

## Product datasheet for **RG240038**

### Metabotropic Glutamate Receptor 1 (GRM1) (NM\_001278064) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 1 (GRM1) (NM_001278064) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GRM1
Synonyms:	GPRC1A; MGLU1; MGLUR1; PPP1R85; SCA44; SCAR13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG240038 representing NM_001278064. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGTCGGGCTCCTTTTGTTTTTTTTCCAGCGATCTTTTTGGAGGTGTCCCTTCTCCCCAGAAGCCCC
GGCAGGAAAGTGTGCTGGCAGGAGCGTCTCAGCGCTCGGTGGCCAGAATGGACGGAGATGTCATC
ATTGGAGCCCTTCTCAGTCCATCACCAGCCTCCGGCCGAGAAAGTGCCCGAGAGGAAGTGTGGGGAG
ATCAGGGAGCAGTATGGCATCCAGAGGGTGGAGGCCATGTTCCACACGTTGGATAAGATCAACGCGGAC
CCGGTCTCTGCCAACATCACCCTGGCAGTGAGATCCGGGACTCCTGCTGGCACTCTCCGTGGCT
CTGGAACAGAGCATTGAGTTCATTAGGGACTCTCTGATTTCCATTGAGATGAGAAGGATGGGATCAAC
CGGTGTCTGCCTGACGGCAGTCCCTCCCCCAGGCAGGACTAAGAAGCCATTGCGGGAGTGATCGGT
CCCGGCTCCAGCTCTGTAGCCATTCAAGTGCAGAACCTGTCCAGCTCTTCGACATCCCCAGATCGCT
TATTCAGCCACAAGCATCGACCTGAGTGACAAAATTTGTACAAATACTTCTGAGGGTTGTCCCTTCT
GACACTTTGCAGGCAAGGCCATGCTTGACATAGTCAAACGTTACAATTGGACCTATGTCTCTGCAGTC
CACACGGAAGGGAATTATGGGGAGAGCGGAATGGACGCTTTCAAAGAGCTGGCTGCCAGGAAGGCCCTC
TGTATCGCCATTCTGACAAAATCTACAGCAACGCTGGGAGAAGAGCTTTGACCGACTCTTGCGCAAA
CTCCGAGAGAGGCTTCCCAAGGCTAGAGTGGTGGTCTGCTTCTGTGAAGGCATGACAGTGGCAGACTC
CTGAGCGCCATGCGGCGCCTTGGCGTCTGGGCGAGTTCCTACTATTGGAAGTGATGGATGGGCAGAC
AGAGATGAAGTCATTGAAGTTATGAGGTGGAAGCCAACGGGGGAATCACGATAAAGCTGCACTCTCCA
GAGGTCAGGTCATTTGATGATTATTTCTGAAACTGAGGCTGGACACTAACACAGGGAATCCCTGGTTC
CCTGAGTCTGGCAACATCGGTTCCAGTCCCGCCTTCCAGGACACCTTCTGGAAAATCCCACTTTAAA
CGAATCTGCACAGGCAATGAAAGCTTAGAAGAAAATAATGTCCAGGACAGTAAGATGGGGTTTGCATC
AATGCCATCTATGCCATGGCACATGGGCTGCAGAACATGCACCATGCCCTCTGCCCTGGCCAGTGGGC
CTCTGCGATGCCATGAAGCCATCGACGGCAGCAAGCTGCTGGACTTCTCATCAAGTCTCATTATT
GGAGTATCTGGAGAGGAGGTGTGGTTTGTATGAGAAAGGAGACGCTCCTGGAAGGTATGATATCATGAAT
CTGCAGTACACTGAAGCTAATCGCTATGACTATGTGCACGTTGGAACCTGGCATGAAGGAGTGCTGAAC
```



[View online »](#)

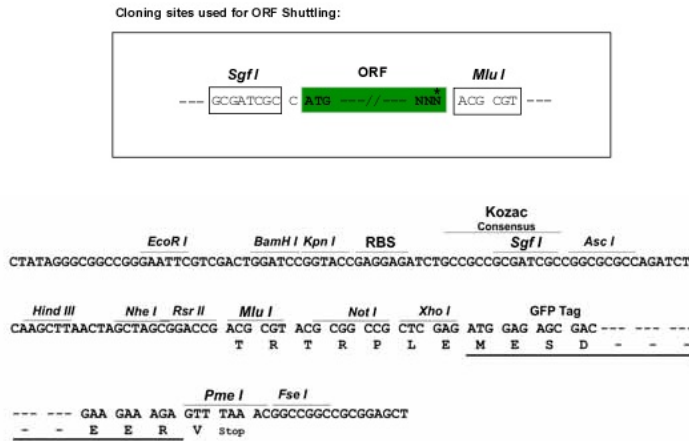
