

Product datasheet for MR211527

Mical1 (NM_138315) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mical1 (NM_138315) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mical1
Synonyms:	MICAL; MICAL-1; Nical
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211527 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCATCACCCGCTCCACCAACCCAGCACATGACCACTTTGAGACCTTTGTGCAGGCACAGCTGTGCC
AGGATGTACTGAGTAGCTTTCAGGGCTCTGTAGAGCCCTGGGAGTGGAGTCTGGTGGGGGATTGTCCCA
GTACCACAAGATCAAGGCCAGCTCACTACTGGAGTGCCAAGTCACTGTGGCCAAGTTGGACAAGAGA
GCGAGCCAGCCTGTGTACCAGCAAGGCCAGGCCTGTACCAACACCAAGTGTCTCGTGGTAGGTGCCGGC
CTTGCGGACTTCGGGCTGCTGTGGAGTTGGCACTGTTAGGTGCCGAGTGGTACTTGTGGAAAAGCGTAT
CAAGTTCTCTAGGCACAATGTGCTCCATCTCTGGCCCTTACCATCCATGACCTTCGGGCACTTGGGGCC
AAGAAGTTCTACGGGCGCTTCTGTACTGGCACCCTGGACCATATCAGCATCCGACAGCTTCAGCTGCTTC
TACTGAAGGTGGCCTTACTGTTGGGGTGGAGATTCACTGGGGCGTCAAATTCAGTGGCCTCCAGCCCCC
TCCCAGAAAAGGGAGTGGCTGGCGTGCTCAGCTCCAGCCCAACCCCCAGCCCAACTGGCCAGCTATGAG
TTTGATGTCCTCATCTCAGCTGCAGGAGGCAAATTTGTCCCTGAAGGCTTCACTATACGAGAGATGCGTG
GCAAATGGCCATTGGCATCACAGCCAATTTGTGAATGGGCGCACGGTGGAGGAGACACAGGTGCCGGA
GATCAGTGGTGTAGCTCGAATCTACAACCAAAAATCTCCAGAGCCTGCTCAAAGCCACAGGTATTGAT
CTGGAGAACATTGTATACTACAAAGACGAGACCCACTACTTTGTGATGACAGCCAAGAAGCAGTGCCTGC
TGAGGCTGGGGTGTGCGCCAGGACTTGTGAGAGACTGATCAGCTGCTGGGCAAAGCTAATGTGGTACC
GGAGGCTCTGCAGCGCTTGGCCAGAGCAGCGGCTGACTTCGCCACACATGGCAAGCTTGGAAAAGTGGAG
TTTGCTCAGGATGCACGCGGGCGGCTGATGTGGCGGCTTCGACTTCACAAGCATGATGCGGGCAGAGA
GTTCCGCTCGTGTCCAAGAAAAGCATGGTGTGCTCGCCTACTGCTGGGGCTGGTGGGGGACTGCCTAGTGG
GCCCTTCTGGCCTCTGGCACTGGAGTAGCCGAGGCTTCTTGGCAGCCTTCGATGCAGCCTGGATGGT
AAGCGGTGGCAGAGGGCGCTGGCCGCTAGAGGTGTTGGCTGAACGCGAGAGCTGTACCAGCTTCTGT
CACAAACATCCCCGAGAATATGCATCGAAATGTAGCCAGTATGGTGGACCTGCCACCCGATACCC
CAACCTGAACCTCCGGGCTGTAACCCCAATCAGGTACAGGACCTCTATGATATGATGGACAAGGAGCAT



GCTCAGAGGAAGAGTGACGAGCCGGATTCCAGGAAGACAACCACAGGGTCCGCAGGCACGGAGGAGCTTC
 TGCACTGGTGCCAGGAGCAGACAGCTGGCTTCTCTGGAGTCCATGTCAGTACTTTTCTTCTCTGCTGGGC
 TGATGGGCTAGCTCTGTGTGCCCTGGTACACCACCTACAGCCTGGCCTGCTGGAACCCCTCGGAGCTGCAG
 GGCATGGGAGCTCTAGAAGCCACTACCTGGGCACTGAGGGTGGCAGAACATGAGCTAGGCATCACACCAG
 TGTTGTCTGCACAGGCAGTCATGGCTGGCAGTGACCCACTGGGTCTCATTGCCTACCTCAGCCACTTCCA
 CAGTGCCTTCAAGAACACGAGCCACAGCTCAGGCCTTGTAGCCAGCCCTCTGGAACCCCAAGTGCATATA
 CTTTTCTTGGCAAACCTCAGAGGAGCCTACAACGGACCCGCCAAGGTAGACGAGGAGACTCCGAGCA
 CTGAGGAGCCGCCTGTCTCCGAGCCAGTATGTCTCAAACACTCCAGAGCTCTCTGAACACCAGGAGGC
 TGGGGCAGAGGAGCTGTGTGAACTCTGTGGAAACATCTGTACATCCTAGAACGCTTCTGTGTGGATGGC
 CATTCTTTTACCAGGAGCTGCTTCTGCTGCCATACCTGTGAGGCCACATTGTGGCCAGGTGGCTATGGGC
 AACATCCAGGAGATGGACATTTCTACTGTCTCCAGCACCTACCCAGGAGGACAAAAGGAGGCTGACAA
 CAATGGAAGTCTGGAGAGCCAGGAGCTCCCAACACCAGGAGACAGCAACATGCAGCCAGACCCCTCTCT
 CCTCTGTGACGAGGGTACGCCCTGTCCAAGCCCGAGCCAGCCTGCACGTGGGTGATCCGGCTCTCCA
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 CCCAAGGAGCTGCTCAGACTTGGCCGAGAATCCCTGAAGAGCAGCTTTGTGGGCTGGGGTGTGCCAGTC
 CAAGCACCACAAGTTCCTGAAGCCATAGAGAAAGGGGATGATGAGGAGGAGGAAGAGGAAGAAGAGGAGG
 AGGAGGAGGAGCCACTGCCACCTTTGGAGCCAGAGTTGGAGCAGACTCTGCTGACCTTGGCCAAGAACCC
 AGGTGCCATGACTAAGTACCCAACGTGGCGTCAACCCCTCATGCGCCGTGCCAAAGAGGAGGAGATGAAG
 AGGTTTTGCAAGGCCAGGCCATCCAGCGAAGACTGAACGAGATTGAGGCCACTATGCGGGAGCTGGAGG
 CCGAAGGCACGAAGCTGGAGCTGGCCTTGGAGAAAGAGAGTAGCTCTCCAGAACAGCAGAAGAACTCTG
 GCTGGATCAGCTGCTACGGCTCATTGAGAAGAAGACAGCCTAGTACTGAAGAGGCCGAGCTCATGATC
 ACGGTGCAGGAGCTGGATCTGGAAGAGAAGCAGCGGCAGCTAGACCACGAGTTGCGGGGCTACATGAATC
 GGAAGAAACTATGAAGACAGAGCCGACTGCAGTCTGAGAACCAGTCTAAGGAAGCTGTTGGAGGT
 GGTGAACCAGCGGATGCTCTGATCCAATTCAGGAGGAACGGAGGCTCAGAGAGATGCCTGCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR211527 protein sequence
 Red=Cloning site Green=Tags(s)

