

## Product datasheet for **MC222919**

### **Mical1 (NM\_001164433) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mical1 (NM_001164433) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mical1
Synonyms:	MICAL; MICAL-1; Nical
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC222919 representing NM\_001164433  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCATCACCCGCTCCACCAACCCAGCACATGACCACTTTGAGACCTTTGTGCAGGCACAGCTGTGCC  
 AGGATGTACTGAGTAGCTTTAGGGGCTCTGTAGAGCCCTGGGAGTGGAGTCTGGTGGGGATTGTCCCA  
 GTACCACAAGATCAAGGCCAGCTCAACTACTGGAGTGCCAAAGTCACTGTGGGCCAAGTTGGACAAGAGA  
 GCGAGCCAGCCTGTGTACCAGCAAGGCCAGGCCTGTACCAACACCAAGCTTCAGCTGCTTCTACTGAAGG  
 TGGCCTTACTGTTGGGGTGGAGATTCAGTGGGCGTCAAATTCAGTGGCCTCCAGCCCCCTCCAGAAA  
 AGGGAGTGGTGGCGTGTCTCAGTCCAGCCCAACCCCAAGCCCAAGTGGCCAGCTATGAGTTTGTATGTC  
 CTCATCTCAGTGCAGGAGGCAAATTTGTCCCTGAAGGCTTCACTATACGAGAGATGCGTGGCAAATGG  
 CCATTGGCATCACAGCCAACTTTGTGAATGGGCGCACGGTGGAGGAGACACAGGTGCCGGAGATCAGTGG  
 TGTAGCTCGAATCTACAACCAAAAATTCCTCCAGAGCCTGCTCAAAGCCACAGGTATTGATCTGGAGAAC  
 ATTTGTATACTACAAGACGAGACCCCACTACTTTGTGATGACAGCCAAGAAGCAGTGCCTGCTGAGGCTGG  
 GGTGCTGCGCCAGGACTTGTACAGAGACTGATCAGCTGCTGGGCAAGCTAATGTGGTACCGGAGGCTCT  
 GCAGCGCTTTGCCAGAGCAGCGGCTGACTTCGCCACACATGGCAAGCTTGGGAACTGGAGTTTGTCTCAG  
 GATGCACGCGGGCGGCTGATGTGGCGGCTTCGACTTACAAGCATGATGCGGGCAGAGAGTTCGGCTC  
 GTGTCCAAGAAAAGCATGGTGTCTCGCTACTGCTGGGGCTGGTGGGGGACTGCCTAGTGGAGCCCTTCTG  
 GCCTCTGGGCACTGGAGTAGCCGAGGCTTCTTGGCAGCCTTCGATGCAGCCTGGATGGTGAAGCGGTGG  
 GCAGAGGGCGCTGGGCCGCTAGAGGTGTTGGCTGAACGCGAGAGCTTGTACCAGCTTCTGTCAAAAAT  
 CCCCAGAGAATATGCATCGAAATGTAGCCCAATGGGTTGGACCCTGCCACCCGATACCCCAACCTGAA  
 CCTCCGGCTGTAAACCCCAATCAGGTACAGGACCTCTATGATATGATGGACAAGGAGCATGCTCAGAGG  
 AAGAGTGACGAGCCGATTCCAGGAAGACAACCACAGGGTCCGACGGCAGGAGGAGCTTCTGCACTGGT  
 GCCAGGAGCAGACAGCTGGCTTCTGAGTCCATGTCACTGACTTTTCTCCTCGTGGGCTGATGGGCT  
 AGCTCTGTGTGCCCTGGTACACCACCTACAGCCTGGCCTGCTGGAACCCTCGGAGCTGCAGGGCATGGGA  
 GCTCTAGAAGCCACTACCTGGGCACTGAGGGTGGCAGAACATGAGCTAGGCATCACACCAGTGTGTCTG  
 CACAGGCAGTCATGGCTGGCAGTGACCCACTGGGTCTCATTGCCTACCTCAGCCACTTCCACAGTGCCTT  
