

## Product datasheet for **RG209561**

### MITF (NM\_000248) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MITF (NM_000248) 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)
ORF Nucleotide Sequence:	>RG209561 representing NM_000248 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGGAATGCTAGAATATAATCACTATCAGGTGCAGACCCACCTCGAAAACCCACCAAGTACCACA  
TACAGCAAGCCCAACGGCAGCAGGTAAGCAGTACCTTTCTACCCTTTAGCAAATAACATGCCAACCA  
AGTCTGAGCTTGCCATGTCAAACCAGCCTGGCGATCATGTATGCCACCGGTGCCGGGAGCAGCGCA  
CCCAACAGCCCCATGGCTATGCTTACGCTTAACCCAACCTGTGAAAAAGAGGGATTTATAAGTTTGAAG  
AGCAAAACAGGGCAGAGAGCGAGTGCCAGGCATGAACACACATTCACGAGCGTCTGTATGCAGATGGA  
TGATGTAATCGATGACATCATTAGCCTAGAATCAAGTTATAATGAGGAAATCTTGGGCTTGATGGATCCT  
GCTTTGCAAAATGGCAAAACGTTGCCTGTCTCGGAAACTTGATTGATCTTTATGAAAACCAAGGTCTGC  
CCCCACCAGGCCTCACCATCAGCAACTCCTGTCCAGCCAACCTTCCCAACATAAAAAGGGAGCTCACAGC  
GTGATTTTTCCACAGAGTCTGAAGCAAGAGCACTGGCCAAAGAGAGGCAGAAAAGGACAATCACAAAC  
CTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAGAAGTACTTTGATTCCCAAGT  
CAAATGATCCAGACATGCGCTGGAACAAGGAACCATCTAAAAGCATCCGTGGACTATATCCGAAAGTT  
GCAACGAGAACAGCAACGCGCAAAAGAAGTTGAAAACCGACAGAAGAACTGGAGCACGCCAACCCGCAT  
TTGTTGCTCAGAATACAGGAACCTGAAATGCAGGCTCGAGCTCATGGACTTCCCTTATTCATCCACGG  
GTCTTGCTCTCCAGATTTGGTGAATCGGATCATCAAGCAAGAACCCTTCTTGAGAATGCAGCCAAGA  
CCTCCTTCAGCATCATGCAGACCTAACCTGTACAACAACCTCTCGATCTCACGGATGGCACCATCACCTTC  
AACAAACACTCGGAACTGGGACTGAGGCCAACCAAGCCTATAGTGTCCCACAAAAATGGGATCCAAAC  
TGAAGACATCCTGATGGACGACACCCTTCTCCCGTCCGGTGTCACTGATCCACTCCTTCTCAGTGTC  
CCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATGAGCATGGAAGAGACGGAGCACACTTGT

**ACGGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG209561 representing NM\_000248  
Red=Cloning site Green=Tags(s)

MLEMLEYNHVQVQTHLENPTKYHIQQAQRQVQVQYLSTTLANKHANQVLSLPCPNQPGDHVMPVPVPGSSA  
 PNSPMAMLTLSNCEKEGFYKFEENRAESECPGMNTHSRASCMQDDVIDDIISLESSYNEEILGLMDP  
 ALQMANTLPVSGNLIDL YGNQGLPPPGLTISNSCPANLPNIKRELTACIFPTESEARALAKERQKKDNHN  
 LIERRRRFNINDRIKELGTLIPKSNPDMRWNKGTILKASVDYIRKLRQEQRAKELNRQKKLEHANRH  
 LLLRIQELEMQARAHGLSLIPSTGLCSPDLVNRIKQEPVLENCSDQLLQHHADLTCTTTLDLTDGTITF  
 NNNLGTGTEANQAYSVP TKMGSKLEDILMDDTLSPVGVTDPLLSSVSPGASKTSSRRSSMSMEETEHTC

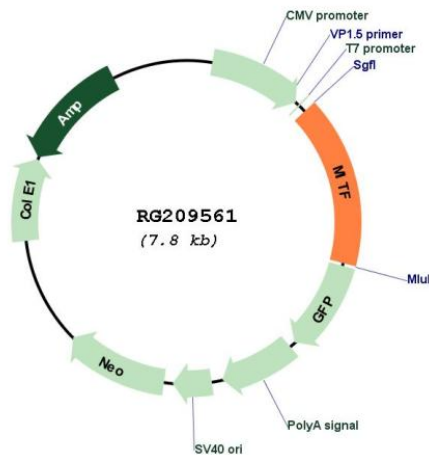
TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_000248

<b>ORF Size:</b>	1257 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_000248.4</a>
<b>RefSeq Size:</b>	4490 bp
<b>RefSeq ORF:</b>	1260 bp
<b>Locus ID:</b>	4286
<b>UniProt ID:</b>	<a href="#">O75030</a>
<b>Cytogenetics:</b>	3p13
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Melanogenesis, Melanoma, Pathways in cancer
<b>Gene Summary:</b>	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]