

Product datasheet for **RN206110**

Mical1 (NM_001106397) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Mical1 (NM_001106397) Rat Untagged Clone
Tag: Tag Free
Symbol: Mical1
Synonyms: MICAL-1; Nical
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Fully Sequenced ORF: >RN206110 representing NM_001106397
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTCACCAACCTCCACCAACCCAGCACATGACCACTTTGAGACCTTTGTGCAGGCACAGCTGTGCC
AAGATGTACTGAGCAGTTTTTCAGGGCTCTGTAGAGCCCTGGGAGTGGAGTCTGGTGGGGGATTACCCCA
GTACCACAAGATCAAGGCCAGCTCACTACTGGAGTGCCAAAGTCACTGTGGCCAAAGTTGGACAAGAGA
GCAAGCCAGCCTGCGTACCAGCAAGGCCAGGCCTGTACCAACACCAAGTGTCTCGTGGTAGGTGCTGGCC
CTTGTGGACTTCGGGCTGCAGTGGAGCTTGCACTGTTAGGTGCCGAGTGGTGTCTGTGGAAAAGCGTAC
CAAGTTCTCTAGGCACAATGTACTCCATCTCTGGCCCTTACCATCCATGATCTCCGGGCACTTGGGGCC
AAGAAGTTCTACGGGCGTTTCTGTACTGGGACCTGGACCATATCAGCATCCGACAGCTCCAGCTGCCTC
TGCTGAAGGTGGCGTTACTGTTGGGGTGGAGATTCACTGGGGCTTCACTTTCACTGGCCTGCAGCCCCC
TCCCAAAAAGGGAGTGGCTGGCGTGCCGGATCCAGCCAGTCCCCAGCCAACTGGCCAGCTACGAA
TTTGATGTCTCATCTCAGCTGGAGGAGCAAATTTGTCCCTGAAGGCTTACCATCAGAGAGATGCGCG
GCAAACGGCCATCGGCATCACAGCCAACTTTGTGAATGGGCGCACGGTGGAGGAGACACAGGTGCCAGA
AATCAGTGGCGTAGCTCGGATCTACAACCAAAAATCTCCAGAGCCTGCTCAAAGCCACAGGTATTGAT
CTGGAGAACATTGTACTACAAGGACGACCCCACTTTGTGCATGACAGCCAAGAAGCAGTGTCTGC
TGAGGCTGGGGTATTGCGCCAGGACTTGCCAGAGACTGATCAGCTGCTGGGCAAAGCTAATGTGGTGCC
TGAGGCTCTGCAGCAGTTTGCCAGAGCAGCGGGCACTTCGCCACCCAAGCAAGCTTGGAAAAGTGGAG
TTCGCTCAGGATGCACGTGGCGGCCGATGTGGCAGCCTTCGACTTCACAAGCATGATGCGGTGAGAGA
GTTCTGCTCGTATCCAAGAAAAGCATGGTGCCCGCCTACTGCTGGGGCTGGTGGGGGACTGCCTTGTTGA
GCCCTTCTGGCCTTTGGCACTGGAGTGGCCGAGGCTTCTTGGCAGCCTTCGATGCAGCCTGGATGGT
AAGCGGTGGGCGGAGGTTACTGGCCTCTAGAGCTGTTGGCTGAACGTGAGAGCTGTACCAGCTTCTGT
CACAAACATCCCAGAGAATATGCATCGAAATGTAGCCAGTATGGTGGACCTGCCACCCGATACCC
CAACCTGAACCTCCGGGCTGTAACGCCAACAGGTACAAGACCTCTATGACATAATGGACAAGGAGCAT



