

## Product datasheet for **RG211195**

### **MCOLN2 (NM\_153259) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MCOLN2 (NM_153259) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MCOLN2
Synonyms:	TRP-ML2; TRPML2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG211195 representing NM\_153259  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCCGGCAGCCTTATCGTTTTCCCAAGCAAGGATCCGGAGAGAGGATCAGGTGTTTTCAGGTAA  
 CCGTCAGAAATGCAATGGCACATCGTGATTCTGAGATGAAAGAAGAATGTCTAAGGGAAGACCTGAAGTT  
 TTAATTCATGAGCCCTTGAAAAATACCGAGCCAGACGCCAGATTCCGTGGAACTGGGTTGCAGATT  
 TTGAAGATAGTCATGGTCAACACACAGCTTGTCGTTTTGGTTAAGTAACAGCTGGTGGTTGCTTTCA  
 AAGAAGATAAAGCTGTTGCTTTTAAAGCACTGTTTTTGAAGGATATTCTGGTACAGATGAAGATGACTA  
 CAGCTGCAGTGTATATACTCAAGAGGATGCCTATGAGAGCATCTTTTTGCTATTAATCAGTATCATCAG  
 CTAAGGACATTACCCTGGGACCTTGTTATGGAGAAAATGAAGACAATAGAATTGGCTAAAAGTCT  
 GTAAGCAGCATTACAAGAAAGGGACCATGTTTCCTTCTAATGAGACACTGAATATTGACAACGACGTTGA  
 GCTCGATTGTGTTCAATTAGACCTTCAGGACCTCTCCAAGAAGCCTCCGACTGGAAGAAGTATCATCTC  
 TTCAGACTGGAATTTTATCGGCTCTTACAGGTTGAAATCTCCTTTCATCTTAAAGGCATTGACCTACAGA  
 CAATTCATTCCCGTGAGTTACCAGACTGTTATGTCTTTCAGAATACGATTATCTTTGACAATAAAGCTCA  
 CAGTGGCAAAATCAAAATCTATTTTGACAGTGTGCCAAATGAAGAATGTAAAGACTTGAACATATTT  
 GGATCTACTCAGAAAAATGCTCAGTATGTCTGGTGGTTGATGCATTTGTCTATTGTGATTGCTTGGCAT  
 CTCTTATTCTGTGTACAAGATCCATTGTTCTTGTCTAAGGTTACGGAAGAGATTCTAAATTTCTTCT  
 GGAGAAGTACAAGCGGCTGTGTGTGACACCGACAGTGGGAGTTCATCAACGGCTGGTATGTCTGGTG  
 ATTATCAGCGACCTAATGACAATCATTGGCTCCATATTAATAATGAAATCAAAGCAAAGAATCTCACAA  
 ACTATGATCTCTGCAGCATTTTTCTTGGAACTCTACGCTCTTGGTTGGGTTGGAGTCATCAGATACCT  
 GGGTTATTTCCAGGCATATAATGTGCTGATTTTAAACAATGCAGGCCTCACTGCCAAAAGTTCTTCGGTTT  
 TGTGCTTGTGCTGGTATGATTTATCTGGGTTACACATTCTGTGGCTGGATTGTCTTAGGACCATACCATG  
 ACAAGTTTGAAAACTGAACACAGTTGCTGAGTGTCTGTTTTCTGGTCAACGGTGATGACATGTTTGC  
 AACCTTTGCCAAATCCAGCAGAAGAGCATCTTGGTGTGGCTGTTCAAGTCTGTATTTATATTCCTTC  
 ATCAGCCTTTTTATATATGATTCTCAGTCTTTTATTGCACTTATTACAGATTCTTATGACACCATT  
 AGAAATCCAACAGAATGGGTTTCTGAAACGATTTGCAGGAATTCCTGAAGGAATGCAGTAGCAAAGA  
 AGAGTATCAGAAAGAGTCTCAGCCTTCTGCTGCATCTGCTGCGGAGGAGGAAAAGAAGTATGATGAT  
 CACTTGATACCTATTAGC

