

Product datasheet for **RG226254**

Metabotropic Glutamate Receptor 1 (GRM1) (NM_001114329) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 1 (GRM1) (NM_001114329) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GRM1
Synonyms:	GPRC1A; GRM1A; mGlu1; MGLUR1; MGLUR1A; SCAR13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG226254 representing NM_001114329
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTCGGGCTCCTTTTGTTTTTTTCCACGCGATCTTTTGGAGGTGTCCCTTCTCCCCAGAAGCCCCG
 GCAGGAAAGTGTGCTGGCAGGAGCGTCGTCTCAGCGCTCGGTGGCCAGAATGGACGGAGATGTCATCAT
 TGGAGCCCTCTTCTCAGTCCATCACCAGCCTCCGGCCGAGAAAGTGCCCGAGAGGAAGTGTGGGAGATC
 AGGGAGCAGTATGGCATCCAGAGGGTGGAGGCCATGTTCCACACGTTGGATAAGATCAACCGGACCCGG
 TCCTCCTGCCAACATCACCTGGGCAGTGGAGTCCGGGACTCCTGCTGGCACTTCTCCGTGGCTGTGA
 ACAGAGCATTGAGTTCATTAGGGACTCTCTGATTTCCATTCGAGATGAGAAGGATGGGATCAACCGGTGT
 CTGCCTGACGGCCAGTCCCTCCCCCAGGCAGGACTAAGAAGCCATTGCGGGAGTGATCGGTCCCGGCT
 CCAGCTCTGTAGCCATCAAGTGCAGAACCTGCTCCAGCTCTTCGACATCCCCAGATCGCTTATTCAGC
 CACAAGCATCGACCTGAGTGACAAAACCTTTGTACAAACTTCTGAGGGTTGTCCCTTCTGACACTTTG
 CAGGCAAGGGCCATGCTTGACATAGTCAAACGTTACAATTGGACCTATGTCTCTGCACTCCACACGGAA
 GGAATTATGGGGAGAGCGGAATGGACGCTTTCAAAGAGCTGGCTGCCAGGAAGGCCCTGTATCGCCCA
 TTCTGACAAAATCTACAGCAACGCTGGGGAGAAGAGCTTTGACCGACTCTTGCGCAAACCTCCGAGAGAG
 CTTCCCAAGGCTAGAGTGGTGGTCTGCTTCTGTGAAGGCATGACAGTGGCAGGACTCCTGAGCGCCATGC
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 TGAAGGTTATGAGGTGGAAGCCAACGGGGGAATCAGATAAAGCTGCAGTCTCCAGAGGTCAGGTCATTT
 GATGATTATTTCTGAAACTGAGGCTGGACACTAACACGAGGAATCCCTGGTCCCTGAGTCTGGCAAC
 ATCGGTTCCAGTGCCGCTTCCAGGACACCTTGGAAAATCCCAACTTAAACGAATCTGCACAGGCA
 TGAAGGTTAGAAAGAAAACCTATGTCCAGGACAGTAAGATGGGGTTTGTCAATGCCATCTATGCCATG
 GCACATGGGCTGCAGAACATGCACCATGCCCTCTGCCCTGGCCACGTGGGCTCTGCGATGCCATGAAGC
 CCATCGACGGCAGCAAGCTGCTGGACTTCTCATCAAGTCCTCATTGAGTATCTGGAGAGGAGGT
 GTGGTTTGTGAGAAAGGAGACGCTCCTGGAAGGTATGATATCATGAATCTGCAGTACACTGAAGCTAAT
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 TGAACAAGAGTGGAGTGGTGGCTGTGTGCAGTGGCCTTGTAAAGGGCCAGATTAAGGTTATACG
 GAAAGGAGAAGTGAAGTGTGCTGGATTTGCACGGCCTGCAAAGAGAATGAATATGTGCAAGATGAGTTC
 ACCTGCAAAGCTTGTGACTTGGGATGGTGGCCCAATGCAGATCTAACAGGCTGTGAGCCATTCTGTGC
 GCTATCTTGAGTGGAGCAACATCGAATCCATTATAGCCATCGCCTTTTCATGCCTGGGAATCCTTGTAC
 CTTGTTTGTACACCTAATCTTTGTACTGTACCGGGACACACCAGTGGTCAAATCCTCCAGTCCGGAGCTC
 TGCTACATCATCTAGCTGGCATCTTCTTGGTTATGTGTGCCATTCACTCTCATTGCCAAACCTACTA
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 TACCAGCAACCTGGGTGTGGTGGCCCTTTGGGCTACAATGGACTCCTCATCATGAGCTGTACCTACTAT
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 CCTGTATCATCTGGCTAGCTTTTGTGCCATTTACTTTGGGAGCAACTACAAGATCATCACAACCTTGCTT
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 AAGCCTGAGAGGAATGTCCGCAGTGCCTTACCACCTCTGATGTTGTCCGCATGCATGTTGGCGATGGCA
 AGCTGCCCTGCCCTCCAACACTTCTCAACATCTTCCGAAGAAAGAAGGCAGGGGAGGGGAATGCCAA
 GAAGAGGCAGCCAGAATTCTCGCCACCAGCCAATGTCCGTGGCACATGTGCAGCTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG226254 representing NM_001114329
 Red=Cloning site Green=Tags(s)

