

## Product datasheet for RC210383

### Mu Opioid Receptor (OPRM1) (NM\_000914) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mu Opioid Receptor (OPRM1) (NM_000914) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	OPRM1
Synonyms:	LMOR; M-OR-1; MOP; MOR; MOR1; OPRM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210383 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGACAGCAGCGCTGCCCCACGAACGCCAGCAATTGCACTGATGCCTTGGCGTACTCAAGTTGCTCCC  
CAGCACCCAGCCCCGGTTCCTGGGTCAACTTGTCCCACTTAGATGGCAACCTGTCCGACCCATGCGGTCC  
GAACCGCACCGACTGGGCGGGAGAGACAGCCTGTGCCCTCCGACCGGCAGTCCCTCCATGATCACGGCC  
ATCACGATCATGGCCCTACTCCATCGTGTGCGTGGTGGGCTCTTCGAAACTTCTGGTTCATGATG  
TGATTGTCAGATACACCAAGATGAAGACTGCCACCAACATCTACATTTTCAACCTTGTCTGGCAGATGC  
CTTAGCCACCACTACCCTGCCCTTCCAGAGTGTGAATTACCTAATGGGAACATGGCCATTTGGAACCATC  
CTTTGCAAGATAGTGATCTCCATAGATTACTATAACATGTTTACCAGCATATTCACCTCTGCACCATGA  
GTGTTGATCGATACATTGCACTGCTGCCACCCTGTCAAGGCCTTAGATTTCCGTAATGTTTCAAGGCTACAACA  
AAATACAGGCAAGGTTCCATAGATTGTACACTAACATTCTCTCATCAACCTGGTACTGGGAAAACCTGC  
TGAAGATCTGTGTTTTCATCTTCGCCTTATTATGCCAGTGCTCATCATTACCGTGTGCTATGGACTGAT  
GATCTTGGCCTCAAGAGTGTCCGATGCTCTCTGGCTCCAAAGAAAAGGACAGGAATCTCGAAGGATC  
ACCAGGATGGTGTGGTGGTGGTGTGTTTCATCGTCTGGACTCCATTACATTTACGTCATCA  
TTAAAGCCTTGGTTACAATCCCAGAAACTACGTTCCAGACTGTTTCTTGGCACTTCTGCATTGCTCTAGG  
TTACACAAAACAGCTGCCTCAACCCAGTCTTTATGCATTTCTGGATGAAAACCTCAAACGATGCTTCAGA  
GAGTTCTGTATCCCAACCTCTTCCAACATTGAGCAACAAAACCTCACTCGAATTCGTCAGAACACTAGAG  
ACCACCCCTCCACGGCAATACAGTGGATAGAATAATCATCAGCTAGAAAATCTGGAAGCAGAACTGC  
TCCGTTGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210383 protein sequence  
 Red=Cloning site Green=Tags(s)

MDSSAAPTNASNCTDALAYSSCSPAPSPGSWVNLSHLDGNLSDPCGPNRTLGGRDLSLCPPTGSPSMITA  
 ITIMALYSIVCVVGLFGNFLVMYVIVRYTKMKTATNIYIFNLALADALATSTLPFQSVNYLMGTWPFGTI  
 LCKIVISIDYYNMFSTIFTLCTMSVDRIYAVCHPVKALDFRTPRNAKIINVCNWILSSAIGLPVMFMATT  
 KYRQGSIDCTLTFSHPTWYWENLLKICVFIKAFIMPVLIITVCYGLMILRLKSVRMLSGSKEKDRNLRI  
 TRMVLVVAVFIVCWTPIHIIYVIKALVTIPETTFQTVSWHFCIALGYTNSCLNPVLYAFLDENFKRCFR  
 EFCIPTSSNIEQQNSTRIRQNTRDHPSTANTVDRTNHQLLENLEAETAPLP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

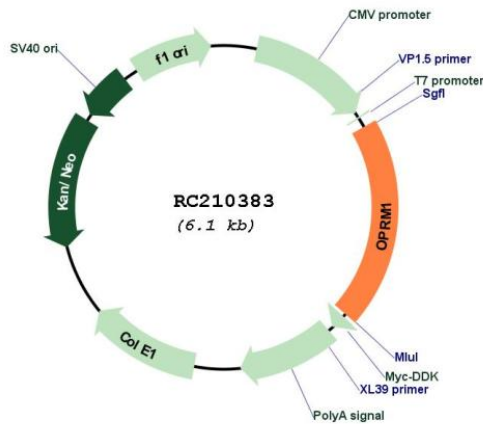
**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6006\\_a09.zip](https://cdn.origene.com/chromatograms/mk6006_a09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



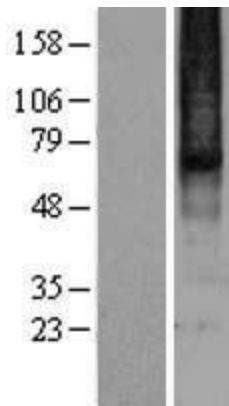
**Plasmid Map:**



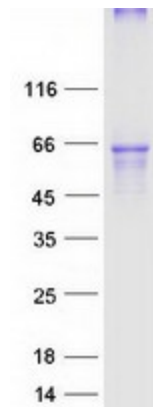
<b>ACCN:</b>	NM_000914
<b>ORF Size:</b>	1200 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<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_000914.5</a>
<b>RefSeq Size:</b>	15279 bp
<b>RefSeq ORF:</b>	1203 bp
<b>Locus ID:</b>	4988
<b>UniProt ID:</b>	<a href="#">P35372</a>
<b>Cytogenetics:</b>	6q25.2
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Neuroactive ligand-receptor interaction
<b>MW:</b>	44.8 kDa

**Gene Summary:**

This gene encodes one of at least three opioid receptors in humans; the mu opioid receptor (MOR). The MOR is the principal target of endogenous opioid peptides and opioid analgesic agents such as beta-endorphin and enkephalins. The MOR also has an important role in dependence to other drugs of abuse, such as nicotine, cocaine, and alcohol via its modulation of the dopamine system. The NM\_001008503.2:c.118A>G allele has been associated with opioid and alcohol addiction and variations in pain sensitivity but evidence for it having a causal role is conflicting. Multiple transcript variants encoding different isoforms have been found for this gene. Though the canonical MOR belongs to the superfamily of 7-transmembrane-spanning G-protein-coupled receptors some isoforms of this gene have only 6 transmembrane domains. [provided by RefSeq, Oct 2013]

**Product images:**

Western blot validation of overexpression lysate (Cat# [LY400332]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210383 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified OPRM1 protein (Cat# [TP310383]). The protein was produced from HEK293T cells transfected with OPRM1 cDNA clone (Cat# RC210383) using MegaTran 2.0 (Cat# [TT210002]).