

Product datasheet for **RG219001**

MITF (NM_006722) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_006722) 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:

>RG219001 representing NM_006722
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGACACCTTGAAAATACTTCAGTGGTTTTCCACGAGCTATTTCTCTCTGTGAAAAGGAAACCA
 GGAAATTGACTCTGTGCCTGTTTTCAAGAAGCAGTCCGCCGAGCATCCTGGGGCCTCCAAGCCTCCGAT
 AAGCTCCTCCAGTATGACATCACGCATCTTGCTACGCCAGCAACTCATGCGTGAGCAGATGCAGGAGCAG
 GAGCGCAGGGAGCAGCAGCAGAAGCTGCAGGCGGCCAGTTTCATGCAACAGAGAGTGCCCGTGAGTCAGA
 CACCAGCCATAAACGTCAGTGTGCCACCACCCTTCCCTCTGCCACGCAGGTGCCGATGGAAGTCTTAA
 GGTGCAGACCCACCTCGAAAACCCACCAAGTACCACATACAGCAAGCCCAACGGCAGCAGGTAAGCAG
 TACCTTTCTACCACTTTAGCAAATAACATGCCAACCAAGTCTGAGCTTGCCATGTCCAAACCAGCCTG
 GCGATCATGTATGCCACCGGTGCCGGGAGCAGCGCACCCAACAGCCCCATGGCTATGCTTACGCTTAA
 CTCCAACGTGAAAAAGAGGGATTTTATAAGTTTGAAGAGCAAAACAGGGCAGAGAGCGAGTGCCAGGC
 ATGAACACACATTCACGAGCGTCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTAGAAT
 CAAGTTATAATGAGGAAATCTTGGGCTTGATGGATCCTGCTTTGCAAATGGCAAATACGTTGCCTGTCTC
 GGGAAACTTGATTGATCTTTATGAAAACCAAGGTCTGCCCCACCAGGCCTCACCATCAGCAACTCCTGT
 CCAGCCAACCTTCCAACATAAAAAGGGAGCTCACAGAGTCTGAAGCAAGAGCACTGGCCAAAGAGAGGC
 AGAAAAAGGACAATCACAACTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAGAACT
 AGGTACTTTGATCCCAAGTCAAATGATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAGCATCC
 GTGGACTATATCCGAAAGTTGCAACGAGAACAGCAACGCGCAAAAGAACTTGAAAACCGACAGAAGAAAC
 TGGAGCACGCCAACCGGCATTTGTGCTCAGAATACAGGAATGAAATGCAGGCTCGAGTCTATGGAT
 TTCCTTATTCCATCCACGGGTCTCTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACCCTGTT
 CTTGAGAACTGCAGCAAGACCTCCTTCAGCATCATGCAGACCTAACCTGTACAACAACCTCTCGATCTCA
 CGGATGGCACCATCACCTTCAACAACAACCTCGGAACTGGGACTGAGGCCAACCAAGCCTATAGTGTCCC
 CACAAAAATGGGATCCAACTGGAAGACATCCTGATGGACGACACCCTTCTCCCGTCCGTTGTCAGTGT
 CCCTCTTTCTCAGTGTCCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATGGAAG
 AGACGGAGCACACTTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG219001 representing NM_006722
 Red=Cloning site Green=Tags(s)

MHLENTSVVFPRAIFSLCEKETRKLTLCLFSRSSSAEHPGASKPPISSSSMTRSILLRQQLMREQMQEQ
 ERREQQKLQAAQFMQQRVPSQTPAINVSVPTLPSATQVPMVCLKVQTHLENPTKYHIQQAQRQVQKQ
 YLSTTLANKHANQVLSLPCPNQPGDHVMPVPGSSAPNSPMAMTLNSNCEKEGFYKFEEQNRAESECPCG
 MNTHSRASCMQDDVIDDIIISLESSYNEEILGLMDPALQMANTLPVSGNLIDL YGNQGLPPPGLTISNSC
 PANLPNIKRELTESEARALAKERQKKNHNLIERRRRFNINDRIKELGTLIPKSNDPDMRWKGTILKAS
 VDYIRKLQREQQRAKELNRQKLEHANRHLRLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIIKQEPV
 LENCSDLLQHHADLTCTTLDLTDGTITFNNLGTGTEANQAYSVPTKMGSKLEDILMDDTLSPVGVTD
 PLLSSVSPGASKTSSRRSSMSMEETEHTC

TRTRPLE - GFP Tag - V

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](#)

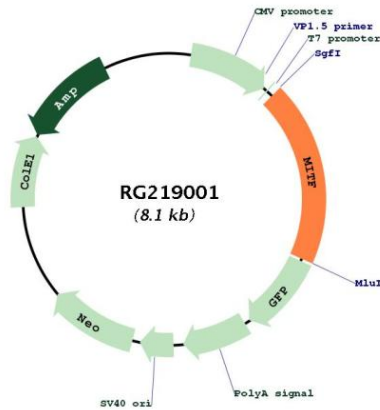
Cytogenetics: 3p13

Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Melanogenesis, Melanoma, Pathways in cancer

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 RG219001