

Product datasheet for **RG222074**

MITF (NM_198178) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_198178) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MITF
Synonyms:	bHLHe32; CMM8; COMMAD; MI; WS2; WS2A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG222074 representing NM_198178
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTGTATGCATTTTGGTTTTCCACAGCAGTTCGCCGAGCATCCTGGGGCTCCAAGCCTCCGATAA
 GCTCCTCCAGTATGACATCACGCATCTTGTACGCCAGCAACTCATGCGTGAGCAGATGCAGGAGCAGGA
 GCGCAGGGAGCAGCAGCAGAAGCTGCAGGCGGCCAGTTCATGCAACAGAGAGTGCCCGTGAGTCAGACA
 CCAGCCATAAACGTCAGTGTGCCACCACCCTTCCCTCTGCCACGCAGGTGCCGATGGAAGTCCTTAAGG
 TGCAGACCCACCTCGAAAACCCACCAAGTACCACATACAGCAAGCCCAACGGCAGCAGGTAAAGCAGTA
 CCTTTCTACCACCTTAGCAAATAAACATGCCAACCAAGTCTGAGCTTGCCATGTCCAAACCAGCCTGGC
 GATCATGTGCATGCCACCGGTGCCGGGAGCAGCGCACCCAACAGCCCATGGCTATGCTTACGCTTAACT
 CCAACTGTGAAAAAGAGGGATTTTATAAGTTTGAAGAGCAAAACAGGGCAGAGAGCGAGTGCCAGGCAT
 GAACACACATTCAGAGCGTCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTAGAATCA
 AGTTATAATGAGGAAATCTTGGGCTTGATGGATCCTGCTTGGCAATGGCAATACGTTGCCTGTCTCGG
 GAAACTTGATTGATCTTTATGGAACCAAGGTCTGCCCCACCAGGCCTACCATCAGCAACTCCTGTCC
 AGCCAACCTTCCAACATAAAAAGGGAGCTCACAGAGTCTGAAGCAAGAGCACTGGCCAAAAGAGAGGCAG
 AAAAAGGACAATCACAACCTGATTGAACGAAGAAGAAGATTTAACATAAAATGACCGCATTAAAGAAGTAG
 GTACTTTGATTCCCAAGTCAAATGATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAGCATCCGT
 GGACTATATCCGAAAGTTGCAACGAGAACAGCAACCGCAAAAAGAACTTGAAAACCGACAGAAGAACTG
 GAGCAGCCCAACCGGCATTTGTTGCTCAGAATACAGGAACTTGAATGCAGGCTCGAGCTCATGGACTTT
 CCCTTATCCATCCACGGGTCTCTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACCCTTCT
 TGAGAAGTGCAGCAAGACCTCCTTCAGCATCATGCAGACCTAACCTGTACAACAACCTCGATCTCAGG
 GATGGCACCATCACCTTCAACAACAACCTCGGAACTGGGACTGAGGCCAACCAAGCCTATAGTGTCCCA
 CAAAAATGGGATCCAAACTGGAAGACATCCTGATGGACGACACCTTTCTCCCGTCGGTGTCACTGATCC
 ACTCCTTCTCAGTGTCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATGGAAGAG
 ACGGAGCACACTTGT

ACGCGTACGCGGCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

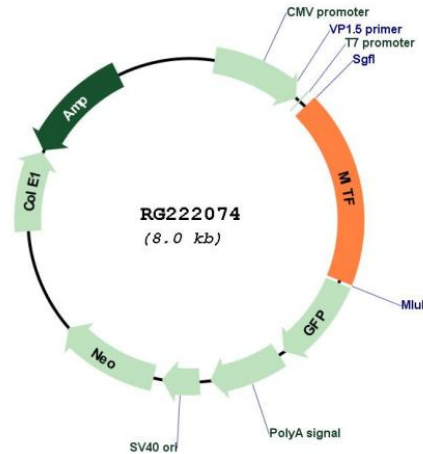
>RG222074 representing NM_198178
 Red=Cloning site Green=Tags(s)

MLYAFWFSSSSAEHPGASKPPISSSSMTRSILLRQQLMREQMQEQERREQQQKLQAAQFMQQRVPSQT
 PAINVSVPTTLPSATQVPMVVLKVQTHLENPTKYHIQQAQRQVQKQYLSTTLANKHANQVLSLPCPNQPG
 DHVMPPVPGSSAPNSPMAMLTLSNCEKEGFYKFEENRAESECPGMNTHSRASCMQMDVDIDDIISLES
 SYNEEILGLMDPALQMANTLPVSGNLIDL YGNQGLPPPGLTISNSCPANLPNIKRELTESEARALAKERQ
 KKDNHNLIERRRFNINDRIKELGTLIPKSNPDMRWKGTILKASVDYIRKLQREQQRAKELNRQKKL
 EHANRHLLLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIIKQEPVLENCSDLLQHHADLTCTTTDLT
 DGTITFNNLGTGEANQAYSVP TKMGSKLEDILMDDTLSPVGVTDPLLSSVSPGASKTSSRRSSMSMEE
 TEHTC

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Plasmid Map:


ACCN: NM_198178

ORF Size: 1485 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:	<ol style="list-style-type: none">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_198178.1 , NP_937821.1
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
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]