

## Product datasheet for **RC239763**

### Metabotropic Glutamate Receptor 1 (GRM1) (NM\_001278066) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 1 (GRM1) (NM_001278066) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Metabotropic Glutamate Receptor 1
Synonyms:	GPRC1A; MGLU1; MGLUR1; PPP1R85; SCA44; SCAR13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC239763 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTCGGGCTCCTTTTGTTTTTTTCCACGCGATCTTTTGGAGGTGTCCCTTCTCCCCAGAAGCCCCG  
 GCAGGAAAGTGTGCTGGCAGGAGCGTCGCTCAGCGCTCGGTGGCCAGAATGGACGGAGATGTCATCAT  
 TGGAGCCCTCTTCTCAGTCCATCACCAGCTCCGGCCGAGAAAGTGCCCGAGAGGAAGTGTGGGAGATC  
 AGGGAGCAGTATGGCATCCAGAGGGTGGAGGCCATGTTCCACACGTTGGATAAGATCAACCGGACCCGG  
 TCCTCCTGCCAACATCACCTGGGCGAGTGGAGTCCGGGACTCCTGCTGGCACTTCTCCGTGGCTGTGA  
 ACAGAGCATTGAGTTCATTAGGGACTCTCTGATTTCCATTCGAGATGAGAAGGATGGGATCAACCGGTGT  
 CTGCCTGACGGCCAGTCCCTCCCCCAGGCAGGACTAAGAAGCCATTGCGGGAGTGATCGGTCCCGGCT  
 CCAGCTCTGTAGCCATTCAAGTGCAGAACCTGCTCCAGCTCTTCGACATCCCCAGATCGCTTATTCAGC  
 CACAAGCATCGACCTGAGTGACAAAACCTTTGTACAAACTTCTGAGGGTTGTCCCTTCTGACACTTTG  
 CAGGCAAGGGCCATGCTTGACATAGTCAAACGTTACAATTGGACCTATGTCTCTGCACTCCACACGGAA  
 GGAATTATGGGGAGAGCGGAATGGACGCTTTCAAAGAGCTGGCTGCCAGGAAGGCCCTGTATCGCCCA  
 TTCTGACAAAATCTACAGCAACGCTGGGGAGAAGACTTTGACCGACTCTTGCGCAAACCTCCGAGAGAGG  
 CTTCCCAAGGCTAGAGTGGTGGTCTGCTTCTGTGAAGGCATGACAGTGGCAGGACTCCTGAGCGCCATGC  
 GGCGCCTTGGCGTCGTGGGCGAGTTCCTCACTCATTGGAAGTGTGGATGGGAGGAGATGAAGTCAT  
 TGAAGGTTATGAGGTGGAAGCCAACGGGGGAATCAGATAAAGCTGCAGTCTCCAGAGGTCAGGTCATTT  
 GATGATTATTTCTGAAACTGAGGCTGGACACTAACACGAGGAATCCCTGGTCCCTGAGTCTGGCAAC  
 ATCGGTTCCAGTGCCGCTTCCAGGACACTTCTGGAAAATCCCAACTTAAACGAATCTGCACAGCCAA  
 TGAAGCTTAGAAGAAAACCTATGTCCAGGACAGTAAGATGGGGTTTGTCAATGCCATCTATGCCATG  
 GCACATGGGCTGCAGAACATGCACCATGCCCTCTGCCCTGGCCACGTGGGCTCTGCGATGCCATGAAGC  
 CCATCGACGGCAGCAAGCTGCTGGACTTCTCATCAAGTCTCATTGAGTATCTGGAGAGGAGGT  
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 CGCTATGACTATGTGCAGTTGGAACCTGGCATGAAGGAGTGTGAACATTGATGATTACAAAATCCAGA  
 TGAACAAGAGTGGAGTGGTGGGCTGTGTGCAGTGGCCTTGTAAAGGGCCAGATTAAGGTTATACG  
 GAAAGGAGAAGTGAAGTGTGCTGGATTTGCACGGCCTGCAAAGAGAATGAATATGTGCAAGATGAGTTC  
 ACCTGCAAAGCTTGTGACTTGGGATGGTGGCCCAATGCAGATCTAACAGGCTGTGAGCCATTCTGTGC  
 GCTATCTTGAGTGGAGCAACATCGAATCCATTATAGCCATCGCCTTTTCAATGCCTGGGAATCCTTGTAC  
 CTTGTTTGTACACCTAATCTTTGTACTGTACCGGGACACACCAGTGGTCAAATCCTCCAGTCCGGAGCTC  
 TGCTACATCATCCTAGCTGGCATCTTCTTGGTTATGTGTGCCATTCACTCTCATTGCCAAACCTACTA  
 CCACCTCTGCTACCTCCAGCGCCTCTTGGTGGCCTCTCCTCTGCGATGTGCTACTCTGCTTTAGTGAC  
 TAAACCAATCGTATTGCACGCATCCTGGCTGGCAGCAAGAAGAAGATCTGCACCCGGAAGCCAGGTTT  
 ATGAGTGCCTGGGCTCAGGTGATCATTGCCCAATTCTGATTAGTGTGCAACTAACCTGGTGGTAACCC  
 TGATCATCATGGAACCCCTATGCCATCTGTCTACCAAGTATCAAGGAAGTCTACCTTATCTGCAA  
 TACCAGCAACCTGGGTGGTGGCCCTTTGGGCTACAATGGACTCCTCATCATGAGCTGTACCTACTAT  
 GCCTTCAAGACCCGCAACGTGCCCGCAACTTCAACGAGGCCAAATATATCGCGTTCACCATGTACACCA  
 CCTGTATCATCTGGCTAGCTTTTGTGCCATTTACTTTGGGAGCAACTACAAGATCATCACAACCTTGCTT  
 TGCAGTGAAGTCTCAGTGTAAAGTGGCTCTGGGGTGCATGTTCACTCCCAAGATGTACATCATTATTGCC  
 AAGCCTGAGAGGAATGTCCGCGAGTGCCTTACCACCTCTGATGTTGTCCGCATGCATGTTGGCGATGGCA  
 AGCTGCCCTGCCGCTCCAACACTTCTCAACATCTTCCGAAGAAAGAAGGCAGGGGAGGGGAATGCCAA  
 GAAGAGGCAGCCAGAATTCTCGCCACCAGCCAATGTCCGTGGCACATGTGCAGCTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC239763 protein sequence  
Red=Cloning site Green=Tags(s)

