

Product datasheet for **MC219324**

Mcoln1 (NM_053177) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mcoln1 (NM_053177) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mcoln1
Synonyms:	2210015I05Rik; mucolipidin; TRPML1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC219324 representing NM_053177
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCACCCCGGCGGGCCGGCGCGCTCAGAGACTGAGCGGCTGCTGACCCCCAATCCTGGGTATGGGA
 CCCAGGTGGGACCTCACCAGCCCCAACACCCCCACAGAAGAGGAAGACCTCCGCCGCCGCTCAAGTA
 TTCTTTATGAGCCCATGTGACAAGTCCGGGCCAAAGGCCGCAAGCCCTGCAAGCTGATGCTGCAGGTG
 GTCAAGATCTTGGTGGTCACTGTGCAGCTATTCTCTTTGGGCTCAGCAACCAGCTGGTGGTGACATTCC
 GGAAGAGAACCATTGCCTCCGACATCTTCTGCTGGGTTACTCTGATGGGTCTGATGACACCTT
 TGCAGCTACACACAGGAGCAGCTCTACCAAGCCATCTTCTATGCTGTGGACCAGTACCTGATACTACCT
 GAGATATCCCTGGGCCGGTATGCCTATGTCGGTGGGGTGGGCTTGGGCAATGGATCAGCTTTGG
 CTCTCTGCCAGCGGTACTACCACGTGGCCATGTGGACCCAGCCAATGATACCTTTGACATTGATCCAAG
 GGTAGTCACTGACTGTATCCAGGTGGATCCTCCTGACAGACCCCTGACATCCCCAGTGAGGACTGGAC
 TTCTTGGATGGCAGCGCCAGTTACAAGAACCTCACACTGAAATCCACAAGCTGATCAACGTCCACATCC
 ACTTCCAGCTGAAGACAATTAACCTGCAGAGCCTCATCAACAATGAGATCCCTGATTGTTACACCTTCAG
 TATCCTGATCACATTTGACAATAAAGCGCACAGTGGGCGAATCCCATCCGCCTGGAGACCAAGACCCAC
 ATCCAGGAGTGCAAACACCCAGTGTCTCCAGACATGGAGACAACAGCTTCCGGCTTCTGTTTGTATGTGG
 TGGTTATCCTCACCTGCTCCCTGCTCCTGCTGTGCGCCCGCTCACTGCTCCGTGGCTTCTGCTGCA
 GAACGAGTTTGTGTATTCATGTGGCGGCGGGGTGGGAAATCAGCCTCTGGGAACGGCTGGAGTTT
 GTCAATGGCTGGTACATCCTGCTGGTACCAGTGACGTGCTCACCATCTCGGGACTGTCATGAAGATTG
 GCATTGAGGCAAAGAACCCTAGCCAGCTATGATGTCTGCAGTATTCTCTTGGGTACCTCCACTCTGCTAGT
 CTGGGTCCGTGTCATTTCGCTACCTGACATTTTTCCACAAGTACAACATCTTGATTGCCACGTTGCGAGTG
 GCACTGCCAGTGTATGCGTTTCTGCTGCTGTGGCTGTCATCTACCTGGGCTATTGCTTCTGTGGCT
 GGATCGTTCTAGGGCCCTACCATGTGAAGTTCGCTCGCTGTCCATGGTTTCTGAGTGTCTGTTCTCACT
 CATCAACGGAGACGACATGTTTGTGACGTTTCGCGGCCATGCAGGCCAGCAGGGTCACAGCAGCCTGGTG
 TGGCTCTTCTCCAGCTGTACCTCTACTCTTTCATCAGCCTTTCATCTACATGGTGTGAGCCTTTCA
 TTGCACTCATACCGCGCCTATGACACCATCAAGCACCCAGGAGGACTGGCACAGAGAAGAGTGAGCT
 CCAGGCCATACATCGAGCAGTGCCAGGATAGCCCCACATCTGGCAAGTCCGTCGTGGCAGTGGCTCAGCT
 TGTAGCCTTTTCTGCTGTGTGGAAGGGACTCCCGGAGGACCATTGCTGCTGGTGAAC**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_053177
Insert Size: 1743 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_053177.1](#), [NP_444407.1](#)

RefSeq Size: 2039 bp

RefSeq ORF: 1743 bp

Locus ID: 94178

UniProt ID: [Q99J21](#)

Cytogenetics: 8 1.92 cM

Gene Summary:

Nonselective cation channel probably playing a role in the regulation of membrane trafficking events and of metal homeostasis (PubMed:29019981). Proposed to play a major role in Ca(2+) release from late endosome and lysosome vesicles to the cytoplasm, which is important for many lysosome-dependent cellular events, including the fusion and trafficking of these organelles, exocytosis and autophagy. Required for efficient uptake of large particles in macrophages in which Ca(2+) release from the lysosomes triggers lysosomal exocytosis. May also play a role in phagosome-lysosome fusion (PubMed:23993788). Involved in lactosylceramide trafficking indicative for a role in the regulation of late endocytic membrane fusion/fission events. By mediating lysosomal Ca(2+) release is involved in regulation of mTORC1 signaling and in mTOR/TFEB-dependent lysosomal adaptation to environmental cues such as nutrient levels (PubMed:25733853). Seems to act as lysosomal active oxygen species (ROS) sensor involved in ROS-induced TFEB activation and autophagy (By similarity). Functions as a Fe(2+) permeable channel in late endosomes and lysosomes. Proposed to play a role in zinc homeostasis probably implicating its association with TMEM163 (By similarity). In adaptive immunity, TRPML2 and TRPML1 may play redundant roles in the function of the specialized lysosomes of B cells (PubMed:17050035).[UniProtKB/Swiss-Prot Function]