

## Product datasheet for RC203218

### MC1 Receptor (MC1R) (NM\_002386) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MC1 Receptor (MC1R) (NM_002386) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MC1 Receptor
Synonyms:	CMM5; MSH-R; SHEP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203218 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGTGCAGGGATCCCAGAGAAGACTTCTGGGCTCCCTCACTCCACCCACAGCCATCCCCAGC  
TGGGGTGGTGCCAACCAGACAGGAGCCCGGTGCCTGGAGGTGCCATCTCTGACGGGCTTCTCTCAG  
CCTGGGGTGGTGAGCTTGGTGGAGAACCGCTGGTGGCCACCATCGCCAAGAACCGGAACCTGCAC  
TACCCATGTACTGCTTCATCTGCTGCCTGGCCTTGTCCGACCTGCTGGTGGAGCGGGAGCAACGTGCTGG  
AGACGGCCGTCATCCTCCTGCTGGAGGCCGGTGCCTGGTGGCCGGGCTGCGGTGCTGCAGCAGCTGGA  
CAATGTCATTGACGTGATCACCTGCAGCTCCATGCTGTCCAGCCTCTGTTCTGGGCGCCATCGCCGTG  
GACCGCTACATCTCCATCTTCTACGCACTGCGCTACCACAGCACCGTGACCCCTGCCGCGGGCGCGCGAG  
CCGTTGCGGCCATCTGGGTGGCCAGTGTGCTTTCAGCACGCTTTCATCGCCTACTACGACCACGTGGC  
CGTCTGCTGTGCCTCGTGGTCTTCTTCTGGCTATGCTGGTGTGCTATGGCCGTGCTGTACGTCCACATG  
CTGGCCCGGGCCTGCCAGCACGCCAGGGCATCGCCCGGCTCCACAAGAGGCAGCGCCCGGTCCACCAGG  
GCTTTGGCCTAAAGGCGCTGTACCCCTACCATCCTGCTGGGCATTTTCTTCTCTGCTGGGCCCCCTT  
CTTCTGCATCTCACACTCATCGTCTCTGCCCCGAGCACCCACGTGCGGCTGCATCTTCAAGAACTTC  
AACCTTTTCTCGCCCTCATCTGCAATGCCATCATCGACCCCTCATCTACGCCCTCCACAGCCAGG  
AGCTCCGAGGACGCTCAAGGAGGTGCTGACGTGCTCCTGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

**Protein Sequence:** >RC203218 protein sequence  
Red=Cloning site Green=Tags(s)

MAVQGSQRRLGSLNSTPTAIPQLGLAANQTGARCLEVISDGLFLSLGLVSLVENALVVATIAKNRNLH  
 SPMYCFICCLALSDLLVSGSNVLETAVILLLEAGALVARAAVLQQLDNVIDVITCSSMLSSL CFLGAIIV  
 DRYISIFYALRYHSTVTLPRARRAVAAIWWASVVFSTLFIAYYDHVAVLLCLVFFLAMLVLMVAVLYVHM  
 LARACQHAQGIARLHKRQRPVHQGFGLKGAVTLTILLGIFFLCWGPFLLHLTLIVLCPHEPTCGCIFYKNF  
 NLFLALIIICNAIIDPLIYAFHSQELRRTLKEVLTCSW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6078\\_e12.zip](https://cdn.origene.com/chromatograms/mk6078_e12.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\_002386

**ORF Size:** 951 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).

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002386.2](#), [NP\\_002377.3](#)

**RefSeq Size:** 3115 bp

**RefSeq ORF:** 954 bp

**Locus ID:** 4157

**UniProt ID:** [Q01726](#)

**Cytogenetics:** 16q24.3

**Domains:** 7tm\_1

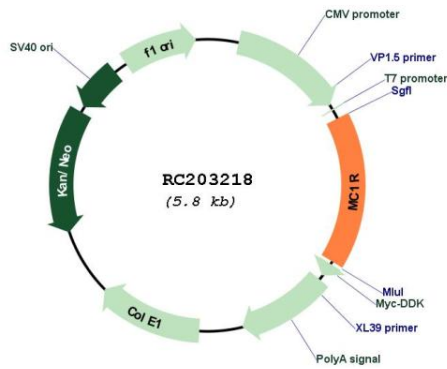
**Protein Families:** Druggable Genome, GPCR, Transmembrane

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

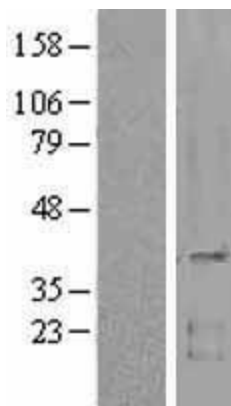
**MW:** 34.7 kDa

**Gene Summary:** This intronless gene encodes the receptor protein for melanocyte-stimulating hormone (MSH). The encoded protein, a seven pass transmembrane G protein coupled receptor, controls melanogenesis. Two types of melanin exist: red pheomelanin and black eumelanin. Gene mutations that lead to a loss in function are associated with increased pheomelanin production, which leads to lighter skin and hair color. Eumelanin is photoprotective but pheomelanin may contribute to UV-induced skin damage by generating free radicals upon UV radiation. Binding of MSH to its receptor activates the receptor and stimulates eumelanin synthesis. This receptor is a major determining factor in sun sensitivity and is a genetic risk factor for melanoma and non-melanoma skin cancer. Over 30 variant alleles have been identified which correlate with skin and hair color, providing evidence that this gene is an important component in determining normal human pigment variation. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC203218



Western blot validation of overexpression lysate (Cat# [LY400853]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203218 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).