

Product datasheet for RC229050

MICAL1 (NM_001159291) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MICAL1 (NM_001159291) Human 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:	>RC229050 representing NM_001159291 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTCACCTACCTCCACCAACCCAGCGCATGCCACTTTGAGAGCTTCTGCAGGCCAGCTGTGCC
AGGACGTGCTGAGCAGCTTCCAGGAGCTGTGTGGGGCCCTGGGGCTGGAACCCGGTGGGGGGCTGCCCA
GTACCACAAGATCAAGGACCAGCTCACTACTGGAGCGCAAGTCACTGTGGACCAAGCTGGACAAGCGA
GCAGGCCAGCCTGTCTACCAGCAGGGCCGGCCGCACCAGCACCAAGTGCCTGGTGGTGGGTGCTGGAC
CTTGCGGGCTGCGGGTCGCTGTGGAGCTGGCGCTGCTGGGGCCCGAGTGGTGTGGTGGAAAAGCGCAC
CAAGTTCTCTCGCCACAACGTGCTCCACCTCTGGCCCTTACCATCCACGACCTGCGGGCACTCGGTGCT
AAGAAGTTCTACGGGCGCTTCTGCACCGCACCCCTGGACCACATCAGCATCAGGCAGCTCCAGCTGCTTC
TGCTGAAGGTAGCATTGCTGCTGGGGTGGAAATTCAGTGGGGTGTCACTTTCACTGGCCTCCAGCCCC
TCCTAGGAAGGGGAGTGGCTGGCGTGCCAGCTCCAACCAACCCCTGCCAGCTGGCCAATATGAA
TTTGACGTCTTATCTCGGCTGCAGGAGGTAATTCGTCCTGAAGGCTTCAAAGTTCGAGAAATGCGAG
GCAAATGGCCATTGGCATTACAGCCAACCTTTGTGAATGGACGCACCGTGGAGGAGACACAGGTGCCGA
GATCAGTGGTGTAGCCAGGATCTACAACAGAGCTTCTCCAGAGCCTTCTCAAAGCCACAGGCATTGAT
CTGGAGAACATTGTACTACAAGGACGACCCCACTACTTTGTGATGACAGCCAAGAAGCAGTGCCTGC
TGGGGTGGGGTGTGCGCCAGCCTTCTGGCCCTGGGCACTGGAGTGGCACGGGGCTTCTGGCAGC
CTTTGATGCAGCCTGGATGGTGAAGCGGTGGGCGAGGGCGCTGAGTCCCTAGAGGTGTTGGCTGAGCGT
GAGAGCCTGTACCAGTTCTGTACAGACATCCCCAGAAAACATGCATCGCAATGTGGCCAGTATGGGC
TGGACCCAGCCACCCGCTACCCCAACCTGAACCTCCGGGCAGTGACCCCAATCAGGTACGAGACCTGTA
TGATGTGTAGCCAAGGAGCCTGTGCAGAGGAACAACGACAAGACAGATACAGGGATGCCAGCCACCGGG
TCGGCAGGCACCCAGGAGGAGCTGCTACGCTGGTCCAGGAGCAGACAGCTGGGTACCCGGGAGTCCAGC
TCTCCGATTTGTCTTCTCCTGGGCTGATGGGCTAGCTCTGTGTGCCCTGGTGTACCGGCTGCAGCCTGG
CCTGCTGGAACCTCAGAGCTGCAGGGGCTGGGAGCTCTGGAAGCAACTGCTTGGCACTAAAGGTGGCA



[View online >](#)

GAGAATGAGCTGGGCATCACACCGTGGTGTCTGCACAGGCCGTGGTAGCAGGGAGTGACCCACTGGGCC
 TCATTGCCTACCTCAGCCACTTCCACAGTGCCTTCAAGAGCATGGCCACAGCCAGGCCCTGTCAGCCA
 GGCTCCCCAGGGACCTCCAGTGTGTATTATTCCTTAGTAACTTACAGAGGACCTGCAGCGATCCCGG
 GCCAAGGAAAAATGCAGAGGATGCTGGTGGCAAGAACTGCGCTTGGAGATGGAGGCCGAGACCCCAAGTA
 CTGAGGTGCCACCTGACCAGAGCCTGGTGTACCCCTGACACCCCATCCCAACACCAGGAGGCCGGTGC
 TGGGACCTGTGTGCACTTTGTGGGAAACACCTCTATGTCTGGAACGCCTCTGTGTCAACGGCCATTTCC
 TTCCACCGGAGCTGCTTCCGCTGCCATACCTGTGAGGCCACACTGTGGCCAGGTGGCTACGAGCAGCACC
 CAGGAGATGGACATTTCTACTGCCTCCAGCACCTGCCCCAGACAGACCACAAAGCGGAAGGCAGCGATAG
 AGGCCCTGAGAGTCCGGAGCTCCCCACACCAAGTGAAGATAGCATGCCACCAGGCCCTCTCAACTCCCACA
 GCCTCGCAGGAGGGGGCCGGTCTGTTCCAGATCCCAGCCAGCCACCCGTCGGCAGATCCGCCTCTCCA
 GCCCGGAGCGCCAGCGGTTGTCTCCCTAACCTTACCCCTGACCCGAAATGGAGCCTCCACCCAAGCC
 TCCCCGACGTGCTCCGCCTTGGCCGCCACGCCCTGGAGAGCAGCTTTGTGGGTGGGGCTGCCAGTC
 CAGAGCCCTCAAGCTCTGTGGCATGGAGAAGGAGGAAAAAGAGAGTCCCTTCTCCAGTGAAGAGGAAG
 AAGAAGATGTGCCTTTGACTCAGATGTGGAACAGGCCCTGCAGACCTTTGCCAAGACCTCAGGCACCAT
 GAATAACTACCCAACATGGCGTCGGACTCTGCTGCGCCGTGCGAAGGAGGAGAGATGAAGAGGTTCTGC
 AAGGCCAGACCATCCAACGGCGACTAAATGAGATTGAGGCTGCCTTGGGGAGCTAGAGGCCGAGGGCG
 TGAAGCTGGAGCTGGCCTTGGGCGCCAGAGCAGTTCGCCAGAACAGCAAAGAAACTATGGGTAGGACA
 GCTGCTACAGCTCGTTGACAAGAAAAACAGCCTGGTGGCTGAGGAGGCCGAGCTCATGATCACGGTGCAG
 GAATTGAATCTGGAGGAGAAACAGTGGCAGCTGGACCAGGAGCTACGAGGCTACATGAACCGGGAAGAAA
 ACCTAAGACAGCTGCTGATCGGCAGGCTGAGGACCAGGTCTGAGGAAGCTGGTGGATTTGGTCAACCA
 GAGAGATGCCCTCATCCGCTTCCAGGAGGAGCGCAGGCTCAGCGAGCTGGCCTTGGGGACAGGGGCCAG
 GGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC229050 representing NM_001159291
 Red=Cloning site Green=Tags(s)

