

Product datasheet for **MR230816**

Mylk3 (NM_001297612) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mylk3 (NM_001297612) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mylk3
Synonyms:	D830007F02Rik; MLCK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR230816 representing NM_001297612
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGAATCTGTGCCCTGTCCCAGCACTGTGCAGGCCAGCACCAGAGGCCAGCAGCGGCATCAGATT
 ACACCCAGATATTTGCGAACAAGGAGCAAGCAGAAGTTGCTGGAGTGAAGCCAAACCATGTACTGACTAC
 AGGAGGTGTGCAAGCTGACGCCTCTAGGACGCTGTGGGAAGAGAGCCAAAAGGAGGACATACCTGTGCGA
 ACAGTGGAGGGGCTGCCTCTCATCATCAATACGCTACTGAAGGGAGCTGACCTAACCCAGGCAGGAGCCT
 CACTGAGGCAGGGAGTTGAAGTCTTGGCCAGGCCAAGTACCCCTACCCACAGAAGCAGAATCCAGGCT
 TCCTGAGACAGCCAGTGAGAACACTGGAGCCACCCTGGAATTGTCGTAGCAATCGACAGAATCAGCGAG
 GTCCTCACTAGCCTCAAGATGTCACAAGTGGTGGTCAAGAACTCATCCAGCAAGCCTGACTGTTGGC
 TTTCAGAAGAGGCCATGAGGCTGAGTTCAGGGCCTCTCCCTCAGCCCTAGGACCACTAACTCCAGACAG
 TGACATTCACAGTGGTGTGCACTTCCCAGGATCCCTATCAATATGCAAGAGATGGCTACTCCTGGGGAG
 TTGCTTGAGACCCAAAGTGGCAGTCCCATTGGCTCTGCAGAAGCTCCAGGCCTTGGGACTGTGTTAGAAG
 ACCAGATCCCTAAAGGAGCCAGACCATTCCACCCCTGCCAAAGAGGAGCAGCAACAATGGTGGCATGAG
 TGCAGAGGAGGAGATAGGGTCTGGGGCTGAGCCTATGAGAGGACCAAGCTTGGCTACAAGGGACTGGAGA
 GATGAGACTGTTGGGACCACAGACCTGCAGCAAGGCATAGACCCAGGAGCAGTGAGCCCTGAGCCTGGGA
 AGGACCACGCAGCCCAGGGCCCAGGAAGAAGTGAAGCTGGAAGGCTATCTTCTGCTGCAGAGGCTGCCAT
 TGTGGTTCTAGATGACAGCGCAGCACCCCCAGCCCTTTTGAACACCGGGTAGTGAGCATCAAAGATACC
 CTGATCTCAGCAGGCTACACGGTATCCCAACATGAAGTCTTAGGAGGGGGTGGTTTGGCCAGGTGCACA
 GGTGTACAGAGAGGTCTACAGGCCTTGCACTGGCAGCCAAGATCATCAAAGTGAAGAACGTAAGGACCG
 GGAGGATGTGAAGAATGAGGTCAACATCATGAACCAGCTCAGCCACGTAACCTTGATCCAACCTTTATGAT
 GCGTTTGAGAGCAAGAGCAGCTTCACTCTGATCATGGAGTATGTGGATGGAGGCGAACTCTTTGACCGGA
 TCACGGATGAGAAGTACCACCTCACTGAGTTGGATGTGGTCTTGTTCACGAGGCAGATCTGTGAGGGTGT
 GCATTACCTGCATCAGCACTATATCCTGCACCTGGACCTCAAGCCTGAGAACATATTGTGTGTCAGCCAG
 ACAGGGCATCAAATTAAGATCATTGACTTTGGGCTGGCTAGAAGATACAAGCCTCGGGAGAAGCTAAAGG
 TGAACCTTGGTACTCCGGAGTTCCTGGCCCCAGAAGTTGTTAACTATGAGTTTGTGTCATTTCCAACAGA
 CATGTGGAGTGTGGGAGTTATCACCTACATGCTACTCAGTGGTTTGTCCCATTCTAGGGGAGACAGAT
 GCAGAGACCATGAATTTTATTGGAAGTGCAGCTGGGATTTTCGATGCTGATACCTCAAAGGGCTGTCCG
 AGGAAGCCAAGGACTTTGTTTCCCGTTACTGGTCAAAGAGAAGAGCTGTAGGATGAGCGCCACACAGTG
 CCTGAAACACGAGTGGTTAAGTACCTGCCTGCCAAAGCCTCGGGCTCCAACGTTTCGCCTCAGATCCCAA
 CAACTGCTGCAGAAATATATGGCTCAGAGTAAATGGAAGAAACATTTCCACGTGGTACTGCAGTCAACA
 GGCTACGGAAATTTCCAACGTGTCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR230816 representing NM_001297612
Red=Cloning site Green=Tags(s)

