

Product datasheet for **RC223673**

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:	Myc-DDK
Symbol:	Metabotropic Glutamate Receptor 4
Synonyms:	GPRC1D; mGlu4; MGLUR4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>RC223673 representing NM_000841
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGGGAAGAGAGGCTTGGGCTGGTGGTGGGCCCGGTGCCCTTTGCCTGCTCCTCAGCCTTTACG
 GCCCTGGATGCCTTCTCCCTGGGAAAGCCAAAGGCCACCCTCACATGAATTCATCCGCATAGATGG
 GGACATCACACTGGGAGGCTGTTCCCGGTGCATGGCCGGGGCTCAGAGGGCAAGCCCTGTGGAGAACTT
 AAGAAGGAAAAGGGCATCCACCGGCTGGAGGCCATGCTGTTCCGCTGGATCGCATCAACAACGACCCGG
 ACCTGCTGCCTAACATCACGCTGGGCGCCCGCATTCTGGACACCTGCTCCAGGGACACCCATGCCCTCGA
 GCAGTCGCTGACCTTTGTGACGGCGCTCATCGAGAAGGATGGCACAGAGGTCCGCTGTGGCAGTGGCGGC
 CCACCCATCATCACCAGCCTGAACGTGTGGTGGGTGTCATCGGTGCTTCAGGGAGCTCGGTCTCCATCA
 TGGTGGCCAAACATCCTTCGCTCTTCAAGATACCCAGATCAGCTACGCCTCCACAGCGCCAGACCTGAG
 TGACAACAGCCGCTACGATTTCTTCTCCGCGTGGTGCCTCGGACACGTACCAGGCCAGGCCATGGTG
 GACATCGTCCGTCGCCCTCAAGTGGAACTATGTGTCCACAGTGGCCTCGGAGGGCAGCTATGGTGAGAGCG
 GTGTGGAGGCCCTTCATCCAGAAGTCCCCTGAGGACGGGGCGTGTGCATCGCCCAGTCCGGTGAAGATACC
 ACGGGAGCCAAAGGCAGGCGAGTTCGACAAGATCATCCGCCGCTCCTGGAGACTTCGAACGCCAGGGCA
 GTCATCATCTTTGCCAACGAGGATGACATCAGGCGTGTGCTGGAGGCAGCACGAAGGGCCAAACCAGACAG
 GCCATTTCTTCTGGATGGGCTCTGACAGCTGGGGCTCCAAGATTGCACCTGTGCTGCACCTGGAGGAGGT
 GGCTGAGGGTGTGTACGATCCTCCCCAAGAGGATGTCCGTACGAGGCTTCGACCGCTACTTCTCCAGC
 CGCACGCTGGACAACAACCGCGCAACATCTGGTTTCCGAGTTCGGGAGGACAACCTCCACTGCAAGC
 TGAGCCGCCACGCCCTCAAGAAGGGCAGCCAGTCAAGAAGTGCACCAACCGTGAAGGAAATGGGCGGA
 TTCAGCTTATGAGCAGGAGGGGAAGGTGCAAGTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTG
 CACGCCATGCACCGTACCTGTGTCCCGCCGCGTGGGGCTCTGCCCGCCATGGACCCTGTAGATGGCA
 CCCAGTCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCTGTGACCTTCAATGA
 GAATGGAGATGCGCCTGGGCGCTATGACATCTACCAATACCAGCTGCGCAACGATTCTGCCGAGTACAAG
 GTCATTGGCTCCTGGACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCGGGAGCGGGCAGC
 AGCTGCCCGCTCCATCTGCAGCTGCCCTGCCAACCGGGTGAAGCGGAAGAAGACAGTGAAGGGCATGCC
 TTGCTGCTGGCACTGCGAGCCTTGACAGGGTACCAGTACCAGGTGGACCCTACACCTGTAAGACGTGT
 CCCTATGACATGGGCCACAGAGAACCGCACGGGCTGCCGCCCATCCCATCATCAAGCTTGAGTGGG
 GCTCGCCCTGGGCGTGTGCCCTCTTCTGGCCGTGGTGGGCATCGCTGCCAGTTGTTCTGTTGGTGTAT
 CACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGGCCGTGAAGTGAAGTACGTGCTGCTG
 GCAGGCATCTTCTGTGCTATGCCACCACCTTCTCATGATCGCTGAGCCCGACCTTGGCACCTGTCTCGC
 TGCGCCGAATCTTCTGGGACTAGGATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCCGAT
 CTACCGCATCTTCGAGCAGGGCAAGCGCTCGGTGAGTGCACCGCTTTCATCAGCCCCGCTCACAGCTG
 GCCATCACCTTACGCTCATCTCGCTGCAGCTGCTGGGCATCTGTGTGGTGGTGGTGGGACCCCTCCC
 ACTCGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGA
 CATCTCGGACCTGCTCATCTGCCTGCTGGGCTACAGCATGCTGCTCATGGTACGTCAGTGCACCGTGTAT
 GCCATCAAGACACGCGGGTGGCCGAGACCTCAATGAGGCCAAGCCATTGGTTCACCATGTACACCA
 CTTGCATCGTCTGGCTGGCTTCAATCCCATCTTCTTTGGCACCTCGAGTGGCCGACAAGCTGTACAT
 CCAGACGACGACGCTGACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTTACATGCC
 AAAGTCTACATCATCTTCCACCCGGAGCAGAAATGTGCCAAGCGCAAGCGCAGCCTCAAAGCCGTGCG
 TTACGGCGGCCACCATGTCCAACAAGTTACGCGAGAAGGGCAACTTCGGGCCAACGGAGAGGCCAAGTC
 TGAGCTCTGCGAGAACCTTGAAGCCCCAGCGTGGCCACCAACAGACTTACGTCACTTACACCAACCAT
 GCAATC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC223673 representing NM_000841
 Red=Cloning site Green=Tags(s)