MASPASTNPAHDHFETVQAQLCQDVLSSFQGLCRALGVESGGLSQYHKIKAQLNYWSAKSLWAKLDKR
 ASQPVYQQGQACTNNTKCLVVGAGPCGLRAAVELALLGARVVLVEKRIKFSRHNVLHLWPFTHIDLRLALGA
 KKFYGRFCTGLDHSIRQLQLLLLKVALLLGVIEHWGVKFTGLQPPPRKGSWRAQLQPNNPQLASYE
 FDVLI SAAGGKFVPEGFTIREMRGKLAIGITANFVNGRTVEETQVPEISGVARIYNQKFFQSLKATGID
 LENIVYKDETHYFVMTAKKQCLRLGVL RQDLSETDQLLGKANVPEALQRFARAAADFATHGKLGKLE
 FAQDARGRPDVAADFDTSMRAESSARVQEKHGARLLLGLVGDCLEPFWPLGTGVARGFLAAFDAAMV
 KRWAEGAGPLEVLAERESLYQLLSQTSPEMHRNVAQYGLDPATRYPNLNLRAVTPNQVDLYDMMDKHE
 AQRKSDEPDSRKTGTSAGTEELLHWCQEQTAGFPVHVTDSSSWADGLALCALVHHLQPLLEPSELQ
 GMGALEATTWALRVAEHELGITPVLSAQAVMAGSDPLGLIAYLSHFHSAFKNTSHSSGLVSPSGTSPAI
 LFLGKLRSLQRTRAKVDEETPSTEPPVSEPSMSPNTPSELSEHQEAGAEELCELCGKHL YILERFCVDG
 HFFHRSCFCCHTCEATLWPGGYGQHPGDGHFYCLQHLPEQKEADNNGSLESQELPTPGDSNMQDPSS
 PPVTRVSPVSPSPARRLIRLSSLERLRLSSLNIIPDSGAEPKPPRSCSDLARESLKSSFVWGVPV
 QAPQVPEAIEKGDDEEEEEEEEEEEPLPLEPELEQTLLTLAKNPGAMTKYPTWRRLMRRAKEEEMK
 RFCKAQAIQRRLEIEATMRELEAEGTKLELALRKESSSPEQKKLWLDQLRLIQKNSLVTEEAEELMI
 TVQELDLEEKQRQLDHEL RGYMREETMKTEADLQSENQVLRKLELVNQRDALIQFQEERRLEMPA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_138315

ORF Size: 3147 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.

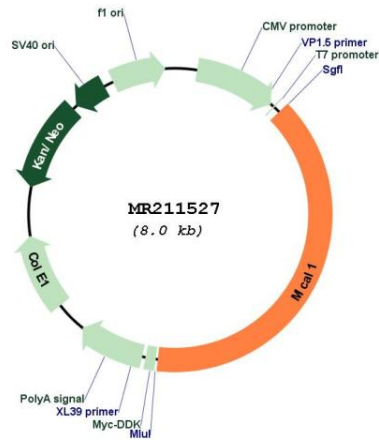
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

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_138315.2 , NP_612188.1
RefSeq Size:	3563 bp
RefSeq ORF:	3147 bp
Locus ID:	171580
UniProt ID:	Q8VDP3
Cytogenetics:	10 B1
MW:	116.8 kDa
Gene Summary:	<p>Monooxygenase that promotes depolymerization of F-actin by mediating oxidation of specific methionine residues on actin to form methionine-sulfoxide, resulting in actin filament disassembly and preventing repolymerization. In the absence of actin, it also functions as a NADPH oxidase producing H₂O₂ (By similarity). Acts as a cytoskeletal regulator that connects NEDD9 to intermediate filaments. Also acts as a negative regulator of apoptosis via its interaction with STK38 and STK38L; acts by antagonizing STK38 and STK38L activation by MST1/STK4. Involved in regulation of lamina-specific connectivity in the nervous system such as the development of lamina-restricted hippocampal connections. Through redox regulation of the actin cytoskeleton controls the intracellular distribution of secretory vesicles containing L1/neurofascin/NgCAM family proteins in neurons, thereby regulating their cell surface levels. May act as Rab effector protein and play a role in vesicle trafficking.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR211527