 CAAGAACAGGACACAGCTCAGGCCTTGTGAGCCAGCCCTGGAACCCCAAGTGTATACTTTTCTT  
 GGCAAACCTCCAGAGGAGCTACAACGGACCCGCGCAAGGTAGACGAGGAGACTCCGAGCACTGAGGAGC  
 CGCTGTCTCCGAGCCAGTATGTCTCAAACACTCCAGAGCTCTCTGAACACCAGGAGGCTGGGGCAGA  
 GGAGCTGTGTGAACTCTGTGGGAAACATCTGTACATCCTAGAACGCTTCTGTGTGGATGGCCATTTCTT  
 CACCGGAGCTGCTTCTGTGCCATACCTGTGAGGCCACATTGTGGCCAGGTGGCTATGGGCAACATCCAG  
 GAGATGGACATTTCTACTGTCTCCAGCACCTACCCAGGAGGACCAAAAGGAGGCTGACAACAATGGAAG  
 TCTGGAGAGCCAGGAGCTCCCAACACCAGGAGACAGCAACATGCAGCCAGACCCCTCCTCTCCTCTGTG  
 ACGAGGGTCAGCCCTGTCCCAAGCCCAAGCCAGCCTGCACGTGGCTGATCCGGCTCTCCAGTTTGAAC  
 GCCTACGGCTGTCTCCTGAATATCATCCCTGACTCAGGAGCGGAGCCTCCTCCAAACCCCAAGGAG  
 CTGCTCAGACTTGGCCGAGAATCCCTGAAGAGCAGCTTTGTGGGCTGGGGTGTGCCAGTCCAAGCACCA  
 CAAGTTCTGAAGCCATAGAGAAAAGGGGATGATGAGGAGGAGGAAGAGGAAGAAGAGGAGGAGGAGGAGG  
 AGCCACTGCCACCTTTGGAGCCAGAGTTGGAGCAGACTCTGCTGACCTTGGCCAAGAACCAGGTGCCAT  
 GACTAAGTACCCAACGTGGCGTGAACCCCTCATGCGCCGTGCCAAAGAGGAGGAGATGAAGAGTTTTGC  
 AAGGCCAGGCCATCCAGCGAAGACTGAACGAGATTGAGGCCACTATGCGGGAGCTGGAGGCCGAAGGCA  
 CGAAGCTGGAGCTGGCCTTGGGAAAGAGAGTAGCTCTCCAGAACAGCAGAAGAACTCTGGCTGGATCA  
 GCTGCTACGGCTCATTGAGAAGAAGAAGCAGCCTAGTACTGAAGAGGCCGAGCTCATGATCACGGTGCAG  
 GAGCTGGATCTGGAAGAGAAGCAGCGGCAGCTAGACCACGAGTTGCGGGGCTACATGAATCGGGAAGAAA  
 CTATGAAGACAGAGGCCGACCTGCAGTCTGAGAACCAGGTCTAAGGAAGCTGTTGGAGGTGGTGAACCA  
 GCGGGATGCTCTGATCCAATTCAGGAGGAACGGAGGCTCAGAGAGATGCCTGCA**TAG**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_001164433
<b>Insert Size:</b>	2928 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001164433.1</a></u> , <u><a href="#">NP_001157905.1</a></u>
<b>RefSeq Size:</b>	3344 bp
<b>RefSeq ORF:</b>	2928 bp
<b>Locus ID:</b>	171580
<b>UniProt ID:</b>	<u><a href="#">Q8VDP3</a></u>
<b>Cytogenetics:</b>	10 B1
<b>Gene Summary:</b>	<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 H<sub>2</sub>O<sub>2</sub> (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> <p>Transcript Variant: This variant (2) lacks an exon in the 5' coding region compared to variant 1. The resulting protein (isoform 2) is shorter but has the same N- and C-termini compared to isoform 1.</p>