MGTLCPVPALCRPSTRGQQRASDYTQIFANKEQAEVAGVKNHVLTTGGVQADASRTLWEESQKEDIPVR
 TVEGLPLIINTSLKADLTQAGASLRQGVVLPTEAESRLPETASENTGATLELSVAIDRISE
 VLTSLKMSQGGQETSSSKPDCWLSEEAMRLSSGPLPQPLGPLTPDSDIHSGDALPRIPINMQEMATPGE
 LLETQSGSPIGSAEAPGLGTVLEDQIPKGARFPPLPKRSSNNGGMSAEIEIGSGAEPMRGPSLATRDWR
 DETVGTDDLQQGIDPGAVSPEPGKDHAHQGPGRTEAGRLSSAAEAAIVLDDSAAPPAPFEHRVVSIKDT
 LI.SAGYTVSQHEVLGGGRFGQVHRCTERSTGLALAAKIKVKNVKDREDVKNEVINMQLSHVNLIQLYD
 AFESKSSFTLIMEYVDGGELFDRLTDEKYHLTELDVVLFRQICEGVHYLHQHYILHLDLKPENILCVSQ
 TGHQIKIIDFGLARRYKPREKLKVNFGTPEFLAPEVVNYEFVSFPTDMWSVGVITYMLLSGLSPFLGETD
 AETMNFIVNCSWDFDADTFKGLSEEAKDFVSRLLVKEKSCRMSATQCLKHEWLSHLPKASGSNVRLSQ
 QLLQKYMAQSKWKKHFHVVTAVNRLRKFPPTCP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001297612

ORF Size: 1986 bp

OTI Disclaimer: 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_001297612.1](#), [NP_001284541.1](#)

RefSeq Size: 2617 bp

RefSeq ORF: 1989 bp

Locus ID: 213435

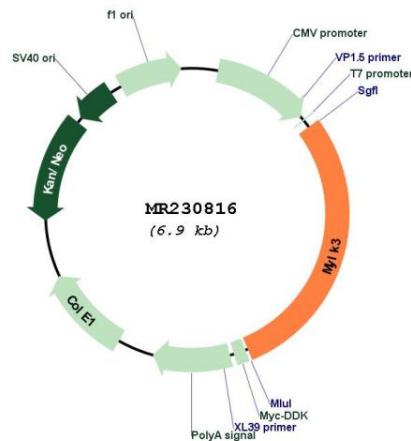
UniProt ID: [Q3UIZ8](#)

Cytogenetics: 8 C3

MW: 72.6 kDa

Gene Summary: Kinase that phosphorylates MYL2 in vitro. Has been proposed to be calmodulin-dependent (PubMed:17885681), although MYL2 phosphorylation has also been observed in the presence or absence of calmodulin (PubMed:18202317). Promotes sarcomere formation in cardiomyocytes and increases cardiomyocyte contractility.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR230816