

## Product datasheet for **RG223673**

### Metabotropic Glutamate Receptor 4 (GRM4) (NM\_000841) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 4 (GRM4) (NM_000841) 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:**

>RG223673 representing NM\_000841  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCTGGGAAGAGAGGCTTGGGCTGGTGGTGGGCCCGGTGCCCTTTGCCTGCTCCTCAGCCTTTACG  
 GCCCTGGATGCCTTCTCCCTGGGAAAGCCAAAGGCCACCCTCACATGAATTCATCCGCATAGATGG  
 GGACATCACACTGGGAGGCTGTTCCCGGTGCATGGCCGGGGCTCAGAGGGCAAGCCCTGTGGAGAACTT  
 AAGAAGGAAAAGGGCATCCACCGGCTGGAGGCCATGCTGTTCCGCTGGATCGCATCAACAACGACCCGG  
 ACCTGCTGCCTAACATCACGCTGGGCGCCCGATTCTGGACACCTGCTCCAGGGACACCCATGCCCTCGA  
 GCAGTCGCTGACCTTTGTGACGGCGCTCATCGAGAAGGATGGCACAGAGGTCCGCTGTGGCAGTGGCGGC  
 CCACCCATCATCACCAGCCTGAACGTGTGGTGGGTGTCATCGGTGCTTCAGGGAGCTCGGTCTCCATCA  
 TGGTGGCCAAACATCCTTCGCTCTTCAAGATACCCAGATCAGCTACGCCTCCACAGCGCCAGACCTGAG  
 TGACAACAGCCGCTACGACTTCTTCTCCGCGTGGTGCCTCGGACACGTACCAGGCCAGGCCATGGTG  
 GACATCGTCCGTCGCCCTCAAGTGGAACTATGTGTCCACAGTGGCTCGGAGGGCAGCTATGGTGAGAGCG  
 GTGTGGAGGCCTTCATCCAGAAGTCCCCTGAGGACGGGGCGTGTGCATCGCCCAGTCCGGTGAAGATACC  
 ACGGGAGCCAAAGGCAGGCGAGTTCGACAAGATCATCCGCCGCTCCTGGAGACTTCGAACGCCAGGGCA  
 GTCATCATCTTTGCCAACGAGGATGACATCAGGCGTGTGCTGGAGGCAGCACGAAGGGCCAAACCAGACAG  
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 GGCTGAGGGTGTGTACGATCCTCCCCAAGAGGATGTCCGTACGAGGCTTCGACCGCTACTTCTCCAGC  
 CGCACGCTGGACAACAACCGCGCAACATCTGGTTTCCGAGTTCGAGGAGCAACTTCCACTGCAAGC  
 TGAGCCGCCACGCCCTCAAGAAGGGCAGCCACGTCAAGAAGTGCACCAACCGTGAAGCAATTGGGCGGA  
 TTCAGCTTATGAGCAGGAGGGGAAGGTGCAAGTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTG  
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 GAATGGAGATGCGCCTGGGCGCTATGACATCTACCAATACCAGCTGCGCAACGATTCTGCCGAGTACAAG  
 GTCATTGGCTCCTGGACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCGGGAGCGGGCAGC  
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 TTGCTGCTGGCACTGCGAGCCTGCACAGGTTACCAGTACCAGGTGGACCCTACACCTGTAAGACGTGT  
 CCCTATGACATGGGCCCCACAGAGAACCGCACGGGCTGCCGGCCATCCCATCATCAAGCTTGAGTGGG  
 GCTCGCCCTGGGCGTGTGCCCTCTTCTGGCCGTGGTGGGCATCGCTGCCAGTTGTTCTGTTGGTGTAT  
 CACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGGCCGTGAAGTACGCTACGTGCTGCTG  
 GCAGGCATCTTCTGTGCTATGCCACCCTTCTCATGATCGCTGAGCCCGACCTTGGCACCTGTCTCGC  
 TGCGCCGAATCTTCTGGGACTAGGATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCCGAT  
 CTACCGCATCTTCGAGCAGGGCAAGCGCTCGGTGAGTGCACCGCTTTCATCAGCCCCGCTCACAGCTG  
 GCCATCACCTTACGCTCATCTCGCTGCAGCTGCTGGGCATCTGTGTGGTGGTGGTGGGACCCCTCCC  
 ACTCGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGA  
 CATCTCGGACCTGCTCATCTGCCTGCTGGGCTACAGCATGCTGCTCATGGTACGTCAGTGCACCGTGTAT  
 GCCATCAAGACACGCGGGTGGCCGAGACCTCAATGAGGCCAAGCCATTGGCTTCAACCATGTACACCA  
 CTTGATCGTCTGGCTGGCTTCAATCCCATCTTCTTTGGCACCTCGAGTGGCCGACAAGCTGTACAT  
 CCAGACGACGACGCTGACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTTACATGCC  
 AAAGTCTACATCATCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGCCGTG  
 TTACGGCGGCCACCATGTCCAACAAGTTACGCGAGAAGGGCAACTTCCGGCCCAACGGAGAGGCCAAGTC  
 TGAGCTCTGCGAGAACCTTGAAGCCCCAGCGTGGCCACCAACAGACTTACGTCACTTACACCAACCAT  
 GCAATC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG223673 representing NM\_000841  
 Red=Cloning site Green=Tags(s)