MPGKRGLGWWARLPLCLLLSLYGPWMPSSLGKPKGHPHMNSIRIDGDITLGGFLFPVHGRGSEGKPCGEL
 KKEKGIHRL EAMLFALDRINNDPDLNITLGARILDTCSRDTTHALEQSLTFVQALIEKDGTEVRCGSGG
 PPIITKPERVVGVIGASGSSVSIMVANILRLFIPQISYASTAPDLSDNSRYDFSRVVPSTYQAQAMV
 DIVRALKWNYYVSTVASEGSYGESGVEAFIQKSREDDGGVCIQSVKIPREP KAGEFDKIIRRLLETSNARA
 VIIFANEDDIRRVLEAARRANQTHGFFWMGSDSWGSKIAPVLHLEEVAEGAVTILPKRMSVRGFDRYFSS
 RTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCTNRERIGQDSAYEQEGKVQFVIDAVYAMGHAL
 HAMHRDLCPGRVGLCPRMDPVDGTQLLKYIRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNSAEYK
 VIGSWTDHLHLRIERMHWPGSGQLPRISCSLPCQPGERKKTVKGMPCWHCEPCTGYQYQVDRYTKCTC
 PYDMRPTENRTGCRPIPIIKLEWSPWAVLPLFLAVVGI AATLFVVITFVRYNDTPIVKASGRELSYVLL
 AGIFLCYATTFLMIAEPDLGTC SLRRI FLGLGMSISYAALLTKTNRIYRIFEQGRSVSAPRFISPASQL
 AITFSLISLQLLGICVWFVVDPSHSVDFQDQRTLDPRFARGVLKCDISDL SLICLLGYSMLLMVTCTVY
 AIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTSQSADKLYIQTTTLTVSVLSASVSLGMLYMP
 KYVYILFHPEQNVPKRKRSLKAVVTAATMSNKFTQKGNFRPNGEAKSEL CENLEAPALATKQTYVTYTNH
 AI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2602_g09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

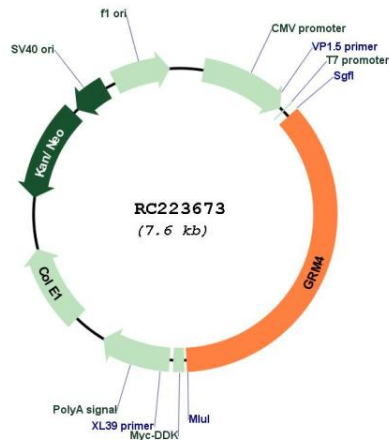


* The last codon before the Stop codon of the ORF

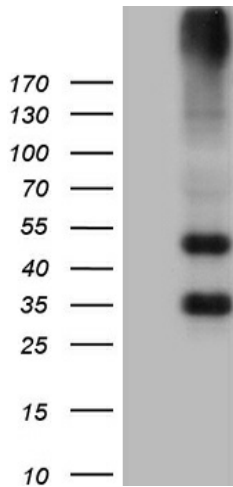
ACCN: NM_000841

ORF Size: 2736 bp

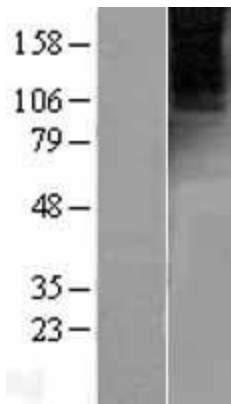
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.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.
RefSeq:	NM_000841.4
RefSeq Size:	3884 bp
RefSeq ORF:	2739 bp
Locus ID:	2914
UniProt ID:	Q14833
Cytogenetics:	6p21.31
Protein Families:	Druggable Genome, GPCR, Transmembrane
Protein Pathways:	Neuroactive ligand-receptor interaction, Taste transduction
MW:	101.87 kDa
Gene Summary:	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 RC223673



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GRM4 (Cat# RC223673, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GRM4 (Cat# [TA810384])(1:2000). Positive lysates [LY400298] (100ug) and [LC400298] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400298]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223673 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).