MVGLLLFFFPALFLEVSLLPRSPGRKVLLAGASSQRSVARMDGDVIGALFSVHHQPPAEKVPERKCGEI
 REQYGIQRVEAMFHTLDKINADPVLLPNITLGSEIRDSCWHSSVALEQSIIEFIRDSLISIRDEKDGINRC
 LPDQSLPPGRTKKPIAGVIGPGSSVAIQVQNLQLFDIPQIAYSATSIDLSDKTLKYFLRVVPSDTL
 QARAMLDIVKRYNWTYVSAVHTEGNYGESGMDAFKELAAQEGLCIAHSDKIYSNAGEKSFDRLLRKLRLR
 LPKARVVVCFCEGMTVRGLLSAMRRLGVVGEFSLIGSDGWADRDEVIIEGYEVEANGGITIKLQSPVRSF
 DDYFLKLRDNTNRNPWFPEFWQHRFQCRLPGHLLNPNFKRICTGNESLEENYVQDSKMGFVINAIYAM
 AHGLQNMHHALCPGHVGLCDAMKPIDGSKLLDFLIKSSFIVSGEEVWFDEKGDAPGRYDIMNLQYTEAN
 RYDYVHVGTWHEGVLNIDDYKIQMNKSGVVRVCSEPCCLKQIKVIRKGEVSCCWICTACKENEYVQDEF
 TCKACDLGWPNADLTGCEPIPVRYLEWSNIESIIAIAFSCLGILVTLFVTLIFVLYRDPVVKSSSREL
 CYIILAGIFLGYVCPFTLIAKPTTSCYLQRLVGLSSAMCYSALVTKNRIARILAGSKKKICTRKPFRF
 MSAWAQVIIASILISVQLTLVVTIIMEPPMPILSYPSIKEVYLICNTSNLGVVAPLGYNLLIMSCTYY
 AFKTRNVPANFNIAKYIAFTMYTTCIIWLAFFVPIYFGSNYKIITTCFAVSLSVTVALGCMFTPKMYIIIA
 KPERNVRSFAFTSDVVRMHVGDGKLPSCRNTFLNIFRRKKAGAGNAKKRQPEFSPTSQCPSAHVQL

TRTRPLE - GFP Tag - V

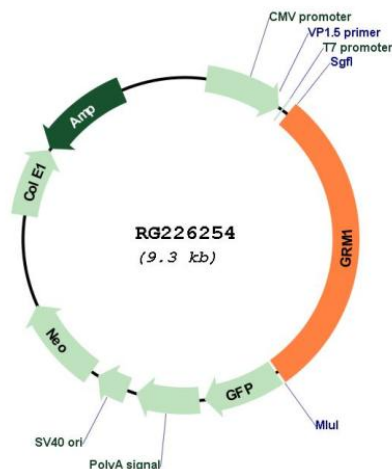
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001114329

ORF Size: 2718 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_001114329.1 , NP_001107801.1
RefSeq Size:	6939 bp
RefSeq ORF:	2720 bp
Locus ID:	2911
Cytogenetics:	6q24.3
Protein Families:	Druggable Genome, GPCR, Transmembrane
Protein Pathways:	Calcium signaling pathway, Gap junction, Long-term depression, Long-term potentiation, Neuroactive ligand-receptor interaction
Gene Summary:	<p>This gene encodes a metabotropic glutamate receptor that functions by activating phospholipase C. L-glutamate is the major excitatory neurotransmitter in the central nervous system and activates both ionotropic and metabotropic glutamate receptors. Glutamatergic neurotransmission is involved in most aspects of normal brain function and can be perturbed in many neuropathologic conditions. The canonical alpha isoform of the encoded protein is a disulfide-linked homodimer whose activity is mediated by a G-protein-coupled phosphatidylinositol-calcium second messenger system. This gene may be associated with many disease states, including schizophrenia, bipolar disorder, depression, and breast cancer. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, May 2013]</p>