

## Product datasheet for **RG227905**

### Mu Opioid Receptor (OPRM1) (NM\_001145279) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mu Opioid Receptor (OPRM1) (NM_001145279) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mu Opioid Receptor
Synonyms:	LMOR; M-OR-1; MOP; MOR; MOR1; OPRM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG227905 representing NM\_001145279  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTGTTTGCACAGAAGAGTGCCAGTGAAGAGACCTACTCCTTGATCGCTTTGCGCAAAATCCACCCC  
 TTTTCCCTCCTCCCTCCCTCCAGCCTCCGAATCCCGCATGGCCACGCTCCCCTCCTGCAGCGGTGCGG  
 GGCAGCCAGGACTGGTTTCTGTAAAGAAACAGCAGGAGCTGTGGCAGCGGCGAAAGGAAGCGGCTGAGGCG  
 CTTGGAACCCGAAAAGTCTCGGTGCTCCTGGTACCTCGCACAGCGGTGCCCGCCGCGGCTCAGTACCA  
 TGGACAGCAGCGCTGCCCCACGAACGCCAGCAATTGCACTGATGCCTTGGCGTACTCAAGTTGCTCCCC  
 AGCACCCAGCCCCGGTCTCGGTCAACTTGTCCCACTTAGATGGCAACCTGTCCGACCCATGCGGTCCG  
 AACCGCACCGACTGGGCGGGAGAGACAGCCTGTGCCCTCCGACCGGCAGTCCCTCCATGATCACGGCCA  
 TCAGGATCATGGCCCTACTCCATCGTGTGCGTGGTGGGGCTCTTCGAAACTTCTGGTCATGTATGT  
 GATTGTACAGATACCAAGATGAAGACTGCCACCAACATCTACATTTTCAACCTTGTCTGGCAGATGCC  
 TTAGCCACCAAGTACCCTGCCCTCCAGAGTGTGAATTACCTAATGGGAACATGGCCATTTGGAACCATCC  
 TTTGCAAGATAGTGATCTCCATAGATTACTATAACATGTTCAACAGCATATTCACCTCTGCACCATGAG  
 TGTTGATCGATACATTGCAGTCTGCCACCTGTCAAGGCCTTAGATTTCCGTAATGTTTCATGGCTACAACAA  
 AATACAGGCAAGGTTCCATAGATTGTACTAACAATCTCTCATCAACCTGGTACTGGGAAAACCTGCT  
 GAAGATCTGTGTTTTCATCTTCGCTTCAATATGCCAGTGTCTCATATTACCGTGTGCTATGGACTGATG  
 ATCTTGGCCCTCAAGAGTGTCCGCATGCTCTCTGGCTCAAAGAAAAGGACAGGAATCTTGAAGGATCA  
 CCAGGATGGTGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT  
 TAAAGCCTTGGTTACAATCCAGAAACTAGCTTCCAGACTGTTTCTTGGCACTTCTGCATTGCTCTAGGT  
 TACACAAACAGCTGCCTCAACCCAGTCTTTATGCATTCTCGATGAAAACCTTCAACAGATGCTTCAGAG  
 AGTTCTGTATCCCAACCTCTTCAACATTGAGCAACAAAACCTCCACTCGAATTCGTGAGAACACTAGAGA  
 CCACCCCTCCACGGCCAATACAGTGGATAGAATAATCATCAGCTAGAAAATCTGGAAGCAGAACTGCT  
 CCGTTGCC

**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA**

**Protein Sequence:**

>RG227905 representing NM\_001145279  
 Red=Cloning site Green=Tags(s)

MCLHRRVSEETYSLDRFAQNPLFPPPSLPASESRMAHAPLLQRCGAARTGFCKKQQLWQRKEAAEA  
 LGTRKVSVLLATSHSGARPAVSTMDSSAAPTNASNCTDALAYSSCSPAPSPGSWVNLSHLDGNLSDPCGP  
 NRTDLGGRDSLCPPTGSPSMITAITIMALYSIVCVVGLFGNFLVMYVIVRYTKMKTATNIYIFNLALADA  
 LATSTLFPQSVNYLMGTWPFGTILCKIVISIDYNNMFTSIFTLCTMSVDRIYAVCHPVKALDFRTPRNAK  
 IINVCNWILSSAIGLPVFMATTKYRQGSIDCTLFSHTWYWENLLKICVFIFAFIMPVLIITVICYGLM  
 ILRLKSVRMLSGSKEKDRNLRRITRMVLVVAVFIVCWTPIHIIYVIKALVTIPETTFQTVSWHFCIALG  
 YTNISCLNPVLYAFLDENFKRCRFRECIPTSSNIEQQNSTRIRQNRDHPSTANTVDRTNHQLENLEAETA  
 PLP

**TRTRPLE – GFP Tag – V**

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_001145279

**ORF Size:** 1479 bp

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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:**
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.

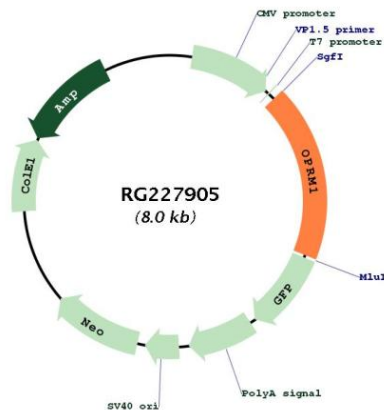
**RefSeq:** [NM\\_001145279.4](#)

**RefSeq Size:** 2738 bp  
**RefSeq ORF:** 1482 bp  
**Locus ID:** 4988  
**UniProt ID:** [P35372](#)  
**Cytogenetics:** 6q25.2  
**Protein Families:** Druggable Genome, GPCR, Transmembrane

**Protein Pathways:** Neuroactive ligand-receptor interaction

**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:



Circular map for RG227905