

Product datasheet for **MG225394**

Mcoln3 (NM_134160) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mcoln3 (NM_134160) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mcoln3
Synonyms:	6720490O21 Rik; TRPML3; Va
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG225394 representing NM_134160
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCAAATCCCAGGTGCTGGTTAGCAGCTGCAGAGCTCGCAAGATGAAAGCCCTGCACCTTTCCACC
 CGAGCTCGTCCCGTCAGAGCAGCTTCTCTTAGAAGACCAGATGAGGCGGAAACTCAAGTCTTTTTTAT
 GAATCCTTGTGAGAAGTTCTGGGCTCGGGTAGGAAGCCATGAAACTTGCCATACAGATTCTGAAAATC
 GCGATGGTACTATCCAGCTGGTTCTGTTTGGACTAAGTAACCAGATGGTAGTAGCTTCAAGAGGAGA
 AACTATAGCCTCAAACACCTTCTCTAAAGGGCTACATGGATCGAATGGACGACACCTATGCAGTGTA
 CACTCAGAGTGAAGTGTATGACCAGATCATCTTGCAGTGACCCAGTACTTGCAGCTTCAGAACATCTCC
 GTGGGCAATCACGCTTATGAGAACAAGGGGACTAAGCAGTCGGCGATGGCAATCTGTCAGCACTTCTACA
 GGCAAGGAACCATCTGCCCGGGAACGACACCTTTGACATCGATCCAGAAGTTGAAACAGAATGTTTCT
 TGTAGACCCAGATGAAGCTTCCACCTTGAACGCCTGGAGAAAAAACTCAACCTGAGCTGGACTTC
 CACAGACTTCTGACGGTGGAGCTCCAGTTAAAGCTCAAAGCCATCAATCTGCAGACAGTTCGACACCAGG
 AGCTTCTGACTGTTACGACTTTACGCTGACTATAACATTCGACAACAAGGCTCACAGTGAAGAATCAA
 AATAAGCTTAGACAACGACATTTCTATCAAAGAATGCAAAGACTGGCATGTGTCTGGATCAATTCAGAAG
 AACACACACTACATGATGATCTTTGATGCCTTTGTCTTCTGACCTGCTTGGCCTCACTGGTGTGTG
 CCAGGTCTGTGATTAGGGGTCTTCAGCTTCAGCAGGAGTTTGTCAACTTCTTCTTCTTCACTACAAGAA
 GGAAGTTTCGGCTCTGATCAGATGGAGTTCATCAACGGGTGGTACATTATGATCATCATTAGTGACATA
 TTGACAATCGTTGGATCAGTTCGAAAAATGAAATCCAAGCCAAGAGTCTACAAGCATGATGTCTGCA
 GCATCTTCTCGGACGTCAACTATGCTGTGTGGCTTGGAGTTATCCGATACCTGGTTCCTTTCGCGAA
 GTACAATCTCCTTATTCTGACCCTCCAGCAGCGCTGCCCAACGTCATGAGGTTCTGTTGCTGCGCTGCT
 ATGATCTATCTAGGCTATTGCTTTTGGGATGGATTGTGCTGGGCCCTTACCATGAGAAGTTCGGTCC
 TGAACAGGGTCTCCGAGTGCCTGTTCTCGCTGATAAACGGAGACGATATGTTTTCCACATTTGCGAAAT
 GCAGCAGAAGAGTTACCTGGTGTGGCTGTTTCAGCCGAGTCTACCTGACTCGTTCATCAGCCTTCTCATT
 TACATGATTCTGAGCCTTTTTCATCGCGCTCATCACAGACACATACGAAACAATTAAGCACTACCAGCAAG
 ATGGCTTCCAGAGACGGAACCTCGAAAGTTTATAGCGGAATGCAAAGACCTCCCAACTCCGAAAATA
 CAGATTAGAAGATGACCCTCCGGTCTTACTCTGCTGCTGCAAAAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG225394 representing NM_134160
 Red=Cloning site Green=Tags(s)

MANPEVLVSSCRARQDESPCTFHPSSPSEQLLLEDQMRRKLFKFFMNPCEKFWARGRPWKLAIQILKI
 AMVTIQLVLFGLSNQMVVAFKEENTIAFKHLFLKGYMDRMDTYAVYTQSEVYDQIIFAVTQYLQLQNIS
 VGNHAYENKGTKQSAMAICQHFYRQGTICPGNDFDIDPEVETECFLVEPDEASHLGTPGENKLNLSLDF
 HRLLTVELQFKLKAINLQTVRHQELPDCYDFTLITFDNKAHSGRIKISLDNDISIKECKDWHVSGSIQK
 NTHYMMIFDAFVILTCLASLVLCARSVIRGLQLQEQEFVNFLLHYKKEVSASDQMEFINGWYIMIIISDI
 LTIVGSVLKMEIQAKSLTSYDVCSILLGTSTMLVWLVIRYLGFFAKYNLLILTLQAALPNVMRFCCCAA
 MIYLYGFCGWIVLGPYHEKFRSLNRVSECLFSLINGDDMFSTFAKMQQKSYLVWVFSRVLYSFIISLFI
 YMILSLFIALITDITYETIKHYQQDGFPELTKFIAECKDLPSNGKYRLEDDPPGSLCCCKK

TRTRPLE - GFP Tag - V

Restriction Sites:

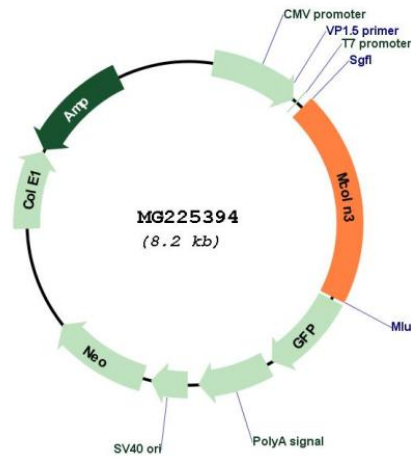
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_134160
ORF Size:	1659 bp
OTI Disclaimer:	<p>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.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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_134160.1 , NP_598921.1
RefSeq Size:	1712 bp
RefSeq ORF:	1662 bp
Locus ID:	171166
UniProt ID:	Q8R4F0
Cytogenetics:	3 71.03 cM

Gene Summary:

Nonselective ligand-gated 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:17989217). Mediates release of Ca(2+) from endosomes to the cytoplasm, contributes to endosomal acidification and is involved in the regulation of membrane trafficking and fusion in the endosomal pathway (By similarity). Does not seem to act as mechanosensory transduction channel in inner ear sensory hair cells. Proposed to play a critical role at the cochlear stereocilia ankle-link region during hair-bundle growth (PubMed:18801844). Involved in the regulation of autophagy. Through association with GABARAPL2 may be involved in autophagosome formation possibly providing Ca(2+) for the fusion process (PubMed:24269818). Through a possible and probably tissue-specific heteromerization with MCOLN1 may be at least in part involved in many lysosome-dependent cellular events. Possible heteromeric ion channel assemblies with TRPV5 show pharmacological similarity with TRPML3 (By similarity).[UniProtKB/Swiss-Prot Function]