**ACGCGT**ACGCGGCGGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

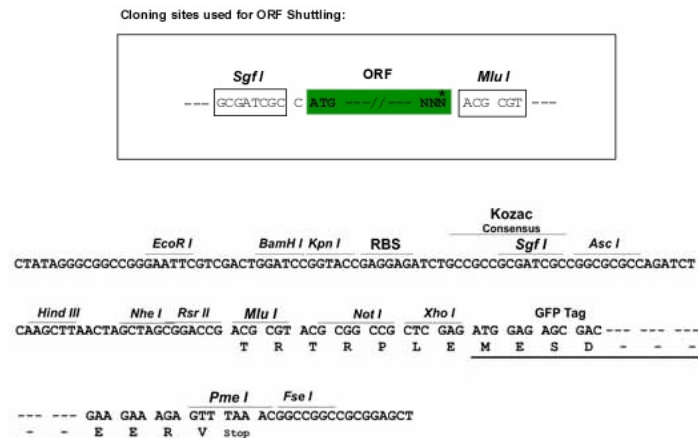
>RG211195 representing NM\_153259  
 Red=Cloning site Green=Tags(s)

MARQPYRFPQARIPERGSVFRLLTVRNAMAHRDSEMKEECLREDLKIFYFMSPCEKYRARRQIPWKLGLQI  
 LKIVMVTTLVRFGLSNQLVFAFKEDNTVAFKHLFLKGYSGTDEDDYSCSVYTTQEDAYESIFFAINQYHQ  
 LKDITLGLGYGENEDNRIGLVCKQHYKGTMFPSNETLNIDNDVELDCVQLDLQDL SKKPPDWKNSSF  
 FRLEFYRLLQVEISFHLKGIDLQTIHSRELPCYVFQNTIIFDNKAHSGIKIYFSDAKIEECKDLNIF  
 GSTQKNAQYVLVDAFVIVICLASLILCTRSIVLALRLRKRFLNFFLEKYKRPVCDTDQWEFINGWYVLV  
 IISDLMTIIGSILKMEIKAKNL TNYDLCSIFLGTSTLLVWVGVIYRYLGYFQAYNVLILTMQASLPKVLRF  
 CACAGMIYLYGTFCGWIVLGPYHDKFENLNTVAECLFSLVNGDDMFATFAQIQQKSILVWLF SRLYLYSF  
 ISLFIYMILSLFIALITDSYDTIKKFQNGFPETDLQEFLKECSSKEEYQKESSAFLSCICRRRRKRSDD  
 HLIPIS

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_153259

**ORF Size:** 1698 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\\_153259.4](#)

**RefSeq Size:** 3060 bp

**RefSeq ORF:** 1701 bp

**Locus ID:** 255231

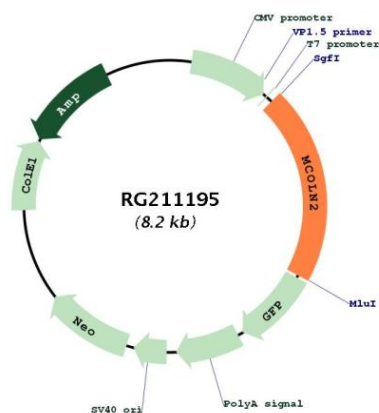
**UniProt ID:** [Q8IZK6](#)

**Cytogenetics:** 1p22.3

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

**Gene Summary:** Mucolipins constitute a family of cation channel proteins with homology to the transient receptor potential superfamily. In mammals, the mucolipin family includes 3 members, MCOLN1 (MIM 605248), MCOLN2, and MCOLN3 (MIM 607400), that exhibit a common 6-membrane-spanning topology. Homologs of mammalian mucolipins exist in *Drosophila* and *C. elegans*. Mutations in the human MCOLN1 gene cause mucopolipodosis IV (MIM 262650) (Karacsonyi et al., 2007 [PubMed 17662026]).[supplied by OMIM, Sep 2009]

## Product images:



Circular map for RG211195