

## Product datasheet for **MG211527**

### Mical1 (NM\_138315) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Mical1 (NM\_138315) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Mical1  
**Synonyms:** MICAL; MICAL-1; Nical  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG211527 representing NM\_138315  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCATCACCCGCTCCACCAACCCAGCACATGACCACTTTGAGACCTTTGTGCAGGCACAGCTGTGCC  
 AGGATGTACTGAGTAGCTTTTCAGGGCTCTGTAGAGCCCTGGGAGTGGAGTCTGGTGGGGGATTGTCCCA  
 GTACCACAAGATCAAGGCCAGCTCACTACTGGAGTGCCAAGTCACTGTGGCCAAGTTGGACAAGAGA  
 GCGAGCCAGCCTGTGTACCAGCAAGGCCAGGCCTGTACCAACACCAAGTGTCTCGTGGTAGGTGCCGGC  
 CTTGCGGACTTCGGGCTGCTGTGGAGTTGGCACTGTTAGGTGCCGAGTGGTACTTGTGGAAAAGCGTAT  
 CAAGTTCTCTAGGCACAATGTGCTCCATCTCTGGCCCTTACCATCCATGACCTTCGGGCACTTGGGGCC  
 AAGAAGTTCTACGGGCGCTTCTGTACTGGCACCTGGACCATATCAGCATCCGACAGCTTCAGCTGCTTC  
 TACTGAAGGTGGCCTTACTGTTGGGGTGGAGATTCACTGGGGCGTCAAATTCAGTGGCCTCCAGCCCCC  
 TCCCAGAAAAGGGAGTGGCTGGCGTGCTCAGCTCCAGCCCAACCCCCAGCCCAACTGGCCAGCTATGAG  
 TTTGATGTCCTCATCTCAGCTGCAGGAGGCAAATTTGTCCCTGAAGGCTTCACTATACGAGAGATGCGTG  
 GCAAATGGCCATTGGCATCACAGCCAATTTGTGAATGGGCGCACGGTGGAGGAGACACAGGTGCCGGA  
 GATCAGTGGTGTAGCTCGAATCTACAACCAAAAATCTTCCAGAGCCTGCTCAAAGCCACAGGTATTGAT  
 CTGGAGAACATTGTATACTACAAAGACGAGACCCACTACTTTGTGATGACAGCCAAGAAGCAGTGCCTGC  
 TGAGGCTGGGGTGTGCGCCAGGACTTGTGAGAGACTGATCAGCTGCTGGGCAAAGCTAATGTGGTACC  
 GGAGGCTCTGCAGCGCTTGGCCAGAGCAGCGGCTGACTTCGCCACACATGGCAAGCTTGGAAAAGTGGAG  
 TTTGCTCAGGATGCACGCGGGCGGCTGATGTGGCGGCTTCGACTTCACAAGCATGATGCGGGCAGAGA  
 GTTCCGCTCGTGTCCAAGAAAAGCATGGTGTGCTCGCCTACTGCTGGGGCTGGTGGGGGACTGCCTAGTGA  
 GCCCTTCTGGCCTCTGGCACTGGAGTAGCCGAGGCTTCTTGGCAGCCTTCGATGCAGCCTGGATGGT  
 AAGCGGTGGCAGAGGGCGCTGGCCGCTAGAGGTGTTGGCTGAACGCGAGAGCTGTACCAGCTTCTGT  
 CACAAACATCCCCGAGAATATGCATCGAAATGTAGCCAGTATGGTGGACCTGCCACCCGATACCC  
 CAACCTGAACCTCCGGGCTGAACCCCAATCAGGTACAGGACCTCTATGATATGATGGACAAGGAGCAT