GCTCGGAAGAAGAGTGACGAGACGGATGCCCGGAAGACAACCACAGGGTCTGCAGGCACTGAGGAGCTTC
 TGCACTGGTGCCAGGAGCAGACAGCTGGCTTTCCTGGAGTCTCTGTCACTGACTTCTTCTCCTCGTGGG
 TGATGGGCGAGCTCTGTGTGCCCTGGTACACCGCTACAGCCTGGCCTTCTGGAACCTCAGAGCTGCAG
 GGCATGAGCGCTCTGGAAGCCACTGCCTGGGCACTGAGGGTGGCAGAATATGAGTTGGGCATCATAACCAG
 TGTTGTCTGCACAGGCCGTAGTGGCAGGAGTACCCACTGGGCCTCATTGCCTACCTCAGCCACTTCCA
 CAGCGCCTTCAAGAACACACCCACAGCTCAGGCCTTGTACCCAGCCTCAGGGACCCCTAGTGCCATA
 CTTTTCTTGGCAAACCTCAGAGGAGCCTACAACGGACCCGACCAAGGTAGAGGAGGAGACTCCGTGTA
 CTGAGGAGCCTCCTGTCTCTGAGCCAGTGTGCCCCAGCTCTGCCCTCCGAACATGAGGAGGCTGGGGC
 AGAGGATGTGTGAGCTCTGTGGGAAACGCTCTACATCCTGGAACGCTTCTGTGTGGATGGCCATTTT
 TTCCACCGCGGCTGCTTCTGCTGCCGTACTGTGAGGCCACATTGCGGCCAGGTGGCTATGGGCAATATC
 CAGGAGATGGATATTTCTACTGTCTCCAGCACCTACCCAGGAGGATCAGAAGGAGGCAGACAACAATGG
 AAGTCCAGAGAACCAGGAGCTCCCAACACCAGGAGACAGTACCACACAGTACAGCCCTCCTCTCCTGTA
 CCTCTGTGACGGAGGCCAGCCCTGTCCAAGCCAGCCAACTGCACGTCGGTGATCCGCTCTCCA
 GCGTAGAACGCCCTACGGCTATCCTCCTGAACATCATCCTGACTCAGGAGTGGAGCCTCCACCCAAGCC
 CCCACGGAGCTGCTTGGACTTGGCCAAGAGTCCCTCAAGAGCAGCTTTATGGGCTGGGGTGTGCTCCGG
 GCACCACAGGTTCTGAGCCATAGAGAAGGGGAGGAGGAAGAAGAAGAGGAGGAGGAAGAAGAAGAGG
 AGGAGGAGGAGCTTCGCCACCTTTGGCGCTAGAAGTGAACAGTCACTGCTGACCTTGGCCAAGAAGCTC
 AGGCGACATGACTAAGTACCCAACGTGGCGTCGAACCCTCATGCGCCGTGCCAAAGAGGAGGAGATGAAG
 AGGTTCTGCAAGGCCAGGCCATCCAGCGGAGACTAAACGAGATTGAGGCTGCTATGAGGGAACTGGAGA
 CCGAAGGCATGAAGCTGGAGGTGGCCTTGGAGAAAGAGAGTAGCTCTCCAGAAAAGCAGAAGAACTCTG
 GCTAGAGCAGCTGCTACAGCTCATTGAGAAGAAGCAGCCTAGTACTGAGGAAGCCGAAGTCAATGATC
 ACGGTGCAGGAGCTGGACCTGGAAGAGAAGCAGCGGCAACTGGACCACGAGTTTCGGGGCCTCAACCGGG
 AAGAACTCTGAAGACCCAGGCCAGCCGACTGTCTGAGGACCGGGTCTAAGGAAGCTGTTGGATGTGGT
 GAACACGCGGGATGCTCTGATCCAATTCAGGAGGAGCGAAGGCTCAGAGAGATGCCCGTATAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-MluI

ACCN:

NM_001106397

Insert Size:

3144 bp

OTI Disclaimer:

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).

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_001106397.1, NP_001099867.1

RefSeq Size:

3536 bp

RefSeq ORF: 3144 bp

Locus ID: 294520

UniProt ID: [D3ZBP4](#)

Cytogenetics: 20q12

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 H₂O₂. 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]