

## Product datasheet for **RC239059**

### Metabotropic Glutamate Receptor 4 (GRM4) (NM\_001282847) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 4 (GRM4) (NM_001282847) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRM4
Synonyms:	GPRC1D; mGlu4; MGLUR4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC239059 representing NM\_001282847  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGCTCTGACAGCTGGGGCTCCAAGATTGCACCTGTGTGCACCTGGAGGAGGTGGCTGAGGGTCTG  
 TCACGATCTCCCAAGAGGATGTCGTACGAGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAA  
 CAACCGCGCAACATCTGGTTTGCAGATTCTGGGAGGACAACCTCCACTGCAAGCTGAGCCGCCACGCC  
 CTCAAGAAGGGCAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTACGCTTATGAGC  
 AGGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCG  
 TGACCTGTGTCCCGCCGCGTGGGGCTCTGCCCGCATGGACCCTGTAGATGCCACCCAGCTGCTTAAG  
 TACATCCGAAACGTCACTTCTCAGGCATCGCAGGGAACCCTGTACCTTCAATGAGAATGGAGATGCGC  
 CTGGGCGCTATGACATCTACCAATACCAGCTGCACAACGATTCTGCCGAGTACAAGGTATTGGCTCCTG  
 GACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCGGGAGCGGGCAGCAGCTGCCCCGTCC  
 ATCTGCAGCCTGCCCTGCCAACCGGGTGAAGCGGAAGAAGACAGTGAAGGGCATGCCTTGCTGGCACT  
 GCGAGCCTTGACAGGGTACCAGTACCAGTGGACCGCTACACCTGTAAGACGTGTCCTATGACATGCG  
 GCCACAGAGAACCGCACGGGTGCCGGCCATCCCCATCATCAAGCTTGAAGTGGGGCTCGCCCTGGGCC  
 GTGCTGCCCTCTTCTGGCCGTGGTGGGCATCGCTGCCACGTTGTTCTGTGGTATCACCTTTGTGCGCT  
 ACAACGACACGCCCATCGTCAAGGCTCGGGCCGTGAAGTACGCTACGTGCTGCTGGCAGGCATCTTCT  
 GTGCTATGCCACACCTTCTCATGATCGCTGAGCCCGACCTGGCACCTGCTCGCTGCGCCGAATCTTC  
 CTGGGACTAGGGATGAGCATCAGCTATGCAGCCCTGCTACCAAGACCAACCGCATCTACCGCATCTTCG  
 AGCAGGGCAAGCGCTCGGTCAAGTCCCGCCACGCTTCAATCAGCCCGCCTCACAGCTGGCCATCACCTTCAG  
 CCTCATCTCGCTGCAGCTGCTGGGCATCTGTGTGGTTTGTGGTGGACCCTCCCACTCGGTGGTGGAC  
 TTCCAGGACCAGCGGACACTCGACCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCGGACCTGT  
 CGCTCATCTGCTGCTGGGTACAGCATGCTGCTCATGGTCAAGTGCACCGTGTATGCCATCAAGACACG  
 CGGCGTGGCCGAGACCTTCAATGAGGCCAAGCCATTGGCTTACCATGTACACCACTTGCATCGTCTGG  
 CTGGCCTTCAATCCCATCTTCTTTGGCACCTCGCAGTGGCCGACAAGCTGTACATCCAGACGACGACGC  
 TGACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCTGGGAATGCTCTACATGCCAAAGTCTACATCAT  
 CCTTTCCACCCGAGCAGAACGTGCCAAGCGCAAGCGCAGCCTCAAAGCCGTCGTTACGGCGGCCACC  
 ATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAACGGAGAGGCCAAGTCTGAGCTCTGCGAGA  
 ACCTTGAGGCCCCAGCGCTGGCCACCAACAGACTTACGTCACCTACACCAACCATGCAATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC239059 representing NM\_001282847  
 Red=Cloning site Green=Tags(s)

MGSDSWGSKIAPVLHLEEVAEAVTILPKRMSVRGFDRYFSSRTLNNRRNIWF AEFWEDNFHCKLSRHA  
 LKKGSHVKKCTNRERIGQDSAYEQEGKVFVIDAVYAMGHAMHRDLCPGRVGLCPMPDVPDGTQLLK  
 YIRNVNFSGIAGNPVTFNENGAPGRYDIYQYQLRNSAEYKVIKSWTDHLHLRIERMHWPGSGQQLPRS  
 ICSLPCQPGERKKTVMGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTENRTGCRPIPIIKLEWGPWA  
 VLPLFLAVVGIATLFFVITFVRYNDTPIVKASGRELSYVLLAGIFLCYATTFMLIAEPDLGTCSLRRIF  
 LGLGMSISYAALLTKTNRIYRIFEQGRSVPAPRFISPASQLAITFSLISLQLLIGICVWFVVDPSHSVVD  
 FQDQRTLDPRFARGVLKCDISLISLICLLGYSMLLMVTCTVYAIKTRGVPETFNFAKPIGFTMYTTCIIV  
 LAFIPIFFGTSQSADKLYIQTTTLTVSVLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT  
 MSNKFTQKGNFRPNGEAKSELNLEAPALATKQTYVVTYTNHAI

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI



<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_001282847.2</a>
<b>RefSeq Size:</b>	7217 bp
<b>RefSeq ORF:</b>	1815 bp
<b>Locus ID:</b>	2914
<b>UniProt ID:</b>	<a href="#">Q14833</a>
<b>Cytogenetics:</b>	6p21.31
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Neuroactive ligand-receptor interaction, Taste transduction
<b>MW:</b>	68.4 kDa
<b>Gene Summary:</b>	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 metabotropic glutamate receptors are a family of G protein-coupled receptors, that have been divided into 3 groups on the basis of sequence homology, putative signal transduction mechanisms, and pharmacologic properties. Group I includes GRM1 and GRM5 and these receptors have been shown to activate phospholipase C. Group II includes GRM2 and GRM3 while Group III includes GRM4, GRM6, GRM7 and GRM8. Group II and III receptors are linked to the inhibition of the cyclic AMP cascade but differ in their agonist selectivities. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2012]