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GCTCAGAGGAAGAGTGACGAGCCGGATTCCAGGAAGACAACCACAGGGTCCGCAGGCACGGAGGAGCTTC  
 TGCACTGGTGCCAGGAGCAGACAGCTGGCTTTCCTGGAGTCCATGTCAGTACTTTTCTTCTCGTGGGC  
 TGATGGGCTAGCTCTGTGTGCCCTGGTACACCACCTACAGCCTGGCCTGCTGGAACCCCTCGGAGCTGCAG  
 GGCATGGGAGCTCTAGAAGCCACTACCTGGGCACTGAGGGTGGCAGAACATGAGCTAGGCATCACACCAG  
 TGTTGTCTGCACAGGCAGTCATGGCTGGCAGTACCCACTGGGTCTCATTGCCTACCTCAGCCACTTCCA  
 CAGTGCCTTCAAGAACACGAGCCACAGCTCAGGCCTTGTACGCCAGCCCTCTGGAACCCCAAGTGCATA  
 CTTTTCTTGGCAAACCTCCAGAGGAGCCTACAACGGACCCGCCAAGGTAGACGAGGAGACTCCGAGCA  
 CTGAGGAGCCGCCTGTCTCCGAGCCAGTATGTCTCAAACACTCCAGAGCTCTCTGAACACCAGGAGGC  
 TGGGGCAGAGGAGCTGTGTGAACTCTGTGGAAACATCTGTACATCCTAGAACGTTCTGTGTGGATGGC  
 CATTCTTTTACCAGGAGCTGTTCTGCTGCCATACCTGTGAGGCCACATTGTGGCCAGGTGGCTATGGGC  
 AACATCCAGGAGATGGACATTTCTACTGTCTCCAGCACCTACCCAGGAGGACAAAAGGAGGCTGACAA  
 CAATGGAAGTCTGGAGAGCCAGGAGCTCCCAACACCAGGAGACAGCAACATGCAGCCAGACCCCTCTCT  
 CCTCTGTGACGAGGGTACGCCCTGTCCAAGCCCGAGCCAGCCTGCACGTGGGTGATCCGGCTCTCCA  
 GTTTAGAAGCCCTACGGCTGTCTCCTGAATATCATCCCTGACTCAGGAGCGGAGCCTCTCCCAAACC  
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 CAAGCACCACAAGTTCCTGAAGCCATAGAGAAAGGGGATGATGAGGAGGAGGAAGAGGAAGAAGAGGAGG  
 AGGAGGAGGAGCCACTGCCACCTTTGGAGCCAGAGTTGGAGCAGACTCTGCTGACCTTGGCCAAGAACCC  
 AGGTGCCATGACTAAGTACCCAACGTGGCGTCAACCCCTCATGCGCCGTGCCAAAGAGGAGGAGATGAAG  
 AGGTTTTGCAAGGCCAGGCCATCCAGCGAAGACTGAACGAGATTGAGGCCACTATGCGGGAGCTGGAGG  
 CCGAAGGCACGAAGCTGGAGCTGGCCTTGGAGAAAGAGAGTAGCTCTCCAGAACAGCAGAAGAACTCTG  
 GCTGGATCAGCTGCTACGGCTCATTGAGAAGAAGACAGCCTAGTACTGAAGAGGCCGAGCTCATGATC  
 ACGGTGCAGGAGCTGGATCTGGAAGAGAAGCAGCGGCAGCTAGACCACGAGTTGCGGGGCTACATGAATC  
 GGAAGAAACTATGAAGACAGAGGCCACTGCAGTCTGAGAACCAGGTCTAAGGAAGCTGTTGGAGGT  
 GGTGAACCAGCGGATGCTCTGATCCAATTCAGGAGGAACGGAGGCTCAGAGAGATGCCTGCA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG211527 representing NM\_138315  
 Red=Cloning site Green=Tags(s)

MASPASTNPAHDHFETVQQLCQDVLSSFQGLCRALGVESGGGLSQYHKIKAQLNYWSAKSLWAKLDKR  
 ASQPVYQQQACTNNTKCLVVGAGPCGLRAAVELALLGARVVLVEKRIKFSRHNVLHLPFTIHDLRALGA  
 KKFYGRFCTGLDHI SIRQLQLLLLKVALLLGV EIHGWVKFTGLQPPPRKGSWRAQLQPNPPAQLASYE  
 FDVLI SAAGGKFVPEGFTIREMRGKLAIGITANFVNGRTVEETQVPEISGVARIYNQKFFQSLKATGID  
 LENIVVYKDETHYFVMTAKKQCLLRGLRQDLSETDQLLGKANVVPEALQRFARAAADFATHGKLGKLE  
 FAQDARGRPDVAADFDTSMRAESSARVQEKHGARLLLGLVGDCLEPFWPLGTGVARGFLAAFDAAMV  
 KRWAEGAGPLEVLAERESLYQLLSQTSPEMHRNVAQYGLDPATRYPNLNLRAVTPNQVDLYDMMDKH  
 AQRKSDEPDSRKTGTSAGTEELLHWCQEQTAGFPGVHVTDFSSSWADGLALCALVHHLQPGLLEPSELQ  
 GMGALEATTWALRVAEHELGITPVL SAQVMAGSDPLGLIAYLSHFHSAFKNTSHSSGLVSPSGTPSAI  
 LFLGKLQRSLQRTRAKVDEETPSTEEPVPSEPSMSPNTPELSEHQEAGAEELCELCGKHL YILERFCVDG  
 HFFHRSCFCCHTCEATLWPGGYGQHPGDGHFYCLQHLPEQDQKEADNNGSLESQELPTPGDSNMQDPSS  
 PPVTRVSPVSPSPARRLIRLSSLERLRLSSLNIIPDSGAEPKPPRSCSDLARESLKSSFFVWGVV  
 QAPQVPEAIEKGDDEEEEEEEEEEEPLPLEPELEQTLLTLAKNPGAMTKYPTWRRLMRRAKEEEMK  
 RFCKAQAIQRRLNEI EATMRELEAEGTKLELALRKESSSPEQKKLWLDQLRLIQKKNLVT EEAELMI  
 TVQELDLEEKQRQLDHEL RGYMREETMKTEADLQSENQVLRKLLLEVNRDALIQFQEERRLREMPA

TRTRPLE – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



**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\\_138315.2](#), [NP\\_612188.1](#)

**RefSeq Size:** 3563 bp

**RefSeq ORF:** 3147 bp

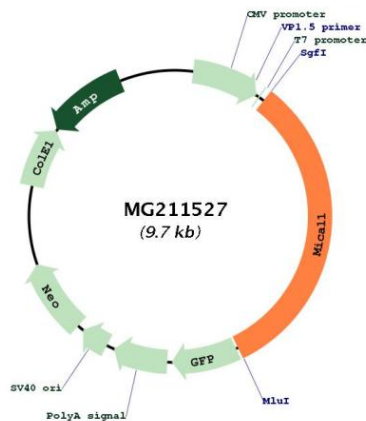
**Locus ID:** 171580

**UniProt ID:** [Q8VDP3](#)

**Cytogenetics:** 10 B1

**Gene Summary:** 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]

**Product images:**



Circular map for MG211527