

Product datasheet for **RC222074**

MITF (NM_198178) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_198178) 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)
ORF Nucleotide Sequence:	>RC222074 representing NM_198178 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGGAATGCTAGAATATAATCACTATCAGGTGCAGACCCACCTCGAAAACCCACCAAGTACCACA
TACAGCAAGCCCAACGGCAGCAGGGATTTATAAGTTTGAAGAGCAAACAGGGCAGAGAGCGAGTGCC
AGGCATGAACACACATTCACGAGCGTCCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTA
GAATCAAGTTATAATGAGGAAATCTTGGGCTTGATGGATCCTGCTTTGCAAATGGCAAATACGTTGCCTG
TCTCGGAAACTTGATTGATCTTTATGGAAACCAAGGTCTGCCCCACCAGGCCTCACCATCAGCAACTC
CTGTCCAGCCAACCTTCCAACATAAAAAGGGAGCTCACAGAGTCTGAAGCAAGGACTGGCCAAAGAG
AGGCAGAAAAAGGACAATCACAACCTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAG
AACTAGGTACTTTGATCCCAAGTCAAATGATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAGC
ATCCGTGGACTATATCCGAAAGTTGCAACGAGAACAGCAACGCGCAAAGAAGAACTTGAACCCGACAGAAG
AACTGGAGCAGCCAAACCGCATTTGTTGCTCAGAATACAGGAAGTGAATGCAGGCTCGAGCTCATG
GACTTTCCTTATTCCATCCACGGTCTCTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACC
CGTTCCTTGAGAACTGCAGCAAGACCTCCTTCAGCATCATGCAGACCTAACCTGTACAACAACCTCTCGAT
CTCAGGATGGCACCATCACCTTCAACAACAACCTCGAACTGGGACTGAGGCCAACCAAGCCTATAGTG
TCCCACAAAAATGGGATCCAAACTGGAAGACATCCTGATGGACGACACCCCTTTCTCCCGTCGGTGTAC
TGATCCACTCCTTCTCAGTGTCCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATG
GAAGAGACGGAGCACACTTGT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC222074 representing NM_198178
Red=Cloning site Green=Tags(s)

MLEMLEYNHYVQVQTHLENPTKYHIQQAQRQQGFYKFEEQNRAESECPCGMNTHSRASCMQMDVIDDIISL
 ESSYNEEILGLMDPALQMANTLPVSGNLIDL YGNQGLPPPGLTISNSCPANLPNIKREL TESEARALAKE
 RQKKDNHNLIERRRRFNINDRIKELGTLIPKSNDFMRWNKGTILKASVDYIRKLQREQQRAKELNRQK
 KLEHANRHLLLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIKQEPVLENCSDLLQHHADLTCTTTLD
 LTDGTITFNNNLGTGEANQAYSVP TKMGSKLEDILMDDTLSPVGVTDPLLSSVSPGASKTSSRRSSMSM
 EETEHTC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8063_d07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_198178

ORF Size: 1071 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_198178.3](#)

RefSeq Size: 4597 bp

RefSeq ORF: 1074 bp

Locus ID: 4286

UniProt ID: [O75030](#)

Cytogenetics: 3p13

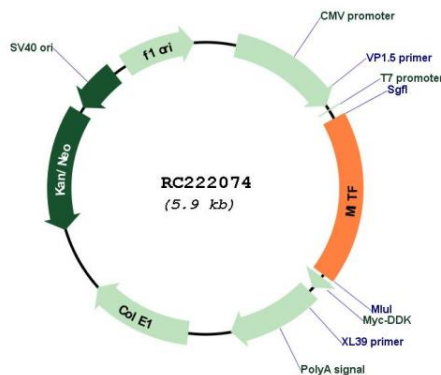
Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Melanogenesis, Melanoma, Pathways in cancer

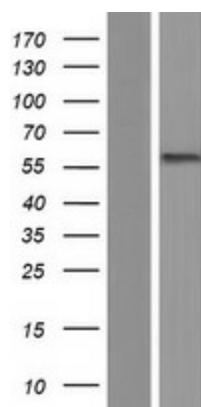
MW: 55.2 kDa

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 RC222074



Western blot validation of overexpression lysate (Cat# [LY404984]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222074 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).