

## Product datasheet for **MR208605**

### **Mcoln2 (NM\_001005846) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mcoln2 (NM_001005846) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mcoln2
Synonyms:	3300002C04Rik; AI549968; C86638; TRPML2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208605 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCGTCTCTCGATTCTGAGGTGAGGGAAGAGTGTCTGAGGGAAGACCTGAAGTTCTACTTCATGAGTC  
 CCTGTGAGAAGTACCGAGCCAGACGTCAGATCCCGTGAAACTGGGCTTGACAGATATTGAAGATAGTCAT  
 GGTAACCCACACAGCTTGTTCGGTTTGGCTTAAGTAACCAAGTTGGTGGTGGCTTCAAAGAAGATAACACT  
 GTTGCTTTTAAGCACTTGTTTTTGAAAGGATTTCTGGAGTTGATGAAGATGACTACAGCTGTAGCATAT  
 ACACTCAGGAGAACACCTATGAGAGCATCTTTTTGCTATAAAGCAGTATCGTCATCTGAAGAATATTTT  
 CCTGGCAACCCTTGTTATGGAGAAAGTGAAGACAATAGAAGTGGCTTGAAGGTCTGTAAGCAGCACTAC  
 AAGACAGGGGCCATGTTTTCTTAACGAGACCCTGAACATTGACAGTGACATTGAGACAGACTGCATTC  
 ACCTGGACCTTCAGGTGCTCACCACGGAACCCGAGGACTGGGCACAGACATCTTTCTTCAGGCTGGATTT  
 TTATCGGCTCGTCAAGTTGATATCTCCTTTGCCCTCAAAGGAATTGACCTACAGGCAGTTCATCCCGA  
 GAGATACCGACTGTTACCTCTTTCAGAATACGATTACCTTCGACAACACAGCCACAGTGGGAAAATCA  
 AAATCTATCTCAACAGCGAGGCCAACATCGAAGAGTGTAAAAACATGAACATATCTGGGTCTACTCAGAG  
 AAGCACTCACTACCTCCTGGTGTGTTGATGTGTTGTCATTATGATCTGCCTGGCATCCCTTATCCTGTGC  
 ACGAGATCCATTGTTCTTGCTCTGAGGCTGAGGAAGAGATTTCTAAACTTCTTCTGGAGAAGTACAAAAC  
 AGCGCGTGTGTGGCGCTGACCAGTGGGAATTCGTCAACGGATGGTACGTCCTGGTCACTATCAGCGACCT  
 CATGACAATAATTGGATCCATATTGAAGATGAAATCAAAGCCAAGAAGCTCACAACTATGACGTGTGC  
 AGCATCTTGCTCGGGACGTCGACGCTCTTTGTCTGGGTTGGAGTCATCAGATATCTGGGTTACTTTCAGA  
 CGTACAACGTGCTCATTTTAACCATGCAAGCCTCACTGCCAAAGTTCTCCGGTTCTGTGCTGGCTGG  
 CATGATCTACCTGGGTTACACCTTCTGCGGCTGGATTGTCTTAGGACCGTACCACGAGAAGTTTGAAAAC  
 CTGAACATAGTCGCTGAATGCCTGTTTTCTCTGGTCAACGGCGATGACATGTTTGCCACGTTGCTCAGA  
 TCCAGCAGAAGAGCATTCTGGTGTGGTGTTCAGCCGCCTCTACCTGTATTCTTTTATCAGCCTATTCAT  
 TTACATGGTCTCAGCCTCTTATCGCGCTCATACCGACTCTTACCACACCATTAAGAAGTACCAGCAG  
 CATGGGTTTCTGAAACAGATCTGCAGAAATCCTGAAGGAGAGCGGAAGCAAAGATGGGTACCAGAAGC  
 AGCCATCGGCCTTGCTGTCTGCTGTCTGAGGAGGAGAAGAAACATGACCACTTGATTCTCAT  
 TGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208605 protein sequence  
 Red=Cloning site Green=Tags(s)

MASLDSEVREECLREDLKFYFMSPEKYRARRQIPWKLGLQILKIYVMTTQLVRFGLSNQLVFAFKEDNT  
 VAFKHLFLKGFSGVDEDDYSCSIYQENTYESIFFAIKQYRHLKNI SLATLGYGESEDNRTGLKVCKQHY  
 KTGAMFSSNETLNIDSDIETDCIHLDLQVLTTEPEDWAQTSFFRLDFYRLVQVDISFALKGIDLQAVHSR  
 EIPDCYLFQNTITFDNTAHSGKIKIYLNSEANIEECKNMNISGSTQRSTHYLLVFDVFMICLASLILC  
 TRSIVLALRLRKRFLNFFLEKYQRVCGADQWEFVNGWYVLTISDLMTIIGSILKMEIKAKKL TNYDVC  
 SILLGTSLFVWVGVIYLYGYFQTYNVLILTMQASLPKVLRFACAGMIYLYGYFCGWIVLGPYHEKFEN  
 LNIVAECFLSLVNGDDMFATFAQIQQSILVWLF SRLYL YSFISLFIYMLSLFIALITDSYHTIKKYQQ  
 HGFPEIDLQKFLKESGSKDGYQKQPSALLSCLCCLRRRRNNDHLILID

**TR**TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001005846

**ORF Size:** 1617 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\\_001005846.1](#), [NM\\_001005846.2](#), [NP\\_001005846.1](#)

**RefSeq Size:** 2496 bp

**RefSeq ORF:** 1617 bp

**Locus ID:** 68279

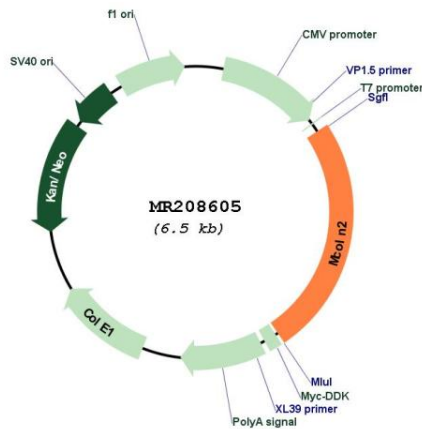
**UniProt ID:** [Q8K595](#)

**Cytogenetics:** 3 H2

**MW:** 62.3 kDa

**Gene Summary:** Nonselective cation channel probably playing a role in the regulation of membrane trafficking events. Acts as Ca(2+)-permeable cation channel with inwardly rectifying activity (PubMed:19763610). May activate ARF6 and be involved in the trafficking of GPI-anchored cargo proteins to the cell surface via the ARF6-regulated recycling pathway (By similarity). May play a role in immune processes. In adaptive immunity, TRPML2 and TRPML1 may play redundant roles in the function of the specialized lysosomes of B cells (PubMed:17050035). In the innate immune response, may play a role in the regulation of chemokine secretion and macrophage migration (PubMed:26432893). Through a possible and probably tissue-specific heteromerization with MCOLN1 may be at least in part involved in many lysosome-dependent cellular events.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR208605