

## Product datasheet for **RG210385**

### 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:	TurboGFP
Symbol:	Melatonin Receptor 1A
Synonyms:	MEL-1A-R; MT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210385 representing NM_005958 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGGGCAACGGCAGCGCGTGCCTCCCAACGCCTCCAGCCCGTCTCCGCGGGACGGCGCGGGCCCT  
CGTGGCTGGCGTCCGCCCTGGCTGCGTCCTCATCTTCACCATCGTGGTGGACATCTGGGCAACCTCCT  
GGTCATCCTGTCGGTGTATCGGAACAAGAAGCTCAGGAACGCAGGAAACATCTTTGGTGGAGCTTAGCG  
GTGGCAGACCTGGTGGTGGCCATTTATCCGTACCCGTTGGTGTGATGTCGATATTTAACAAACGGGTGGA  
ACCTGGGCTATCTGCACTGCCAAGTCAGTGGGTTCTGATGGCCTGAGCGTCATCGGCTCCATATTCAA  
CATCACCGGCATCGCCATCAACCGCTACTGCTACATCTGCCACAGTCTCAAGTACGACAACTGTACAGC  
AGCAAGAACTCCCTCTGCTACGTCTCCTCATATGGCTCCTGACGCTGGCGGCCGCTCCTGCCAACTCC  
GTGCAGGGACTCTCCAGTACGACCCGAGGATCTACTCGTGACCTTCGCCAGTCCGTACGCTCCGCCTA  
CACCATCGCCGTGGTGGTTTTCCACTTCTCGTCCCCATGATCATAGTCATCTTCTGTTACCTGAGAATA  
TGGATCCTGGTTCTCCAGGTGACAGAGGGTAAACCTGACCGCAAACCCAACTGAAACCACAGGACT  
TCAGGAATTTGTACCATGTTTGTGGTTTTGTCTTTTGGCATTGCTGGGCTCCTCTGAACCTCAT  
TGGCCTGGCCGTGGCCTCTGACCCGCCAGCATGGTGCCTAGGATCCCAGAGTGGCTGTTTGTGGCCAGT  
TACTACATGGCGTATTTCAACAGCTGCCTCAATGCCATTATACGGGCTACTGAACCAAATTTTCAGGA  
AGGAATACAGGAGAATTATAGTCTCGCTCTGTACAGCCAGGGTGTCTTTGTGGACAGCTCTAACGACGT  
GGCCGATAGGGTTAAATGAAACCGTCTCCACTGATGACCAACAATAATGTAGTAAAGGTGGACTCCGTT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG210385 representing NM\_005958  
 Red=Cloning site Green=Tags(s)

MQGNLSALPNASQPVLRGDBGARPSWLASALACVLIFTIVVDILGNLLVILSVYRNKCLRKNAGNIFVVSLA  
 VADLVVAIYPYPLVLMSEIFNNGWNLGYLHCQVSGFLMGLSVIGSIFNITGIAINRYCYICHSLKYDKLYS  
 SKNSLCYVLLIWLTLAAVLPNLRAGTLQYDPRIYSCTFAQSVSSAYTIAVVVFHFLVPMIIVIFCYLRI  
 WILVLQVRQRVKPDRKPKLKPQDFRNFVTFMVFVFLFAICWAPLNFIFGLAVASDPASMVPRIPWLFVAS  
 YYMAYFNSCLNAIYGLLNQNFKEYRRIIVSLCTARVFFVDSNDVADRKWKPSPLMTNNNVKVDVS

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_005958

**ORF Size:** 1050 bp

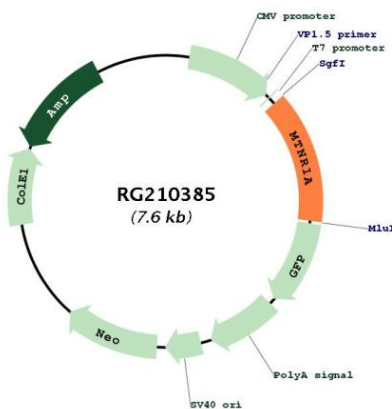
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

## Product images:



Circular map for RG210385