGTGAATATGAATCAAGGCATCTTGGCCCTGG
TCAGCTCCATTGGCTGCACGTGACGAGGATCCCTCCAGTCTTTGGCAGACGCCATGCATATCCCCACCT
CTTCATTCAGCGCTCAACAGCTGGGACCCCAAGGAGTGGCTGTGGACTCACCCGGAGCAACAGGAATGAT
GACTACACTCTCTCAGTTCGCCCACCTGTCTACTTGCATGATGTTATCCTAAGAGTGGTACAGAGTATG
CCTGGCAGAAATTCATTATATTCTATGATAGTGAATACGATATCCGTGGAATACAGGAGTCTTGGACAA
AGTCTCTCAGCAGGGAATGGATGTTGCACCTCAGAAGGTAGAAAACAACATCAATAAAATGATTACCACT
CTCTTTGACACCATGAGAATAGAAGAACTGAATCGCTATCGAGACACTCTTAGGGCAGCGATCCTTGTTA
TGAATCCTGCTACAGCCAAATCCTTCACTACTGAGGTTGTGGAGACTAATTTGGTTGCTTTTGACTGTCA
CTGGATCATTATAAATGAGGAAATAAACGATGTGGACGTACAGGAACTTGAAGAAGTCAATTGGAAGG
TTAACGATTATTCGGCAGACATTTCCAGTTCGCCAGAACATAAGTCAGCGGTGTTCCCGTGGCAACCATC
GAATATCTTCAACATTGTGTGATCCAAAGGATCCATTTGCTCAGAATATGGAGATTTCCAACCTTTACAT
ATATGACACGGTCTTCTGCTTGTCTAATGCTTTTCATAAGAAGCTGGAGGACCGAAAGTGGCACAGCATG
GCAAGTCTGTCATGTATCAGAAAGAACTCAAAGCCTGGCAGGGTGGGCGCTCCATGTTGGAGACCATCA
AGAAGGGTGGAGTTAGTGGGTTGACTGGAGAGCTAGAATTTGGAGAAAATGGAGGCAATCCCAATGTCCA
CTTTGAAATCCTTGAACCAACTATGGAGAAGAGCTTGGCAGAGGTGTTCCGAAAACCTTGGTTGCTGGAAT
CCTGTCACAGGTCTGAATGGTCACTGACTGACAAGAAATTTGGAGAATAACATGCGTGGAGTGGTTCTAC
GTGTAGTAACTGTTCTGGAAGAACCTTTGTGATGGTCTCTGAAAATGTCTTGGGTAAGCCGAAGAATA
CCAGGGCTTCTCCATTGATGTTTTGGATGCCTTATCTAACTACCTGGGTTTTAACTACGAAATTTACGTA



[View online »](#)

GCACCGGATCACAAATACGGAAGCCACAAGAAGATGGGACATGGAATGGCTTGGTAGGAGAACTTGTCT
 TTAAGAGAGCCGACATAGGGATTCTGCCTTAACCATCACTCCAGATCGTGAAAATGTGGTGGACTTTAC
 GACACGTTACATGGACTACTCAGTGGGGTACTACTTCGAAGGGCTGAAAAGACAGTGGATATGTTTGCC
 TGTCTTGACCATTTGATCTCTCTATGGGCTTGCAATGCTGGCACAGTCTTCTGGTGGGTCTACTGG
 TCTACCTTTGAACTGGCTTAATCCCCACGATTACAAATGGGATCAATGACGTCTACTCTCTACAA
 CTCCATGTGGTTTGTGTATGGATCTTTTGTACAACAAGGCGGGGAAGTCCCGTACACGGCAACCTCGCTG
 CGAATGATGATGGGGCTTGGTGGCTATTGCTTTGATTGTTATCTCATCTTACACGGCAACCTCGCTG
 CTTTCTCACTATTACACGCATTGAAAGTTCCATCCAGTCTCTCCAGGACCTTTCCAAGCAAACAGAAAT
 CCCTTATGGCACAGTCTAGACTCTGCGGTATATGAGCATGTCCGCATGAAAGGACTGAATCCTTTTGAG
 AGGGACAGCATGTATTCCCAAATGTGGCGGATGATCAACCGAAGCAATGGATCGGAGAACAATGTTCTGG
 AGTCCCAGGCAGGCATTCAAAGGTAAAATATGGAAATTATGCTTTCGTATGGGATGCAGCTGATTGGA
 ATATGTGGCTATCAATGACCCAGATTGTTCTTTTACACCATTGGAAATACTGTTGCTGATCGGGGATAT
 GGAATTGCATTACAACATGGCAGTCTTACCGAGATGTTTTTTCACAAAGGATCTGGAGCTTCAGCAGA
 ATGGTGACATGGACATCCTGAAGCACAAATGGTGGCCTAAGAATGGCCAGTGTGACCTGTACTCGTCAGT
 GGACACAAAGCAGAAAGGAGGCGCCCTGGACATAAAGAGCTTTGCAGGGTCTTTTGTATCTGGCTGCT
 GGAATTGTCTCTCTGCTTCATAGCCATGCTGGAGACGTGGTGAACAAGAGGAAAGGCTCCCGGGTTC
 CATCAAAAGAGGATGACAAGGAAATTGACCTGGAGCACCTCCATAGACGTGTAATAGCTTGTGCACAGA
 TGACGACAGCCCCATAAACAGTTTTCCACCTCGTCAATTGATTTGACCCCTCTGGACATTGACACTTTG
 CCAACACGACAAGCACTGGAGCAAAATCAGTGATTTTCAGGAACACTCATATTACCACAACAACCTTTATCC
 CAGAGCAGATCCAGACTTAGCCGCACACTGTGAGCTAAAGCTGCTTCTGGTTTCACTTTTGGCAACGT
 GCCTGAGCACCAGAACTGGCCCTTTAGGCACAGGGCACCTAATGGGGGCTTTTTCAGGAGTCTATAAAA
 ACAATGTCATCTATTCTTATCAACCAACTCTACCCTGGGGCTCAATCTGGGTAATGATCCAGACCGAG
 GCACCTCCATA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214449 representing NM_001510
 Red=Cloning site Green=Tags(s)

