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Product datasheet for MC223581

Mical2 (NM_001193305) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mical2 (NM_001193305) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mical2
Synonyms:	5330438E18Rik; 9530064J02; MICAL-2; mKIAA0750
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

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>MC223581 representing NM_001193305
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGAGAGAATGAAGATGAGAAGCAGGCGCAGGCCAGCCAGGTCTTCGAGAACTTTGTGCAAGCTACCA
CATGCAAAGGGACCCTCCAGGCCTTCAACATCCTCACCTGCCTCCTGGACCTAGATCCGCTGGACCATAG
GAACTTCTACTCCCAGCTCAAGTCCAAGGTGAACACCTGGAAGGCCAAAGCCCTGTGGCACAAACTGGAT
AAGCGCGGCTCCCACAAGGAGTACAAGCGAGGAAAAGCCTGCTCGAACACTAAGTGTCTCATCGTCGGAG
GAGGACCATGTGGCTTGCGCACTGCCATTGAACTTGCCTACCTGGGAGCCAAAGTGGTTGTGGTGGAGAA
GAGGGACACCTTCTCCCGGAACAATGTCCTGCACCTCTGGCCCTTCACTATCCATGACCTGCGGGGCCTG
GGGGCCAAGAAGTTCTATGGGAAATTCTGTGCTGGCTCCATCGACCACATCAGTATCCGACAACTGCAGC
TTATCCTCTTCAAGGTGGCCCTGATGCTGGGAGTGGAGGTCCACGTGAATGTGGAGTTTGTGAGGGTGCT
GGAGCCTCCTGAAGACCAAGAGAATCAAAAAGTTGGATGGCGGGCAGAATTCCTTCCTGCAGACCACGCC
CTGTCTGACTTTGAGTTTGATGTCATCATCGGTGCTGACGGTCACAGGAACACGCTAGAAGGCTTCAGGA
GGAAAGAGTTCCGAGGGAAGCTGGCCATCGCCATCACCGCCAACTTCATAAACAGGAACAGCACAGCTGA
GGCCAAGGTGGAGGAGATCAGTGGTGTTGCCTTCATCTTCAACCAGAAGTTCTTCCAGGACCTGAAGGAA
GAAACAGGGATTGATCTCGAGAACATTGTTTACTATAAGGACAGTACCCACTACTTTGTCATGACAGCCA
AGAAGCAGAGCCTGCTGGACAAGGGCGTCATCCTTAATGACTACATTGACACAGAGATGCTGCTGTGTTC
GGAGAATGTGAACCAGGACAACCTGCTCTCCTACGCCAGAGAAGCCGCTGACTTTGCCACCAACTACCAG
CTGCCATCCTTAGACTTTGCCATCAATCACAACGGGCAGCCTGACGTGGCCATGTTCGACTTCACCTCCA
TGTATGCCTCAGAGAACGCAGCTCTGATGCGTGAGCGCCAGGCACACCAGCTGCTCGTGGCTCTTGTGGG
CGACAGCCTGCTTGAGCCATTTTGGCCCATGGGCACAGGCTGTGCCCGAGGCTTCCTGGCAGCCTTTGAC
ACGGCATGGATGGTGAAGAGCTGGGACCAGGGCACCCCTCCCCTGGAGGTATTAGCTGAAAGAGAGAGTC
TTTACAGGCTGTTACCTCAGACAACCCCAGAGAACATCAACAAAAATTTTGAGCAGTACACATTGGACCC
AGCCACGCGGTACCCAAACCTCAACCTGCACTGCGTCAGGCCTCACCAGGTGAAGCATTTGTACATCACT
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AAGGAGATGGACCGCTTCCCTCTCGAGAGATGGGGCTCAGTGAGGAGATCTGTCAGCCTCTCCAGGCGGG
AGTCAGACATCCGGCCTAACAAGCTTTTAACCTGGTGCCAGCAGCAGACCAAGGGTTACCAGCACGTCAG
AGTCACTGACCTGACCACATCCTGGCGCAGCGGCTTGGCCCTGTGTGCCATCATCCACAGCTTCCGGCCA
GAGCTGATCAACTTTGACTCGCTGAATGAAGATGACGCTGTGGAGAACAACCAACTGGCATTTGATGTGG
CCAAGCGTGAGTTTGGGATCCTGCCTGTGACCACAGGCAAAGAGATGGCATCTACCCAGGAGCCAGACAA
GCTCAGCATGGTCATGTACCTCTCCAAGTTCTATGAGCTCTTCCGGGGCACTCCACTGAGACCCATGGAT
