

## Product datasheet for **RC217402**

### Metabotropic Glutamate Receptor 7 (GRM7) (NM\_000844) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Metabotropic Glutamate Receptor 7 (GRM7) (NM_000844) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Metabotropic Glutamate Receptor 7
Synonyms:	GLUR7; GPRC1G; MGLU7; MGLUR7; NEDSHBA; PPP1R87
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC217402 representing NM\_000844  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTCCAGCTGAGGAAGCTGCTCCGCGTCTGACTTTGATGAAGTCCCTGCTGCGTGTGGAGGTGC  
 TCTGTGCGCGCTGGCGCGCGCGCGGCCAGGAGATGTACGCCCGCACTCAATCCGGATCGAGGG  
 GGACGTACCCCTCGGGGGCTGTCCCCGTGCACGCCAAGGGTCCCAGCGGAGTGCCTGCGGCGACATC  
 AAGAGGGAAAACGGGATCCACAGGCTGGAAGCGATGCTCTACGCCCTGGACCAGATCAACAGTGTCCCA  
 ACCTACTGCCAACGTGACGCTGGGCGCGCGGATCCTGGACACTTGTCCAGGGACACTTACGCGCTCGA  
 ACAGTCGCTTACTTTTCGTCAGGCGCTCATCCAGAAGGACACCTCCGACGTGCGCTGCACCAACGGCGAA  
 CCGCCGGTTTTTCGTAAGCCGGAGAAAGTAGTTGGAGTGATTGGGGCTTCGGGGAGTTCCGTCTCCATCA  
 TGGTAGCCAACATCCTGAGGCTCTCCAGATCCCCAGATTAGTTATGCATCAACGGCACCCGAGCTAAG  
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 GACATTGTAAAGGCCCTAGGCTGGAATTATGTGTCTACCTCGCATCGGAAGGAAGTTATGGAGAGAAAAG  
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 CCAGGAACGCAAAGACAGGACCATTGACTTTGATAGAATTATCAAACAGCTCCTGGACACCCCAACTCC  
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 AGATATCGCAGAAGGGGCCATCACCATTCAGCCAAAGCGAGCCACGGTGGAGGGTTTGATGCCTACTTT  
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 GAGGCAAGAAGTTGCTGAAGTATACGCAATGTTAATTTCAATGGTAGTGTGGCACTCCAGTGATGTT  
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 GGTTACCCTGTGATCGGGCAGTGGACAGACGAACCTCAGCTCAATATAGAAGACATGCAGTGGGGTAAAG  
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 AGGAACTCCTTGCTGTTGGACCTGTGAGCCTTGCATGGTTACCAGTACCAGTTTGTAGATGACATGC  
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 TGGAGTGGCACTCCCCCTGGGCTGTGATTCCTGTCTTCTGGCAATGTTGGGGATCATTGCCACCATCTT  
 TGTGATGGCCACTTTCATCCGCTACAATGACACGCCCATTTGTCGGGCATCTGGGCGGAACTCAGCTAT  
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 TCACAACGGCAATCACTTCCAGTTTAAATCAGTTCAGCTTCTAGGGGTGTTCAATTTGGTTTGGTGTG  
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 CAAGTGTGACATTACAGATCTCCAAATCATTGCTCCTTGGGATATAGCATTCTTCTCATGGTCACATGT  
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 TGTACACGACATGTATAGTATGGCTTGCCTTATTCCAATTTTTTTTGGCACCGCTCAATCAGCGGAAAA  
 GCTCTACATACAACTACCACGCTTACAATCTCCATGAACCTAAGTGCATCAGTGGCGCTGGGGATGCTA  
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 AGGCGGTAGTACAGCAGCCACCATGTCATCGAGGCTGTACACAAACCCAGTGACAGACCCAACGGTGA  
 GGCAAAGACCGAGCTCTGTGAAAACGTAGACCCAACAGCCCTGCTGCAAAAAAGAAGTATGTCAGTTAT  
 AATAACCTGGTTATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC217402 representing NM\_000844  
 Red=Cloning site Green=Tags(s)

