

## Product datasheet for **SC309954**

### Metabotropic Glutamate Receptor 1 (GRM1) (NM\_000838) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Metabotropic Glutamate Receptor 1 (GRM1) (NM\_000838) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Metabotropic Glutamate Receptor 1  
**Synonyms:** GPRC1A; GRM1A; mGlu1; MGLUR1; MGLUR1A; SCAR13  
**Mammalian Cell Selection:** None  
**Vector:** pCMV6-XL4  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000838 edited  
TTGTGTAATACGACTCCTATAGGGCGGCCGCGTGGCCACGGTCTCTGGCCCCGGGACCA  
TAGCGCTGTCTACCCCGACTCAGTACTCAGCATCTAGCTCACCCTGCCAACACGACTT  
CCACTGTACTCTTGATCAATTTACCTTGATGCACTACCGGTGAAGAACGGGGACTCGAAT  
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000838 unedited  
TACGATTGTGTAATACGACTCCTATAGGGCGGCCGCTGGCCACGGTCTCTGGCCCCGG  
GACCATAGCGTGTCTACCCGACTCAGGTA CT CAGCATCTAGCTCACCCTGCCAACAC  
GACTTCCACTGTACTCTTGATCAATTTACCTTGATGCACTACCGTGAAGAACGGGGACT  
CGAATTCCTTACAAACGCTCCAGCTTGTAGAGCGGTCTGGAGGACCCAGAGGAGGA  
GACGAAGGGGAAGGAGGCGGTGGTGGAGGAGCAAAGCCTTGGACGACCATTGTTGGCG  
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CAGCGGGACCAGCGTGGGAACGCGCTGGCAGGCTGTGGACCTCGTCTACCACCATGG  
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GCCCGCGCAGGAAAGTGTGCTGGCAGGAGCGTCTCAGCGCTCGGTGGCCAGAATGG  
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TGTTCCACACGTTGGATAAGATCAACGCGGACCCGGTCTCTGCCAACATCACCCTGG  
GCAGTGAGATCCGGGACTCCTGCTGGCACTTCCGTGGCTCTGGAACAGAGCATTGAGT  
TCATTAGGGACTCTGATTTCCATTGAGATGAGAAGGATGGGATCAACCGGTGTCTGC  
CTGACGGCCAGTCCCTCCCCAGGCAGACTAGAGCCAATTGCGGGAGTGATCGGTCCCGG  
CTTCAGCTCTGTAGCCATTGAGTTCAGAACCTGCTCCAGCTCTTCGACATC

**3' Read Nucleotide Sequence:**

>OriGene 3' genomic read for NM\_000838 unedited  
CAATAGGAGGTGACAACCTTCAGGGCCGAGAGGCACTGGGGAGGGGTACAGGGATGCC  
ACCCGGGATCTGTT CAGGAAACAGCTATGACCGCGCCGCAATCTAGAGTCGAGTTTTTT  
TTTTTTTTTTTTTTTTTAATAAATAGAAAATATTTATTATACAGCATTGTCAAGATTA  
TTTGACAAAAGGCAGTAAACAAGCCGAAGGAAAACACATTTACAAGAAGCTGAACAACCTG  
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CCATAATCAGGATAATAGTAGGCATTCAGAGTAATAAAGTATCAGATTGAATGAACGT  
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TCCCTCATGAATTTGTCAATTAATAAAAACCCATCTATTAATCACTGGAGCCATTGATTT  
TCCGCTCTCTGCTTTTCTTACAATGAAAACATGGAACCAAGTCCACCATCTCAGTCATG  
AGATCTTTTCAATAAAGGGTGTTTTAAAAAATTTTTAAAGGGAATGCAGTTCATTCTTG  
GTGGTGGACTGACTAACCTGGCAATAGAAATATGATGAAATATAGTAATACAGGCCCAAC  
ACTGCAATGGATGGCAATTCTGAACAATGATGCACTGGAACCTAAAGGATCTCAGAAGAC  
TTTGGCGGAGAATCCCACCTCCACTCGGAGGGAGCCTATTAACATCGCGCGGAACGACG

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_000838

**Insert Size:**

6800 bp

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<b>OTI Annotation:</b>	The open reading frame of this TrueClone was fully sequenced and found to differ from the protein associated to this reference by a single amino acid.
<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_000838.2</a> , <a href="#">NP_000829.1</a>
<b>RefSeq Size:</b>	6619 bp
<b>RefSeq ORF:</b>	3585 bp
<b>Locus ID:</b>	2911
<b>Cytogenetics:</b>	6q24.3
<b>Domains:</b>	7tm_3, ANF_receptor
<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

**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]

Transcript Variant: This variant (1) encodes the longer isoform (alpha).