MEVFPFLLVLSVWWSRTWDSANADSIHIGAI FDES AKK DDEVFR TAVGDLNQNEEILQTEKITFSVTFV
 DGNPFPQAVQEACELMNQILALVSSIGCTSAGSLQSLADAMHIPHLFIQRSTAGTPRSGGLTRSNRND
 DYTL SVRPPVYLHDVILRVVTEYAWQKFIIFYDSEYDIRGIQEF LDKVSQQGMDVALQKVENNINKMITT
 LFD TMRIEELNRYRDLRRAILVMNPATAKSFITEVVETNLVAFDCHWIIINEEINDVDVQELVRRSIGH
 LTIIRQTFPVPQNISQRCFRGNHRISSTLCDPKDPFAQNMEISNLYIYDTVLLL ANAFHKKLED RKWHSM
 ASL SCIRKNSKPWQGGRSML ETIKKGGVSGLTGELEFGENGGNPNVHFEILGTNYGEELGRGVRKLG CWN
 PVTGLNGSLTDKKLENNMRGVVLRVVTVLEEFVMVSENVLGPKKYQGF SIDVLDALSNYLGFNIEIYV
 APDHKYGSPQEDGTWNLV GELVFKRADIGI SALITIPDRENVDF TTRYMDYSVGVLLRRAEKTVD MFA
 CLAPFDLSLWACIAGTVLLVGLLVYLLNWL NPPRLQMGSMSTTLYNSMWFVYGSFVQGGVEPPTLAT
 RMMMGAWWLFALIVISSYTANLAAFLTITRIESSIQSLQDL SKQTEIPYGTVLDSAVYEHVRMGLNPF E
 RDSMYSQMWRMINRSNGSEN NVLESQAGIQKVYGN YAFVWDAAVLEYVAINDPDCSFYITIGNTVADRGY
 GIALQHGSPPYRDFV SQRIE LELQQNGDMDILKHKWWPKNGQCDLYSSVDTKQKGGALDIKSFAGVFCILAA
 GIVLSCFIAMLETWWNKR KGSRVPSKEDDKEIDLEHLHRRVNSLCTDDDSPHKQFSTSSIDL TPLDIDL
 PTRQALEQISDFRNTHITTTTFIPEQIQTL SRTLSAKAASGFTFGNVPEHRTGPFRRHAPNGGFFRSPIK
 TMSSIPYQPTPLGLNLGNDPDRGTSI

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8115_b12.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001510

ORF Size: 3021 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_001510.4](#)

RefSeq Size: 3024 bp

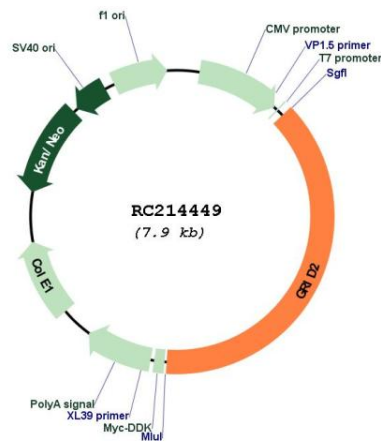
RefSeq ORF: 3024 bp

Locus ID: 2895

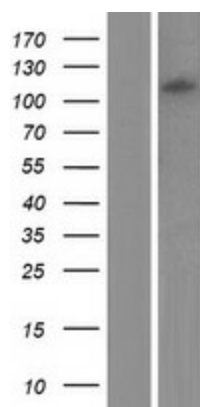
UniProt ID: [O43424](#)
Cytogenetics: 4q22.1-q22.2
Protein Families: Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
Protein Pathways: Long-term depression, Neuroactive ligand-receptor interaction
MW: 113.2 kDa

Gene Summary: The protein encoded by this gene is a member of the family of ionotropic glutamate receptors which are the predominant excitatory neurotransmitter receptors in the mammalian brain. The encoded protein is a multi-pass membrane protein that is expressed selectively in cerebellar Purkinje cells. A point mutation in the mouse ortholog, associated with the phenotype named 'lurcher', in the heterozygous state leads to ataxia resulting from selective, cell-autonomous apoptosis of cerebellar Purkinje cells during postnatal development. Mice homozygous for this mutation die shortly after birth from massive loss of mid- and hindbrain neurons during late embryogenesis. This protein also plays a role in synapse organization between parallel fibers and Purkinje cells. Alternate splicing results in multiple transcript variants encoding distinct isoforms. Mutations in this gene cause cerebellar ataxia in humans. [provided by RefSeq, Apr 2014]

Product images:



Circular map for RC214449



Western blot validation of overexpression lysate (Cat# [LY419892]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214449 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).