

## Product datasheet for **RC211195**

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

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MCOLN2 (NM_153259) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MCOLN2
Synonyms:	TRP-ML2; TRPML2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC211195 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCCGCAGCCTTATCGTTTTCCCCAGGCAAGGATCCGGAGAGAGGATCAGGTGTTTTCAGGTAA  
 CCGTCAGAAATGCAATGGCACATCGTGATTCTGAGATGAAAGAAGAATGTCTAAGGGAAGACCTGAAGT  
 TTACTTCATGAGCCCTTGAAAAATACCGAGCCAGACGCCAGATTCCGTTGAAACTGGGTTTCAGATT  
 TTGAAGATAGTCATGGTCACCACACAGCTTGTTCGTTTTGGTTAAGTAACCAGCTGGTGGTTGCTTTCA  
 AAGAAGATAACACTGTTGCTTTAAAGCACTGTTTTGAAAGGATATTCTGGTACAGATGAAGATGACTA  
 CAGCTGCAGTGTATACTCAAGAGGATGCCTATGAGAGCATCTTTTTGCTATTAATCAGTATCATCAG  
 CTAAGGACATTACCCTGGGACCCTTGGTTATGGAGAAAATGAAGACAATAGAATTGGCTAAAAGTCT  
 GTAAGCAGCATTACAAGAAAGGGACCATGTTTCCTTCTAATGAGACACTGAATATTGACAACGACGTTGA  
 GCTCGATTGTGTTCAATTAGACCTTCAGGACCTCTCCAAGAAGCCTCCGGACTGGAAGAACTCATATTC  
 TTCAGACTGGAATTTTATCGGCTTACAGGTTGAAATCTCCTTTTCATCTTAAAGGCATTGACCTACAGA  
 CAATTCATTCCCCTGAGTTACCAGACTGTTATGCTTTTCAAGTACGATTATCTTTGACAATAAAGCTCA  
 CAGTGGCAAAATCAAAATCTATTTTACAGTGTGCCAAAATGAAGAATGTAAGACTTGAACATATTT  
 GGATCTACTCAGAAAAATGCTCAGTATGCTCCTGGTGGTTGATGCATTTGTCATTGTGATTTGCTGGCAT  
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 GGAGAAGTACAAGCGCCTGTGTGTGACACCGACCAGTGGGAGTTCATCAACGGCTGGTATGCTCCTGGT  
 ATTATCAGCGACCTAATGACAATCATTGGCTCCATATTAATAAATGAAATCAAAGCAAAGAATCTCACAA  
 ACTATGATCTCTGCAGCATTTTTCTTGGAACTCTACGCTCTGGTTGGGTTGGAGTCATCAGTACCT  
 GGGTTATTTCCAGGCATATAATGTGCTGATTTTAAACAATGCAGGCTCACTGCCAAAAGTTCTTCGGTTT  
 TGTGCTTGTGCTGGTATGATTTATCTGGGTTACACATTCTGTGGCTGGATTGTCTTAGGACCATACCATG  
 ACAAGTTTAAAACTGAACACAGTTGCTGAGTGTCTGTTTTCTCTGGTCAACGGTGTGACATGTTTGC  
 AACCTTTGCCAAATCCAGCAGAAGAGCATCTTGGTGTGGCTGTTTCAGTCGTCTGATTTTATATTCCTTC  
 ATCAGCCTTTTTATATATGATTCTCAGTCTTTTTATTGCATTATTACAGATTCTTATGACACCATTA  
 AGAAATCCAACAGAATGGGTTTCTGAAACGGATTTGCAGGAATTCCTGAAGGAATGCAGTAGCAAAGA  
 AGAGTATCAGAAAGAGTCTCAGCCTTCTGCTCCTGCATCTGCTGTCGGAGGAGGAAAAGAAGTATGAT  
 CACTTGATACCTATTAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC211195 protein sequence  
 Red=Cloning site Green=Tags(s)