MVGLLLFFFPALFLEVSLLPRSPGRKVLLAGASSQRSVARMDGDVIGALFSVHHQPPAEKVPERKCGEI  
 REQYGIQRVEAMFHTLDKINADPVLLPNITLGSEIRDSCWHSSVALEQSIIEFIRDSLISIRDEKDGINRC  
 LPDQQLPPGRTKKPIAGVIGPGSSVAIQVQNLQLFDIPQIAYSATSIDLSDKTLKYFLRVVPSDTL  
 QARAMLDIVKRYNWTYVSAVHTEGNYGESGMDAFKELAAQEGLCIAHSDKIYSNAGEKSFDRLLRKLRLR  
 LPKARVVVCFCEGMTVRGLLSAMRRLGVVGEFSLIGSDGWADRDEVIIEGYEVEANGGITIKLQSPVRSF  
 DDYFLKLRDNTNRNPFPEFWQHRFQCRLPGHLLNPNFKRICTGNESLEENYVQDSKMGFVINAIYAM  
 AHGLQNMHHALCPGHVGLCDAMKPIDGSKLLDFLIKSSFIVSGEEVWFDEKGDAPGRYDIMNLQYTEAN  
 RYDYVHVGTWHEGVLNIDDYKIQMNKSGVVRVCSEPCCLKQIKVIRKGEVSCCWICTACKENEYVQDEF  
 TCKACDLGWPNADLTGCEPIPVRYLEWSNIESIIAIAFSCLGILVTLFVTLIFVLYRDPVVKSSSREL  
 CYIILAGIFLGYVCPFTLIAKPTTSCYLQRLVGLSSAMCYSALVTKNRIARILAGSKKKICTRKPRF  
 MSAWAQVIIASILISVQLTLVVTIIMEPPMPILSYPSIKEVYLICNTSNLGVVAPLGYNLLIMSCYY  
 AFKTRNVPANFNEAKYIAFTMYTTCIIWLA FVPIYFGSNYKIITTCFAVSLSVTVALGCMFTPKMYIIIA  
 KPERNVRSAFTTSDVVRMHVGDGKLPKRSNTFLNIFRRKKAGAGNAKKRQPEFSPTSQCPSAHVQL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

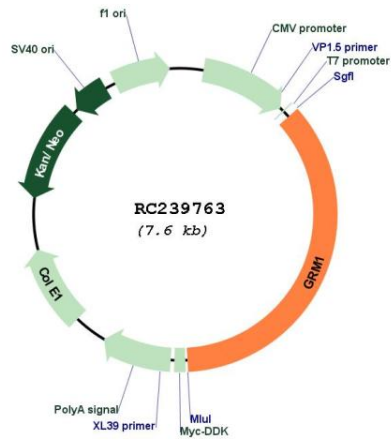
**Cloning Scheme:**



**ACCN:** NM\_001278066

<b>ORF Size:</b>	2718 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001278066.1</a> , <a href="#">NP_001264995.1</a>
<b>RefSeq Size:</b>	6757 bp
<b>RefSeq ORF:</b>	2721 bp
<b>Locus ID:</b>	2911
<b>UniProt ID:</b>	<a href="#">Q13255</a>
<b>Cytogenetics:</b>	6q24.3
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Calcium signaling pathway, Gap junction, Long-term depression, Long-term potentiation, Neuroactive ligand-receptor interaction
<b>MW:</b>	101.3 kDa
<b>Gene Summary:</b>	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]

Product images:



Circular map for RC239763