

Product datasheet for **RG214449**

GRID2 (NM_001510) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GRID2 (NM_001510) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GRID2
Synonyms:	GluD2; SCAR18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214449 representing NM_001510 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGTTTTCCCTTGTCTTTGGTTTTGTCGCTCTGGTGGTCTCGAACCTGGGACTCGGCGAATGCGG
ATTCGATCATTACATCGGAGCAATTTTTGATGAATCTGCCAAAAGGATGATGAGGATTTTCGCACTGC
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CTTCATTACGCGCTCAACAGCTGGGACCCCAAGGAGTGGCTGTGGACTCACCCGGAGCAACAGGAATGAT
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GAATATCTTCAACATTGTGTGATCCAAAGGATCCATTTGCTCAGAATATGGAGATTTCCAACCTTTACAT
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CCAGGGCTTCTCCATTGATGTTTTGGATGCCTTATCTAACTACCTGGGTTTTAACTACGAAATTTACGTA



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GCACCGGATCACAAATACGGAAGCCACAGAAGATGGGACATGGAATGGCTTGGTAGGAGAACTTGTCT
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 ACAATGTCATCTATTCTTATCAACCAACTCTACCCTGGGGCTCAATCTGGGTAATGATCCAGACCGAG
 GCACCTCCATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214449 representing NM_001510
 Red=Cloning site Green=Tags(s)

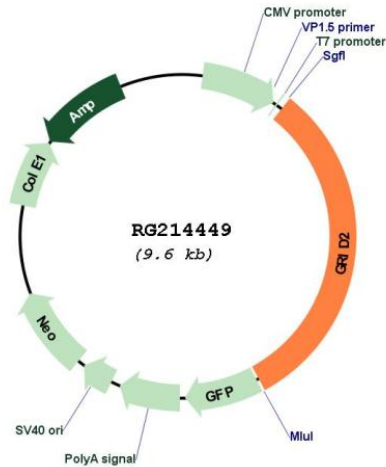
MEVFPLLLVLSVWWSRTWDSANADSIHIGAIHFDESAKKDDEVFRVAVGDLNQNNEEILQTEKITFSVTFV
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 RDSMYSQMWRMINRNSGENNVLESQAGIQKVYGNVAFVWDAAVLEYVAIYDPDCSFYITGNTVADRGY
 GIALQHGSYPYRDFVSQRILELQQNGDMDILKHKWPKNGQCDLYSSVDTKQKGGALDIKSFAGVFCILAA
 GIVLSCFIAMLETWWNKRGSRVPSKEDDKEIDLEHLHRRVNSLCTDDDSPHKQFSTSSIDLTPLDIDL
 PTRQALEQISDFRNTHITTTTTFIPEQIQTL SRTLSAKAASGFTFGNVPEHRTGPFRRHAPNGGFFRSP
 TMSSIPYQPTPTLGLNLGNPDRGTSI

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Plasmid Map:


ACCN: NM_001510

ORF Size: 5351 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:	<ol style="list-style-type: none">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:	<u>NM_001510.1</u> , <u>NP_001501.1</u>
RefSeq Size:	3024 bp
RefSeq ORF:	3024 bp
Locus ID:	2895
UniProt ID:	<u>O43424</u>
Cytogenetics:	4q22.1-q22.2
Protein Families:	Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane
Protein Pathways:	Long-term depression, Neuroactive ligand-receptor interaction
Gene Summary:	<p>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]</p>