

Product datasheet for **RG211518**

MITF (NM_198159) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_198159) 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:

>RG211518 representing NM_198159
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGTCCGAATCGGGGATCGTCCGGATTTTCAAGTCGGGAGGAGTTTCATGAAGAGCCAAAACCT
 ATTACGAACTCAAAGTCAACCGCTGAAGAGCAGCAGTTCGCCGAGCATCCTGGGGCTCCAAGCCTCC
 GATAAGCTCCTCCAGTATGACATCACGCATCTTGTACGCCAGCAACTCATGCGTGAGCAGATGCAGGAG
 CAGGAGCGCAGGGAGCAGCAGCAGAAGTGCAGGCGGCCAGTTCATGCAACAGAGAGTGCCCGTGAGTC
 AGACACCAGCCATAAACGTCAAGTGTGCCACCACCCTTCCCTCTGCCACGCAGGTGCCGATGGAAGTCTT
 TAAGGTGCAGACCACCTCGAAAACCCACCAAGTACCACATACAGCAAGCCCAACGGCAGCAGGTAAG
 CAGTACCTTTCTACCCTTTAGCAAATAAACATGCCAACCAAGTCTGAGCTTGCCATGTCCAAACCAGC
 CTGGCGATCATGTATGCCACCGGTGCCGGGAGCAGCGCACCCAACAGCCCATGGCTATGCTTACGCT
 TAACTCCAAGTGTAAAAAGAGGGATTTATAAGTTTGAAGAGCAAAACAGGGCAGAGAGCGAGTGCCCA
 GGCATGAACACACATTACGAGCGTCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTAG
 AATCAAGTTATAATGAGGAAATCTTGGGCTTGATGGATCCTGCTTTGCAAATGGCAAATACGTTGCCTGT
 CTCGGGAAACTTGATTGATCTTTATGAAACCAAGGTCTGCCCCACCAGGCCTCACCATCAGCAACTCC
 TGTCCAGCCAACCTTCCAACATAAAAAGGGAGCTCACAGAGTCTGAAGCAAGAGCACTGGCCAAAGAGA
 GGCAGAAAAAGGACAATCACAACCTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAGA
 ACTAGGTACTTTGATTCCAAGTCAAATGATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAGCA
 TCCGTGGACTATATCCGAAAGTTGCAACGAGAACAGCAACGCGCAAAAGAAGTGGAAACCGACAGAAGA
 AACTGGAGCAGCCAACCGGCAATTTGTTGCTCAGAATACAGGAAGTGAATGCAGGCTCGAGCTCATGG
 ACTTTCCCTTATCCATCCACGGTCTCTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACCC
 GTTCTTGAGAACTGCAGCCAAGACCTCCTTACGATCATGCAGACCTAACCTGTACAACACTCTCGATC
 TCACGGATGGCACCATCACCTTCAACAACAACCTCGAACTGGGACTGAGGCCAACCAAGCCTATAGTGT
 CCCCACAAAAATGGGATCCAACCTGGAAGACATCCTGATGGACGACACCCCTTCTCCCGTGGTGTCACT
 GATCCACTCCTTCTCAGTGTCCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATGG
 AAGAGACGGAGCACACTTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG211518 representing NM_198159
 Red=Cloning site Green=Tags(s)

MQSESGIVPDFEVGEEFHEEPKTYEYELKSQLKSSSSAEHPGASKPPISSSSMSTRILLRQQLMREQMQE
 QERREQQKLQAAQFMQQRVPSQTPAINVSVPTTLPSATQVPMEVLVKQVTHLENPTKYHIQQAQRQVK
 QYLSTTLANKHANQVLSLPCPNQPGDHVMPVPGSSAPNSPMAMTLNSNCEKEGFYKFEEQNRAESECP
 GMNTHSRASCMQDDVIDDIISLESSYNEEILGLMDPALQMANTLPVSGNLIDL YGNQGLPPPGLTISNS
 CPANLPNIKREL TESEARALAKERQKKNHNL IERRRRFNINDRIKELGTLIPKSNPDMRWKGTILKA
 SVDYIRKLRQEQRAKELNRQKLEHANRHLRLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIKQEP
 VLENCSDLLQHHADLTCTTLDLTDGITFNNNLGTGTEANQAYSVP TKMGSKLEDILMDDTLSPVGV
 DPLLSSVSPGASKTSSRRSSMSMEETEHTC

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_198159

ORF Size: 1560 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

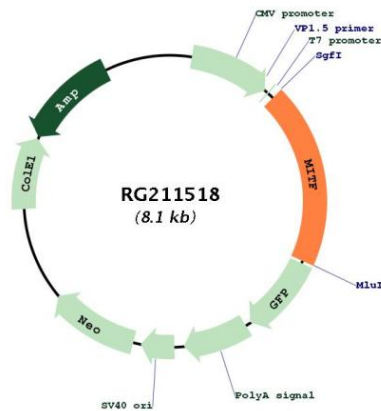
Reconstitution Method:

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_198159.3](#)

RefSeq Size:	4788 bp
RefSeq ORF:	1563 bp
Locus ID:	4286
UniProt ID:	<u>O75030</u>
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]

Product images:



Circular map for RG211518