MPGKRGLGWWWARLPLCLLLSLYGPWMPSSLGKPKGHPHMNSIRIDGDITLGGFLFPVHGRGSEGKPCGEL  
 KKEKGIHRL EAMLFALDRINNDPDLNPNITLGARILDTCSRDTHAL EQLTFVQALIEKDGTEVRCGSGG  
 PPIITKPERVVGVIGASGSSV SIMVANILRLFKIPQISYASTAPDLSDNSRYDFFSRVVPSDITYQAQAMV  
 DIVRALKWNVYSTVASEGSYGESGVEAFIQKSREDGGVCI AQSVKIPREPKAGEFDKIIRRLL ETSNARA  
 VIIFANEDDIRRVLEAARRANQTHGFFWMGSDSWGSKIAPVLHLEEVAEGAVTILPKRMSVRGFDRYFSS  
 RTL DNNRRIWFAEFWEDNFHCKLSRHALKKGSHVKKCTNRERIGQDSAYEQEGKVQFVIDAVYAMGHAL  
 HAMHRDLCPGRVGL CPRMDPVDGTQLLKYIRNVNFSGIAGNPVTFNENG DAPGRYDIYQYQLRND SAEYK  
 VIGSWTDHLHLRIERMHWPGSGQLPR SICSLPCQPGERKKT VKGMPCCWHCEPCTGYQYQVDRYTKTC  
 PYDMRPTENRTGCRPIPIIKLEWGPWAVLPLFLAVVGI AATLFVVITFVRYNDTPIVKASGRELSYVLL  
 AGIFLCYATTFLMIAEPDLGTC SLRRI FLGLGMSISYAALLTKTNRIYRIFEQGRSVSAPRFISPASQL  
 AITFSLISLQLLGICVWFVVDPSHSVDFQDQRTLDPRFARGVLKCDISDLSLICLLGYSMLLMVTCTVY  
 AIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTSQSADKLYIQTTTLTVSVLSASVSLGMLYMP  
 KVIYILFHPEQNVPKRKRSLKAVVTAATMSNKFTQKGNFRPNGEAKSEL CENLEAPALATKQTYVTYTNH  
 AI

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

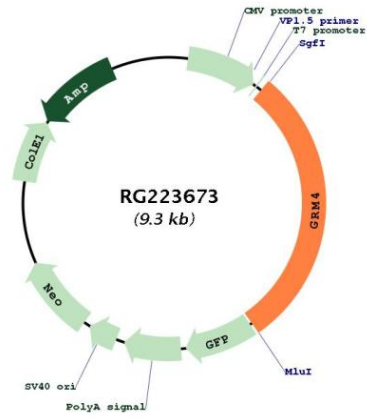
**Cloning Scheme:**



**ACCN:** NM\_000841

<b>ORF Size:</b>	2736 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_000841.4</a>
<b>RefSeq Size:</b>	3884 bp
<b>RefSeq ORF:</b>	2739 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>	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]

Product images:



Circular map for RG223673