MARQPYRFPQARIPERGSVFRLLTVRNAMHRDSEMKEECLREDLKFYFMSPCEKYRARRQIPWKLGLQI  
 LKIVMVTTLQVRFGLSNQLVFAFKEDNTVAFKHLFLKGYSGTDEDDYSCSVYTTQEDAYESIFFAINQYHQ  
 LKDITLGLTYGENEDNRIGLVCKQHYKGTMFPSNETLNIIDNDVELDCVQLDLQDLKSKPPDWKNSF  
 FRLEFYRLLQVEISFHLKGIQLQTIHSRELPCYVFQNTIIFDNKAHSGKIKIYFSDAKIEECKDLNIF  
 GSTQKNAQYVLFDAFVIVICLASLILCTRSIVLALRLRKRFLNFFLEKYKRPVCDTDQWEFINGWYVLV  
 IISDLMTIIGSILKMEIKAKNLNLYDLCSIFLGTSTLLVWVGVIRYLYGFQAYNVLILTMQASLPKVLRF  
 CACAGMIYLYGTYFCGWIVLGPYHDKFENLNTVAECLFSLVNGDDMFATFAQIQQKSILVWLF SRLYLVSF  
 ISLFIYMLSLFIALITDSYDTIKKFQQNGFPETDLQEFLEKCSSKEEYQKESSAFLSCICRRRRKRSD  
 HLIPIS

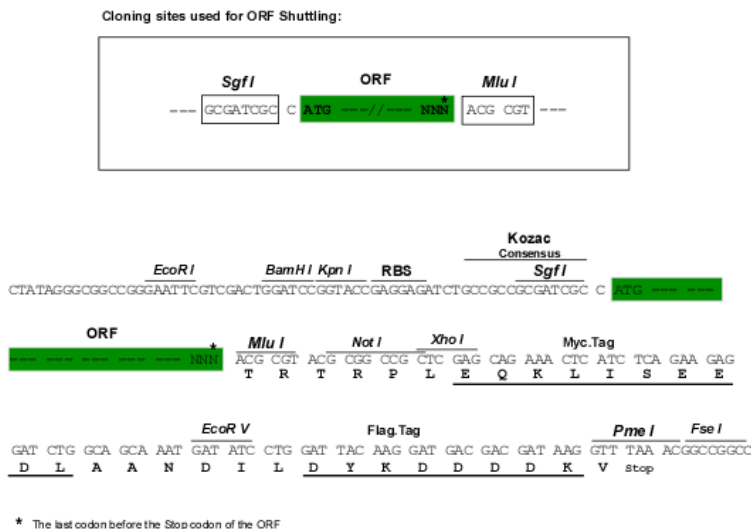
**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6590\\_e08.zip](https://cdn.origene.com/chromatograms/mk6590_e08.zip)

**Restriction Sites:**

Sgfl-Mlul

**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](#)

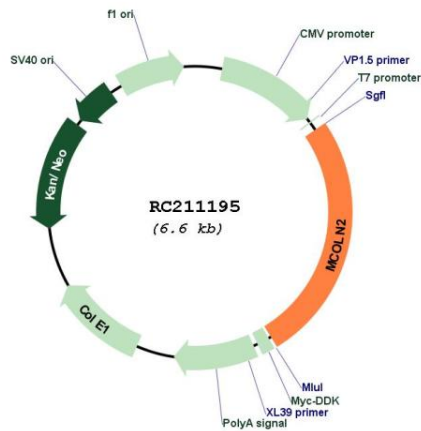
**Cytogenetics:** 1p22.3

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

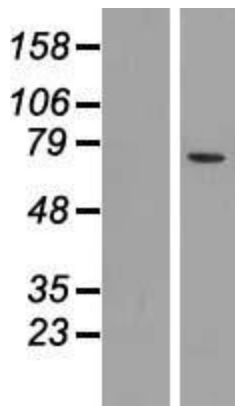
**MW:** 65.9 kDa

**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 mucopolipidosis IV (MIM 262650) (Karacsonyi et al., 2007 [PubMed 17662026]).[supplied by OMIM, Sep 2009]

**Product images:**



Circular map for RC211195



Western blot validation of overexpression lysate (Cat# [LY407109]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211195 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).