

## Product datasheet for **RG234811**

### Metabotropic Glutamate Receptor 4 (GRM4) (NM\_001256812) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 4 (GRM4) (NM_001256812) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Metabotropic Glutamate Receptor 4
Synonyms:	GPRC1D; mGlu4; MGLUR4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG234811 representing NM\_001256812  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCATGTAAGATACCCAGATCAGCTACGCCTCCACAGCGCCAGACCTGAGTGACAACAGCCGCTACG  
 ACTTCTTCTCCCGGTGGTGCCCTCGGACACGTACCAGGCCAGGCCATGGTGGACATCGTCCGTGCCCT  
 CAAGTGGAACTATGTGTCCACAGTGGCCTCGGAGGGCAGCTATGGTGAAGAGCGGTGGAGGCCCTCATC  
 CAGAAGTCCCGTGAAGACGGGGCGTGTGCATCGCCAGTCCGGTGAAGATACCACGGGAGCCCAAGGCAG  
 GCGAGTTCGACAAGATCATCCGCCGCTCCTGGAGACTTCGAACGCCAGGGCAGTCATCATCTTTGCCAA  
 CGAGGATGACATCAGGCGTGTGCTGGAGGCAGCACGAAGGGCCAACCAGACAGGCCATTTCTTGGATG  
 GGCTCTGACAGCTGGGGCTCCAAGATTGCACCTGTGCTGCACCTGGAGGAGGTGGCTGAGGGTGTGTCA  
 CGATCCTCCCAAGAGGATGTCCGTACGAGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACAA  
 CCGGCGCAACATCTGGTTTCCGAGTTCTGGGAGGACAACCTCCACTGCAAGCTGAGCCGCCACGCCCTC  
 AAGAAGGGCAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCAGG  
 AGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGA  
 CCTGTGTCCCGGCCGCTGGGGCTCTGCCCGCGCATGGACCCTGTAGATGGCACCCAGCTGCTTAAGTAC  
 ATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCTGTGACCTTCAATGAGAATGGAGATGCGCCTG  
 GGGCTATGACATCTACCAATACCAGCTGCGCAACGATTTCTGCCGAGTACAAGGTCATTGGCTCCTGGAC  
 TGACCACCTGCACCTTAGAATAGAGCGGATGACTGGCCGGGAGCGGGCAGCAGCTGCCCGCTCCATC  
 TGCAGCTGCCCTGCCAACCAGGTTGAGCGGAAGAAGACAGTGAAGGGCATGCCTTGCTGCTGGCAGTGGC  
 AGCCTTGACAGGGTACCAGTACCAGTGGACCCTACACCTGTAAAGAGTGTCCCTATGACATGACATGCGGG  
 CACAGAGAACCAGCAGGGCTGCCGGCCATCCCATCATCAAGCTTGAGTGGGGCTCGCCCTGGGCCGTG  
 CTGCCCTCTTCTGGCCGTGGTGGGCATCGTGCACGTTGTTCTGGTGGTATCACCTTTGTGCGCTACA  
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 CTATGCCACCACCTTCTCATGATCGTGTGAGCCCGACCTTGGCACCTGCTCGTGCGCCGAATCTTCTGTG  
 GGACTAGGGATGAGCATCAGCTATGCAGCCCTGCTACCAAGACCAACCGCATCTACCGCATCTTCGAGC  
 AGGGCAAGCGCTCGTCAAGTGCACCCACGCTTTCATCAGCCCGCCTCACAGCTGGCCATCACCTTCAGCCT  
 CATCTCGCTGCAGCTGTGGCATCTGTGTGTGGTTTGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC  
 CAGGACCAGCGGACACTCGACCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCGGACCTGTGCG  
 TCATCTGCTGTGGGCTACAGCATGCTGCTCATGGTACGTGCACCGTGTATGCCATCAAGACACGCGG  
 CGTGCCCGAGACCTTCAATGAGGCCAAGCCATTGGCTTACCATGTACACCACTTGCATCGTCTGGCTG  
 GCCTTCATCCCATCTTCTTTGGCACCTCGCAGTCCGGCCGACAAGCTGTACATCCAGACGACGACGCTGA  
 CGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCAAAGTCTACATCATCT  
 CTTCCACCCGGAGCAGAAGCTGCCAAGCGCAAGCGCAGCCTCAAAGCCGTCGTTACGGCGGCCACCATG  
 TCCAACAAGTTCACGCAGAAGGGCAACTCCGGCCCAACGGAGAGGCCAAGTCTGAGCTCTGCGAGAACC  
 TTGAGGCCCCAGCGCTGGCCACCAACAGACTTACGTCACTTACACCAACCATGCAATC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG234811 representing NM\_001256812  
Red=Cloning site Green=Tags(s)

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MSCKIPQISYASTAPDLSDNSRYDFFSRVVPSTYQAQAMVDIVRALKWNYVSTVASEGSYGESGVEAFI
QKSREDGGVCIQSVKIPREPKAGEFDKIIRLLETSNARAVIIFANEDDIRRVLEAARRANQTHGFFWM
GSDSWGSKIAPVLHLEEVAEGAVTILPKRMSVRGFDYFSSRTLNNRRNIWFAEFWEDNFHCKLSRHAL
KKGSHVKKCTNRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDTQLLKY
IRNVNFSGIAGNPVTFNENGDAPEGRYDIYQYQLRNSAEYKVIKSWTDHHLHLRIERMHWPGSGQQLPRSI
CSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTENRTGCRPIPIIKLEWGSWPWAV
LPLFLAVVGAATLFVVITFVRYNDTPIVKASGRELSYVLLAGIFLCYATTFLMIAEPDLGTCSLRRIFL
GLGMSISYAALLTKTNRIYRIFEQKRSVSAPRFISPASQLAITFSLISLQLLGICVWFVDPSPHSVVDF
QQQRTLDPRFARGVLKCDISDLISLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWL
AFIPIFFGTSQSADKLYIQTTTLTVSVLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
SNKFTQKGNFRPNGEAKSELNLEAPALATKQTYVVTYNHAI
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001256812

**ORF Size:** 2229 bp

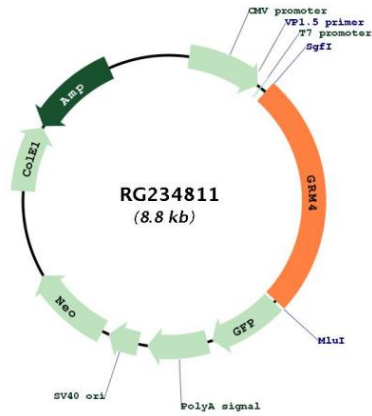
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<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_001256812.2</a> , <a href="#">NP_001243741.1</a>
<b>RefSeq Size:</b>	6518 bp
<b>RefSeq ORF:</b>	2232 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>Gene Summary:</b>	<p>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]</p>

Product images:



Circular map for RG234811