

## Product datasheet for **RC219001**

### MITF (NM\_006722) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_006722) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MITF
Synonyms:	bHLHe32; CMM8; COMMAD; MI; WS2; WS2A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC219001 representing NM\_006722  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGACACCTTGAAAACTTTCAGTGGTTTTCCACGAGCTATTTCTCTCTGTGAAAAAGAAACCA  
 GGAAATTGACTCTGTGCCTGTTTTCAAGAAGCAGTTCGCCGAGCATCCTGGGGCCTCCAAGCCTCCGAT  
 AAGCTCCTCCAGTATGACATCACGCATCTTGTACGCCAGCAACTCATGCGTGAGCAGATGCAGGAGCAG  
 GAGCGCAGGGAGCAGCAGCAGAAGCTGCAGGCGGCCAGTTTCATGCAACAGAGAGTGCCCGTGAGTCAGA  
 CACCAGCCATAAACGTCAGTGTGCCACCACCCTTCCCTCTGCCACGCAGGTGCCGATGGAAGTCTTAA  
 GGTGCAGACCCACCTCGAAAACCCACCAAGTACCACATACAGCAAGCCCAACGGCAGCAGGTAAGCAG  
 TACCTTTCTACCCTTTAGCAAATAACATGCCAACCAAGTCTGAGCTTGCCATGTCCAAACCAGCCTG  
 GCGATCATGTATGCCACCGGTGCCGGGAGCAGCGCACCAACAGCCCCATGGCTATGCTTACGCTTAA  
 CTCCAAGTGTAAAAAGAGGGATTTTATAAGTTTGAAGAGCAAAACAGGGCAGAGAGCGAGTGCCAGGC  
 ATGAACACACATTCACGAGCGTCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTAGAAT  
 CAAGTTATAATGAGGAAATCTTGGGCTTGATGGATCCTGCTTTGCAAATGGCAAATACGTTGCTGTCTC  
 GGGAAACTTGATTGATCTTTATGGAAACCAAGGTCTGCCCCACCAGGCCTCACCATCAGCAACTCCTGT  
 CCAGCCAACTTCCCAACATAAAAAGGGAGCTCACAGAGTCTGAAGCAAGAGCACTGGCCAAAGAGAGGC  
 AGAAAAAGGACAATCACAACTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAGAACT  
 AGGTACTTTGATCCCAAGTCAAATGATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAGCATCC  
 GTGGACTATATCCGAAAGTTGCAACGAGAACAGCAACGCGCAAAAGAACTGAAAACCGACAGAAGAAAC  
 TGGAGCACGCCAACCGGCATTTGTGCTCAGAATACAGGAATGAAATGCAGGCTCGAGCTCATGGACT  
 TTCCTTATTCCATCCACGGGTCTCTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACCCTGTT  
 CTTGAGAACTGCAGCAAGACCTCCTTACGATCATGCAGACCTAACCTGTACAACAACTCTCGATCTCA  
 CGGATGGCACCATCACCTTCAACAACAACCTCGGAACTGGGACTGAGGCCAACCAAGCCTATAGTGTCCC  
 CACAAAAATGGGATCCAACTGGAAGACATCCTGATGGACGACACCCTTCTCCCGTCCGTTGTCAGTGT  
 CCCTCTTTCTCAGTGTCCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATGGAAG  
 AGACGGAGCACACTTGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC219001 representing NM\_006722  
 Red=Cloning site Green=Tags(s)

MGHLENTSVVFPRAIFSLCEKETRKLTLCLFSRSSSAEHPGASKPPISSSSMTRSILLRQQLMREQMQEQ  
 ERREQQQKLQAAQFMQQRVPSQTPAINVSVPTLLPSATQVPMELVKVQTHLENPTKYHIQQAQRQVQKQ  
 YLSTTLANKHANQVLSLPCPNQPGDHVMPVPGSSAPNSPMAMTLNSNCEKEGFYKFEEQNRAESECPCG  
 MNTHSRASCMQDDVIDDIISLESSYNEEILGLMDPALQMANTLPVSGNLIDL YGNQGLPPPGLTISNSC  
 PANLPNIKREL TESEARALAKERQKKNHNL IERRRRFNINDRIKELGTLIPKSNPDMRWKGTILKAS  
 VDYIRKLQREQQRAKELNRQKLEHANRHLLLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIIKQEPV  
 LENCSDLLQHHADLTCTTTLDLTDGTITFNNNLGTGTEANQAYSVPTKMGSKLEDILMDDTLSPVGVTD  
 PLLSSVSPGASKTSSRRSSMSMEETEHTC

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8065\\_b07.zip](https://cdn.origene.com/chromatograms/mk8065_b07.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_006722

**ORF Size:** 1557 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.

**RefSeq:** [NM\\_006722.3](#)

**RefSeq Size:** 4700 bp

**RefSeq ORF:** 1560 bp

**Locus ID:** 4286

**UniProt ID:** [O75030](#)

**Cytogenetics:** 3p13

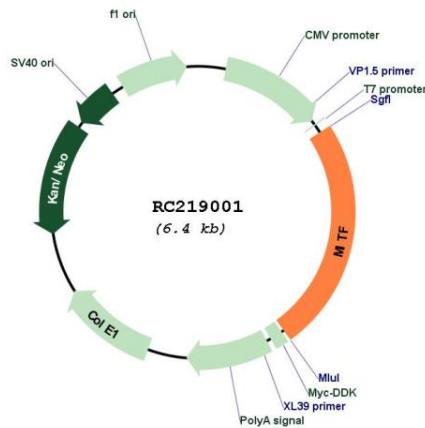
**Protein Families:** Druggable Genome, Transcription Factors

**Protein Pathways:** Melanogenesis, Melanoma, Pathways in cancer

**MW:** 57.9 kDa

**Gene Summary:** The protein encoded by this gene is a transcription factor that contains both basic helix-loop-helix and leucine zipper structural features. The encoded protein regulates melanocyte development and is responsible for pigment cell-specific transcription of the melanogenesis enzyme genes. Heterozygous mutations in the this gene cause auditory-pigmentary syndromes, such as Waardenburg syndrome type 2 and Tietz syndrome. [provided by RefSeq, Aug 2017]

**Product images:**



Circular map for RC219001