ATTGATGATTACAAAATCCAGATGAACAAGAGTGGAGTGGTGCAGTCTGTGTGCAGTGCCTTGCTTA  
AAGGGCCAGATTAAGGTTATACGGAAAGGAGAAGTGAGCTGCTGCTGGATTTGCACGGCCTGCAAAGAG  
AATGAATATGTGCAAGATGAGTTCACCTGCAAAGCTTGTGACTGGGATGGTGGCCCAATGCAGATCTA  
ACAGGCTGTGAGCCATTCTGTGCGCTATCTTGAGTGGAGCAACATCGAATCCATTATAGCCATCGCC  
TTTTCATGCCTGGGAATCCTTGTACCTTGTGGTGCACCTAATCTTTGTACTGTACCGGACACACCA  
GTGGTCAAATCTCCAGTCGGGAGCTGTCTACATCATCTAGCTGGCATCTTCCCTTGGTTATGTGTGC  
CCATTCACTCTCATTGCCAAACCTACTACCACCTCTGTACTCCAGCGCCTCTTGGTTGGCCTCTCC  
TCTGCGATGTGCTACTCTGCTTTAGTGAATAAAACCAATCGTATTGCACGCATCCTGGCTGGCAGCAAG  
AAGAAGATCTGCACCCGGAAGCCAGGTTTCATGAGTGCCTGGGCTCAGGTGATCATTGCCTCAATTCTG  
ATTAGTGTGCAACTAACCCCTGGTGGTAACCCTGATCATCATGGAACCCCTATGCCATTCTGCTCTAC  
CCAAGTATCAAGGAAGTCTACCTTATCTGCAATACCAGCAACCTGGGTGTGGTGGCCCTTTGGGCTAC  
AATGGACTCTCATCATGAGCTGTACCTACTATGCCTTCAAGACCCGCAACGTGCCCGCAAATTCAAC  
GAGGCCAAATATATCGCGTTCCCATGTACACCACCTGTATCATCTGGCTAGCTTTTGTGCCATTTAC  
TTTGGGAGCAACTACAAGATCATACAACCTTGTCTTGCAGTGTCTCAGTGTAAAGTGGCTCTGGGG  
TGCATGTTCACTCCCAAGATGTACATCATTATTGCCAAGCCTGAGAGGAATGCCGAGTGCCTTACC  
ACCTCTGATGTTGCCGATGCATGTTGGCGATGGCAAGCTGCCCTGCCGCTCCAACACTTCTCTAAC  
ATCTTCCGAAGAAAGAAGGCAGGGGACAGGAATGCCAATTCTAATGGCAAGTCTGTGTATGGTCTGAA  
CCAGGTGGAGGACAGGTGCCAAGGGACAGCATATGTGGCACCGCCTCTCTGTGCACGTGAAGACCAAT  
GAGACGGCCTGCAACCAACAGCCGTCATCAAGCCCTCACTAAAAGTTACCAAGGCTCTGGCAAGAGC  
CTGACCTTTTTCAGATACCAGCACCAAGACCTTTACAACGTAGAGGAGGAGGAGGATGCCAGCCGATT  
CGCTTTAGCCCGCTGGTAGCCCTTCCATGGTGGTGCACAGGCGCGTGCCAAGCGCGGCGACCACTCCG  
CCTCTGCCGTCCACCTGACCGCAGAGGAGACCCCTTCTTCTGGCCGAACAGCCCTCCCAAGGGC  
TTGCCCTCTCTCCAGCAGCAGCAGCAACCCCTCCACAGCAGAAATCGCTGATGGACCAGTCCAG  
GGAGTGGTCAGCAACTTCAGTACCGCATCCCGGATTTTACGCGGTGCTGGCAGGCCCGGTGGTCCC  
GGGAACGGGCTGCGGTCCCTGTACCCGCCCGCCACCTCCGACGACCTGCAGATGCTGCCGCTGCAG  
CTGAGCACCTTTGGGAGGAGTGGTCTCCCGCCCGGACGACGACGACGACGAGAGGTTTAAAG  
CTCCTCCAGGAGTACGTGTATGAGCAGGAGCGGGAAGGGAACACGGAAGAAGACGAACTGGAAGAGGAG  
GAGGAGGACCTGCAGGCGGCCAGCAAACCTGACCCGGATGATTCGCTGCGCTGACGCTCCGTGCGCT  
