

Product datasheet for **RG203738**

MTO1 (NM_012123) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	MTO1
Synonyms:	CGI-02; COXPD10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



ORF Nucleotide Sequence: >RG203738 representing NM_012123
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGTTCTACTTCCGAGGCTGTGGCGTTGGGTCGCGTTTCCTTCACCAAGCAGCAATTTCCGTTGGCAC
 GGTGAGCAGTGACAGCGCGGCCCGGACTCCGCACTTCGACGTGATAGTCATTGGTGGAGGACATGC
 CGGGACTGAGGCAGCCACCGCCGCGCTCGGTGCGGCTCTCGGACTCTGCTCCTCACTACCGCGTGGAC
 ACGATCGGTGAGTGTATGTAATCCTTCTTTGGTGGCATCGGAAAGGGACATTTAATGAGGGAAGTAG
 ATGCCCTGGATGGCTGTGTTCTCGCATCTGTGACCACTGCTGGTGTACATTATAAGTATTAAACCGCG
 TAAGGGACCAAGCTGTGTGGGTCTGAGAGCTCAGATTGATAGGAACTCTATAAACAGAACATGCAGAAA
 GAAATCTTGAATACACCACTGCTTACTGTTGAGGAGGAGCTGTAGAAGATCTTATTCTTACAGAACAG
 AGCCTGAACACACTGGGAAATGCCGTGTGAGTGGGTGTTTTGGTGGATGGAAGCAGATATGCAGA
 GAGTGTGATTCTGACTACTGGGACATTTCTGAGAGGCATGATTGTAATTGGATTGGAGACGCATCCAGCA
 GGACGTTTAGGGGATCAGCCTTCTATAGGATTGGCTCAGACACTGGAGAAGTTAGGGTTTGGTGGGAA
 GGTTGAAGACTGGGACTCCACCCGAATTGCCAAAGAGTCCATTAATTTCACTATTCTAAACAAGCATAT
 ACCGGACAATCCATCCATACCATTCAGCTTTACCAATGAGACAGTATGGATTAGCCAGAAGATCAGCTG
 CCATGTTACTTGACTCACCAACCTAGAGTGGATGAGATTGTCCTTAAGAACCTTCACCTTAATAGTC
 ATGTTAAAGAAACGACAAGAGGACCTCGATACTGTCCTCCATTGAATCAAAAGTTTTGCGTTTTCCAAA
 CCGTCTACATCAGTTTTGGTTGGAACCTGAAGGAATGGATTCTGACCTTATCTACCCACAGGGGTATCT
 ATGACGCTACCAGCTGAGTTACAAGAGAAAATGATCACATGCATCAGAGGCTTGGAGAAAGCTAAAGTGA
 TTCAGCCAGGCTACGGTGTTCAGTATGATTACTTAGATCCCGTCAGATACCCCTTCCCTGGAGACTCA
 TTTGGTTCAACGACTCTTCTTTGCTGGACAGATCAATGGCACCCTGCTTATGAGGAAGCTGCAGCTCAA
 GGTGTGATAGCCGAATCAACGCCAGTCTTCGGGTGAGTCGCAAGCCTCCCTTTGTGGTTAGCCGAACAG
 AAGGTTACATAGGAGTCTTGATTGATGACCTCACTCTGCGGCACAGTGAACCATACCGCATGTTTAC
 CAGCCGAGTAGAGTTCGTTTGTCTGCTGCGCCCTGATAATGCTGACAGCCGCTCACACTGCGAGGGTAT
 AAAGACGCTGGCTGTGTGCCCAACAACGATATGAAAGAGCTTGTGGATGAAGTCTTCTTTAGAAGAAG
 GCATTTCTGTGTTGAAATCTATTGAGTTTTTGTGCTCTAAATGGAAAAAATTAATCCAGAGGCTTCTAT
 AAGTACTAGTAGAGTCTGCCTGTGAGAGCTCTCGATGTTCTGAAGTATGAGGAAGTTGACATGGATTCA
 TTAGCCAAGGCTGTTCCAGAGCCCTGAAGAAGTATACTAAATGTAGAGAGCTGGCTGAAAGACTGAAAA
 TAGAAGCCACTTATGAATCAGTGTGTTCCATCAACTACAAGAAATAAAGGGAGTTACAGCAAGATGAAGC
 TCTCCAAGTCCAAAAGACCTAGATTATTTGACTATCAGGGATGTGTCTTTGTCCCAGAAAGTTCGAGAG
 AAACATACATTTAGTCGTCACAGACGATCGGGGCTGCTAGTCGCATACCCGAGTAACACCTGCCGCCA
 TCATCAATCTGCTGAGATTTGTGAAGACCACTCAACGAAGACAGTCGGCTATGAATGAATCATCCAAGAC
 TGATCAATACTTATGTGATGCAGACAGACTTCAAGAGAGAGAGTTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG203738 representing NM_012123
 Red=Cloning site Green=Tags(s)