TCCTGGCGTAAAAACTATGGAGAAAATGCTGACTTTGGCTTGGGCAAAACATTCATTCAGAATAACTATC
TCAACCTCACATTGCCCAGAAAGAGGACCCCACGGGTAGACACCCAGACTGAAGAGAATGACATGAACAA
GAGGCGGCGACAAGGCTTCAACCACCTGGAAGAGCTGCCATCCTTCTCCAGCCGCAGCCTGGGCTCCAGT
CAAGAGTATGCTAAAGAAAGTGGCAGTCAGAACAAGGTCAAGCACATGGCCAATCAGCTGCTAGCCAAGT
TTGAGGAGAACACTCGGAACCCTTCAGTCGTGAAACAGGACTGCCGCCGGGTCTCAGGCATAGGTAAGCC
TGTCCTGTGCTCTGCCTCTCGCCCTCCTGGCACCTCTTGCTGCCCCAAGCTGGAGGAGTCCACTCCCAGG
CTTCCACCTCCTCTGAAAAGGCAGTTCTCCTCCACGGTGGCAACAGGACAGGTGCTCAGAGAACTCAACC
AAGTACCGGCTAGTGGCGAGTGCCCCAGCAGACCCTGGAGAGCCAGGGCCAAGTCAGACCTGCAACTGGG
TGGGGTTGAAAATCTCGCTACCCTGCCTCGCACCTGCCAAGGGGCACTGGCCCTGTCCGGGGTGCTGCGG
CGCCTACAGCAAGTAGAAGAAAAGGTGCTTCAGAAGAGGGCCCAGAACTTGGCTAACAGGGAATTTCACA
CAAAGAACATTAAAGAGAAGGCAGCTCACCTGGCCTCCATGTTTGGACACGGGGATTTACCACAGGATAA
GCTCCTATCTAAACGCGTGCCTCACGCTCATCCTCCATCTCCTCCCTCTTGCCTTCCGTCTCCTCATCCA
GCTGCTGCTTCCTCTCCACCCGCTGCCGACTCTGTTTCTCCTGCCAGAAAGCTGACAGTAGGGAAAGTAT
CCAGCGGAATAGGGGCTGCAGCTGAAGTTCTGGTCAATCTGTACTTGAATGATCACAGACCTAAGACACA
GGCCACCTCTCCAGACCTGGAATCCCCGAGAAAGGCATTCCCCCTGAGCCTGGGCGGCAGAGACACCTGC
TACTTTTGTAAGAAGCGTGTATACATGATAGAGCGGCTGAGTGCTGAGGGCCACTTTTTCCACCAAGAGT
GCTTCCGTTGCAGCGTCTGCAGTGCCACCCTGCGCCTGGCTGCCTATGCCTTTGACTGCGATGAAGGCAA
ATTTTACTGCAAGCCCCATTTTGTTCACTGCAAAACCAGTAGCAAACAGCGAAAGAGACGGGCAGAGCTG
AATCAGCAAAGAGAGGAGGAAGGAACATGGCAGGAGCAGGAAGCACCTCGGAGGGATGTACCCACAGAAA
GCTCTTGTGCAGTGGCGGCCATCAGCACGCCAGAAGGCAGCCCCCCAGTACGTTTCAGCCTTCCAGTCCT
ACACCCACTTCTTGGCTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-RsrII

ACCN: NM_001193305

Insert Size: 3309 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_001193305.1, NP_001180234.1
RefSeq Size:	3680 bp
RefSeq ORF:	3309 bp
Locus ID:	320878
UniProt ID:	Q8BML1
Cytogenetics:	7 F1
Gene Summary:	Nuclear 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 (PubMed:23911929, PubMed:23927065). In the absence of actin, it also functions as a NADPH oxidase producing H(2)O(2) (By similarity). Acts as a key regulator of the SRF signaling pathway elicited by nerve growth factor and serum: mediates oxidation and subsequent depolymerization of nuclear actin, leading to increase MKL1/MRTF-A presence in the nucleus and promote SRF:MKL1/MRTF-A-dependent gene transcription. Does not activate SRF:MKL1/MRTF-A through RhoA (By similarity). [UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (A) encodes the longer isoform (A). Sequence Note: This RefSeq record was created from genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.