

## Product datasheet for **RG224697**

### Mucolipin 3 (MCOLN3) (NM\_018298) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mucolipin 3 (MCOLN3) (NM_018298) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mucolipin 3
Synonyms:	TRP-ML3; TRPML3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224697 representing NM\_018298  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCAGATCCTGAGGTAGTTGTGAGTAGCTGCAGCTCTCATGAAGAGGAAAATCGCTGCAATTTTAAACC  
 AGCAAACATCTCCATCTGAGGAGCTTCTATTAGAAGACCAGATGAGGCGAAAACCTCAAATTTTTTTCAT  
 GAATCCCTGTGAGAAGTTCTGGGCTCGAGGTAGAAAACCATGAAAACCTGCCATACAAATTTCAAAAATT  
 GCAATGGTGACTATCCAGCTGGTCTTATTTGGGCTAAGTAACCAGATGGTGGTAGCTTTCAAGGAAGAGA  
 ATACTATAGCATTCAAACACCTTTTCTAAAAGGATATATGGACCGAATGGATGACACATATGCAGTGTA  
 CACACAAAGTGACGTGTATGATCAGTTAATCTTCGCAGTAAACCAGTACTTGCAGCTATACAATGTCTCC  
 GTTGGGAATCATGCTTATGAGAACAAGGTACCAAGCAATCTGCTATGGCAATCTGTCAGCACTTCTACA  
 AGCGAGGAAAACATCTACCCTGAAAATGATACCTTTGACATCGATCCAGAAATGAAACTGAGTGTTCCTT  
 TGTGGAGCCAGATGAACCTTTTACATTGGGACACCAGCAGAAAATAAACTGAACTTAACACTGGACTTC  
 CACAGACTCCTAACAGTGGAGCTTCAGTTTAAACTGAAAGCCATTAATCTGCAGACAGTTTCGTCATCAAG  
 AACTCCCTGACTGTTATGACTTTACTCTGACTATAACATTTGACAACAAGGCCCATAGTGAAGAATTAA  
 AATAAGTTTAGATAATGACATTTCCATCAGAGAATGTAAGACTGGCATGTATCTGGATCAATTCAGAAG  
 AACACTCATTACATGATGATCTTTGATGCCTTTGTCTTCTGACTTGCTTGGTTTCATTAATCCTCTGCA  
 TTAGATCTGTGATTAGAGGACTTCAGCTTCAGCAGGAGTTTGTCAATTTTTTCTCCTCCATTATAAGAA  
 GGAAGTTTCTGTTTCTGATCAAATGGAATTTGTCAATGGATGGTACATTATGATTATTATTAGTGACATA  
 TTGACAATCATTGGATCAATTTAAAAATGGAATCCAAGCTAAGAGTCTAACTAGTTATGATGTCTGTA  
 GCATCTCTTGGGACTTCTACCATGCTCGTGTGGCTTGGAGTCATCCGATACCTCGGTTCTTTTGCAAA  
 GTACAACCTCCTCATTTTACCCTTCAGCAGCGCTGCCAATGTCATCAGGTTCTGCTGCTGTGCAGCT  
 ATGATTTACTTAGGTTACTGCTTCTGTGGATGGATCGTGTGGGCTTACCATGACAAGTTTCGTTCTC  
 TGAACATGGTCTCTGAGTGCCTTTTCTCTCTGATAAATGGAGATGATATGTTTGCCACGTTTGCAAAAAT  
 GCAGCAAAAAAGTTACTTAGTCTGGCTGTTTAGTAGAATTTACCTCTACTCATTATCAGCCTCTTTATA  
 TATATGATTTAAGTCTTTTATTGCAGTACTGATACATACGAAACAATTAAGCAATACCAACAAG  
 ATGGCTTCCAGAGACTGAACTTCGTACATTTATATCAGAATGCAAGATCTACCAACTCTGGAAAATA  
 CAGATTAGAAGATGACCCTCCAGTATCTTTATTCTGCTGTTGAAAAAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

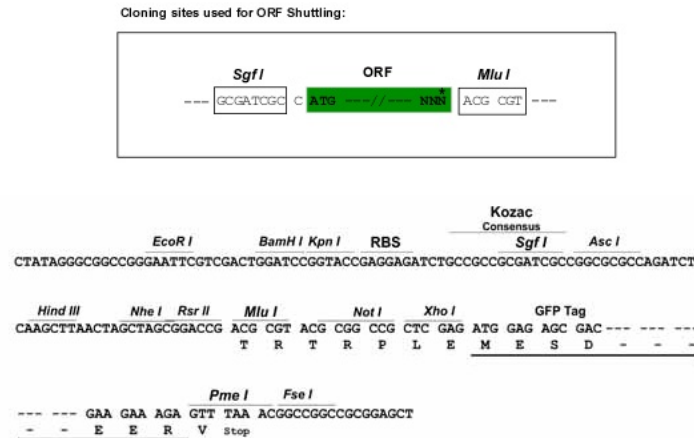
>RG224697 representing NM\_018298  
 Red=Cloning site Green=Tags(s)

MADPEVVVSSCSHEEENRCNFNQQTSPSEELLLEDQMRRLKFFMNPCEKFWARGRPWKLAIQILKI  
 AMVTIQLVLFGLSNQMVVAFKEENTIAFKHLFLKGYMDRMDDTYAVYTQSDVYDQLIFAVNQYLQLYNVS  
 VGNHAYENKGTKQSAMAICQHFYKRGNIYPGNDTFDIDPEIETECFFVEPDEPFHIGTPAENKLNLTDF  
 HRLLTVELQFKLKAINLQTVRHQELPDCYDFTLTITFDNKAHSGRIKISLDNDISIRECKDWHVSGSIQK  
 NTHYMMIFDAFVILTCLVSLILCIRSVIRGLQLQEQEFVNFLLHYKKEVSVSDQMEFVNGWYIMIIISDI  
 LTIIGSILKMEIQAKSLTSYDVCSILLGTSTMLVWLVIRYLGFYAKYNLLILTLQAALPNVIRFCCCAA  
 MIYLYGFCGWIVLGPYHDKFRSLNMVSECLFSLINGDDMFATFAKMQQKSYLVWLFRIYLYSFIISLFI  
 YMILSLFIALITDITYETIKYQQDGFPELRTFISECKDLPSNGKYRLEDDPPVSLFCCCKK

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_018298

**ORF Size:** 1659 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\\_018298.9](#), [NP\\_060768.8](#)

**RefSeq Size:** 2813 bp

**RefSeq ORF:** 1662 bp

**Locus ID:** 55283

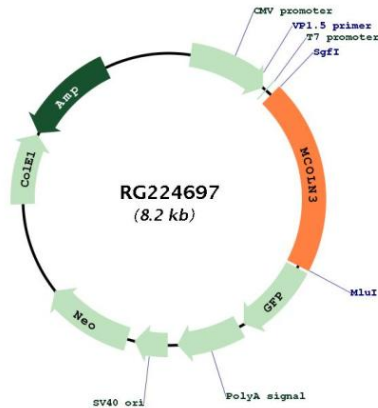
**UniProt ID:** [Q8TDD5](#)

**Cytogenetics:** 1p22.3

**Protein Families:** Druggable Genome, Ion Channels: Transient receptor potential, Transmembrane

**Gene Summary:** This gene encodes one of members of the mucolipin cation channel proteins. Mutation studies of the highly similar protein in mice have shown that the protein is found in cochlea hair cells, and mutant mice show early-onset hearing loss and balance problems. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Nov 2011]

**Product images:**



Circular map for RG224697