

## Product datasheet for RC210385

### Melatonin Receptor 1A (MTNR1A) (NM\_005958) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Melatonin Receptor 1A (MTNR1A) (NM_005958) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Melatonin Receptor 1A
Synonyms:	MEL-1A-R; MT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210385 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATCGAGGGCAACGGCAGCGCGCTGCCAACGCCTCCCAGCCCGTCTCCGCGGGACGGCGCGGGCCCT  
CGTGGCTGGCGTCCGCCCTGGCTGCGTCCTCATCTTCACCATCGTGGTGGACATCTGGGCAACCTCCT  
GGTCATCCTGTCGGTGTATCGGAACAAGAAGCTCAGGAACGCAGGAAACATCTTTGGTGGAGCTTAGCG  
GTGGCAGACCTGGTGGTGGCCATTTATCCGTACCCGTTGGTGTGATGTCGATATTTAACACGGGTGGA  
ACCTGGGCTATCTGCACTGCCAAGTCAGTGGGTTCTGATGGCCTGAGCGTCATCGGCTCCATATTCAA  
CATCACCGGCATCGCCATCAACCGCTACTGCTACATCTGCCACAGTCTCAAGTACGACAAACTGTACAGC  
AGCAAGAACTCCCTCTGCTACGTGCTCCTCATATGGCTCCTGACGCTGGCGGCCGCTCCTGCCAACCTCC  
GTGCAGGGACTCTCCAGTACGACCCGAGGATCTACTCGTGACCTTCGCCAGTCCGTACGCTCCGCCTA  
CACCATCGCCGTGGTGGTTTTCCACTTCTCGTCCCATGATCATAGTCATCTTCTGTTACCTGAGAATA  
TGGATCCTGGTTCTCCAGGTCAGACAGAGGGTAAACCTGACCGCAAACCCAACTGAAACCACAGGACT  
TCAGGAATTTGTACCATGTTTGTGGTTTTGTCTTTTTGCCATTTGCTGGGCTCCTCTGAATTCAT  
TGGCCTGGCCGTGGCCTCTGACCCGCCAGCATGGTGCCTAGGATCCCAGAGTGGCTGTTTGTGGCCAGT  
TACTACATGGCGTATTTCAACAGCTGCCTCAATGCCATTATACGGGCTACTGAACCAAATTTTCAGGA  
AGGAATACAGGAGAATTATAGTCTCGCTCTGTACAGCCAGGGTGTCTTTGTGGACAGCTCTAACGACGT  
GGCCGATAGGGTTAAATGAAACCGTCTCCACTGATGACCAACAATAATGTAGTAAAGGTGGACTCCGTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210385 protein sequence  
Red=Cloning site Green=Tags(s)

MQGNGSALPNASQPVLRGD GARPSWLASALACVLIFTIVVDILGNLLVILSVYRNKLRNAGNIFVVS  
 LADLVVAIYPYPLVLM SIFNNGWNLGYLHCQVSGFLMGLSVIGSIFNITGIAINRYCYICHSLKYDKLYS  
 SKNSLCYVLLIWLLT LAAVLPNLRAGTLQYDPRIYSCTFAQSVSSAYTIAVVVFHFLVPMIIVIFCYLRI  
 WILVLQVRQRVKPDRKPKLKPQDFRNFVTFVVFVLF AICWAPLNF IGLAVASDPASMVPRIP EWL FVAS  
 YYMAYFNSCLNAI IYGLLNQNF RKEYRRIIVSLCTARVFFV DSSNDVADR VKWKPSPLMTN NNVVKVDSV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6006\\_d03.zip](https://cdn.origene.com/chromatograms/mk6006_d03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_005958

**ORF Size:** 1050 bp

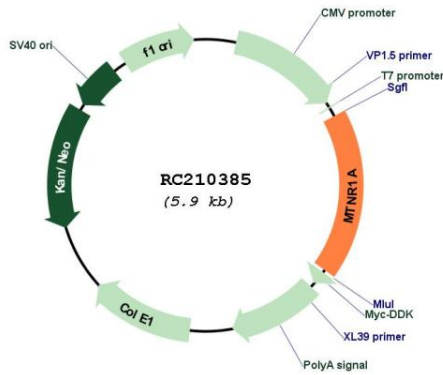
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

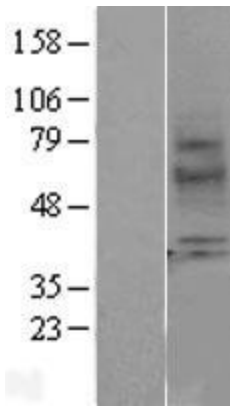
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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_005958.4</a>
<b>RefSeq Size:</b>	1105 bp
<b>RefSeq ORF:</b>	1053 bp
<b>Locus ID:</b>	4543
<b>UniProt ID:</b>	<a href="#">P48039</a>
<b>Cytogenetics:</b>	4q35.2
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Neuroactive ligand-receptor interaction
<b>MW:</b>	39.4 kDa
<b>Gene Summary:</b>	<p>This gene encodes one of two high affinity forms of a receptor for melatonin, the primary hormone secreted by the pineal gland. This receptor is a G-protein coupled, 7-transmembrane receptor that is responsible for melatonin effects on mammalian circadian rhythm and reproductive alterations affected by day length. The receptor is an integral membrane protein that is readily detectable and localized to two specific regions of the brain. The hypothalamic suprachiasmatic nucleus appears to be involved in circadian rhythm while the hypophysial pars tuberalis may be responsible for the reproductive effects of melatonin. [provided by RefSeq, Jul 2008]</p>

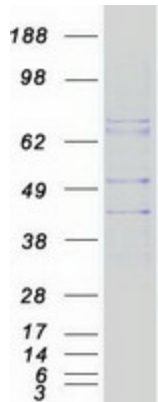
Product images:



Circular map for RC210385



Western blot validation of overexpression lysate (Cat# [LY401806]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210385 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MTNR1A protein (Cat# [TP310385]). The protein was produced from HEK293T cells transfected with MTNR1A cDNA clone (Cat# RC210385) using MegaTran 2.0 (Cat# [TT210002]).