MASPTSTNPAHAHFESFLQAQLCQDVLSSFQELCGALGLEPGGGLPQYHKIKDQLNYWSAKSLWTKLDKR
 AGQPVYQGRACSTKCLVVGAGPCGLRVAVELALLGARVVLVEKRTKFSRHNVLHLPFTIHLRALGA
 KKFYGRFCTGTLDHISIRQLQLLLLKVALLLQVEIHWGVFTGLQPPPRKSGSWRAQLQPNPPAQLANYE
 FDLVISAAGGKFVPEGFKVREMRGKLAIGITANFVNGRTEETQVPEISGVARIYNQSFQSLKATGID
 LENIVVYKDDTHYFVMTAKKQCLLRGLVLRQPFWPLGTGVARGFLAAFDAAWMVKRWAEGAESLEVLAE
 ESLYQLLSQTSPEMHRNVAQYGLDPATRYPNLNLRAVTPNQVRDLVDLAKEPVQRNNDKTDTGMPATG
 SAGTQEELLRWCEQTAGYPGVHSDLSWADGLALCALVYRLQPLLEPSELQGLGALEATAWALKVA
 ENELGITPVVSAQAVVAGSDPLGLIAYLSHFHSAFKSMASPGPVSQASPGTSSAVLFLSKLQRTLQRSR
 AKENAEDAGGKLRLEMAETPSTEVPDPEPGVPLTPPSQHQEAGADLCALCGEHLVLERLCVNGHF
 FHRSCFRCHTCEATLWPGGYEQHPGDGHFYCLQHLPTDHAEGSDRGPESPELPTPSENSMPPGLSTPT
 ASQEGAGVPDPSPQTRRQIRLSSPERQRLSSLNLTPDPEMPPPKPPRSCSALARHALESSFVWGLPV
 QSPQALVAMEKEEKESPFSEEEEEEDVPLDSDVEQALQTFAKTSGTMNMYPTWRRLLRRAKEEEMKRF
 KAQTIQRRLNEIEAALRELEAEGVKLELALRRQSSSPEQKQLWVGQLQLVDKKNLSVAEEAELMITVQ
 ELNLEEKQWQLDQELRGYMNREENLKTAAADRQAEDQVLRKLVLDVNQRDALIRFQEERLSELALGTGAQ
 G

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001159291

ORF Size: 2943 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:

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_001159291.1](#), [NP_001152763.1](#)

RefSeq ORF: 2946 bp

Locus ID: 64780

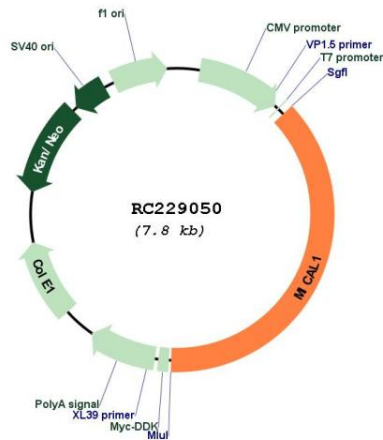
UniProt ID: [Q8TDZ2](#)

Cytogenetics: 6q21

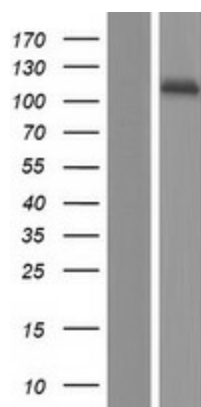
MW: 108.4 kDa

Gene Summary: This gene encodes an enzyme that oxidizes methionine residues on actin, thereby promoting depolymerization of actin filaments. This protein interacts with and regulates signalling by NEDD9/CAS-L (neural precursor cell expressed, developmentally down-regulated 9). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015]

Product images:



Circular map for RC229050



Western blot validation of overexpression lysate (Cat# [LY432077]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229050 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).