TTCCGCGACTCGGTGGCCTCGGGCAGCTCGGTGCCAGCTCCCGGTGTCGAGTCCGTGCTCTGCACC  
CCTCCCAACGTATCCTACGCTCTGTCTTCTGCGGGACTACAAGCAAAGCTCTTCCACCCTG  
ACGCGTACGCGCGCCTCGAG - GFP Tag - GTTTAAAC

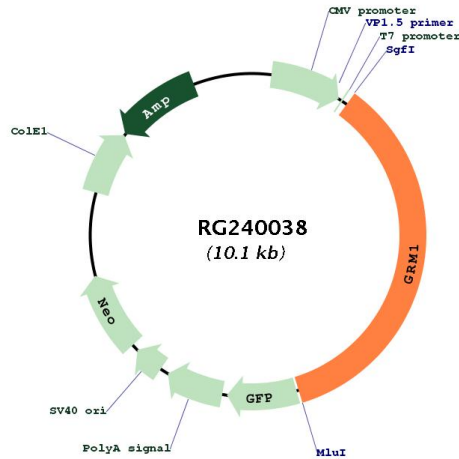
**Protein Sequence:** >Peptide sequence encoded by RG240038  
 Blue=ORF Red=Cloning site Green=Tag(s)

MVGLLLFFFPALFLEVSLLPRSPGRKVLLAGASSQRSVARMDGDVIIGALFSVHHQPPAEKVPERKCGE  
 IREQYGIQRVEAMFHTLDKINADPVLLPNITLGEIRDSCWHSSVALEQSIIEFIRDLSIRDEKDGIN  
 RCLPDGQSLPPGRTKKPIAGVIGPGSSVAIQVQNLQLFDIPQIAYSATSIDLSDKTLKYFLRVVPS  
 DTLQARAMLDIVKRYNWTYVSAVHTEGNYGESGMDAFKELAAQEGLCIAHSDKIYSNAGEKSFDRLLRK  
 LRERLPKARVVVCFCEGMTVRGLLSAMRRLGVVGEFSLIGSDGWADRDEVIEGYEVEANGGITIKLQSP  
 EVRSFDDYFLKLRDLDTNTRNPWFPEFWQHRFQCRLPGHLLNPNFKRICTGNESLEENYVQDSKMGFVI  
 NAIYAMAHGLQNMHHALCPGHVGLCDAMKPIDGSKLLDFLIKSSFIVSGEEVWFDEKGDAPGRYDIMN  
 LQYTEANRYDYVHVGTWHEGVLNIDDYKIOMNKSQVRSVCSEPCCKGQIKVIRKGEVSCCWICTACKE  
 NEYVQDEFTCKACDLGWPNADLTGCEPIPVRYLEWSNIESIIAIAFSLGILVTLFVTLIFVLYRDT  
 VVKSSSRELCYIILAGIFLGYVCPFTLIAKPTTSCYLQRLVGLSSAMCYSALVTKTNRARILAGSK  
 KKICTRKPRFMSAWAQVIAASILISVQLTLVVTLIIMEPPMILSYPSIKEVYLICNTSNLGVVAPLGY  
 NGLLIMSTYYAFKTRNVPANFNEAKYIAFTMYTTCIIWLA FVPIYFGSNYKIITTCFAVLSVTVALG  
 CMFTPKMYIIIAKPERNVSFAFTSDVVRMHVGDGKLPSCRNTFLNIFRRKKAGAGNANSNGKSVSWSE  
 PGGGQVPKGQHMWHRLSVHVKTNETACNQTAVIKPLTKSYQGSGKSLTFSDTSTKTLYNVEEEDAQPI  
 RFPSPGSPSMVHRRVPSAATPPLPSHLTAEETPLFLAEPALPKGLPPPLQQQQPPPQKSLMDQLQ  
 GVVSNFSTAIPDFHAVLAGPGGPGNGLRSLYPPPPPQHLQMLPLQLSTFGEELVSPADDDDDSERFK  
 LLQEYVYEHREGNTEDELEEEEEEDLQAASKLTPDDSPALTPSPFRDVSASGSSVSPSPVSESVLCT  
 PPNVSYASVILRDYKQSSSTL  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSGYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


<b>ACCN:</b>	NM_001278064
<b>ORF Size:</b>	3582 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>RefSeq:</b>	<a href="#">NM_001278064.2</a>
<b>RefSeq Size:</b>	6707 bp
<b>RefSeq ORF:</b>	3585 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>	132.8 kDa

**Gene Summary:**

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]