MFYFRGCRWVAVSFTKQFPLARLSSDSAAPRTPHFDVIVIGGGHAGTEAATAAARCGSRTLLTHRVD
 TIGQMSCNPSFGGIGKGLMREVDALDGLCSRICDQSGVHYKVLNRRKGPVWGLRAQIDRKLKQNMQK
 EILNTPLLTVQEGAVEDLILTEPEEHTGKCRVSGVVLVDGSTVYAESVILTTGTFLRGMIVIGLETHPA
 GRLGDQPSIGLAQTLEKLGFFVGRKLTGTPPRIAKESINFSLNKHIPDNPSIPFSFTNETVWIKPEDQL
 PCYLTHNPRVDEIVLKNLHLNSHVKETTRGPRYCPSEISKVLRFPNRLHQVWLEPEGMDSDLIYPQGLS
 MTLPAELQEKMITCIRGLEKAKVIQPGYGVQYDLDPRQITPSLETHLVQRLFFAGQINGTTGYEEAAAQ
 GVIAGINASLRVSRKPPFVVSRTGEGYIGVLIDDLTTLGTSEPYRMFTSRVEFRLSLRPDNADSRLLRGY
 KDAGCVSQRYERACWMKSSLEEGISVLKSIIEFLSSKWKLIPEASISTSRSLPVRALDVLKYEVEVMDMS
 LAKAVPEPLKKYTKRELAERLKEATYESVLFHQLQEIKGQQDEALQLPKDLDTLIRDVSLSHEVRE
 KLHFSRPQTIGAASRIPGVTPAAIINLLRFVKTQRRQSAMNESSKTDQYLCDADRLQEREL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_012123

ORF Size: 2076 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_012123.2](#), [NP_036255.2](#)

RefSeq Size: 2537 bp

RefSeq ORF: 2079 bp

Locus ID: 25821

UniProt ID: [Q9Y2Z2](#)

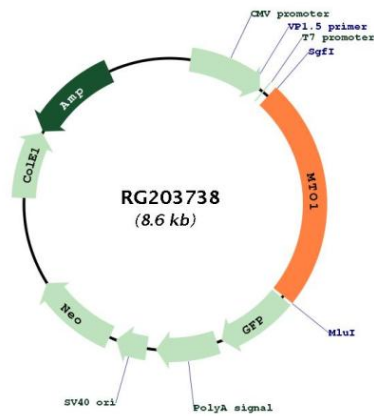
Cytogenetics: 6q13

Domains: GIDA

Protein Families: Druggable Genome

Gene Summary: This gene encodes a mitochondrial protein thought to be involved in mitochondrial tRNA modification. The encoded protein may also play a role in the expression of the non-syndromic and aminoglycoside-induced deafness phenotypes associated with a specific mutation in the mitochondrial 12S rRNA gene. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG203738