MVQLRKLLRVL TLMKFPCCVLEVLL CALAAAARGQEMYAPHSIRIEGDVTLGGLFPVHAKGPGSGVPCGDI  
 KRENGIHRLEAML YALDQINSDPNLLPNVTLGARILDTC SRDTYALEQSLTFVQALIQKDTSDVRC TNGE  
 PPVFKPEKVVGVIGASGSSVSIMVANILR LRFQIPQISYASTAPELSDDRRYDFSRVVPDSFQAQAMV  
 DIVKALGWNYVSTLASEGSYGEKGVESFTQISKEAGGLCIAQSVRIPQERKDRTIDFDRIKQLLDTPNS  
 RAVVIFANDEDIKQILAAAKRADQVGHFLWVGSWSGSKINPLHQHEDIAEGAITIQPKRATVEGFDAYF  
 TSRTLENNRRNVWFAEYWEENFNCKLTISGSKKEDTRKCTGQERIGKDSNYEQEGKVQFVIDAVYAMAH  
 ALHHMNKDLCADYRGVCPMEQAGGKLLKYIRNVNFNGSAGTPVMFNKNGDAPGRYDIFQYQTNTSNP  
 GYRLIGQWTDQLNIEDMQWGKGVREIPASVCTLPCKPGQRKKTQKGTGCCWTCPCDGYQYQFDEMTC  
 QHCPYDQRPENRTGCQDIPIIKLEWHSPWAVIPVFLAMLGIIATIFVMATFIRYNDTPIVRASGRELSY  
 VLLTGIFLCYIITFLMIAKPDVAVCSFRRVFLGLGMCISYAALLTKTNRIYRIFEQKKSVTAPRLISPT  
 SQLAITSSLISVQLLGVFIWFGVDPNNIIDYDEHKTMNPEQARGVLKCDITDLQIICSLGYSILLMVT  
 TVYAIKTRGVENFNEAKPIGFTMYTTCIVWLAFIPIFFGTAQSAEKLYIQTTTLTISMNLSASVALGML  
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 NNLVI

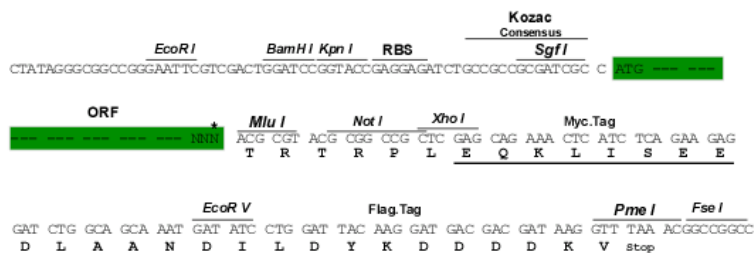
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6163\\_c02.zip](https://cdn.origene.com/chromatograms/mk6163_c02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



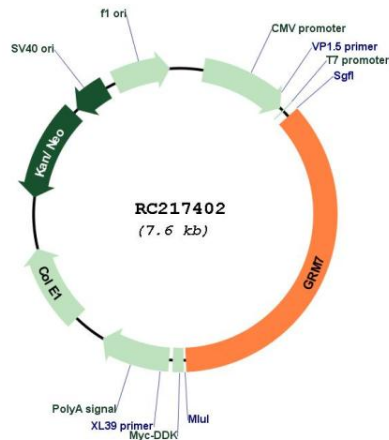
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_000844

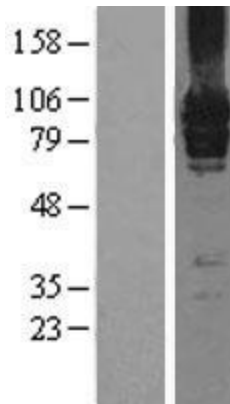
**ORF Size:** 2745 bp

<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_000844.4</a>
<b>RefSeq Size:</b>	4147 bp
<b>RefSeq ORF:</b>	2748 bp
<b>Locus ID:</b>	2917
<b>UniProt ID:</b>	<a href="#">Q14831</a>
<b>Cytogenetics:</b>	3p26.1
<b>Domains:</b>	7tm_3, ANF_receptor
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Neuroactive ligand-receptor interaction
<b>MW:</b>	102.7 kDa
<b>Gene Summary:</b>	L-glutamate is the major excitatory neurotransmitter in the central nervous system, and it 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 three 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. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2009]

Product images:



Circular map for RC217402



Western blot validation of overexpression lysate (Cat# [LY400295]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217402 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).