

Product datasheet for **SC323576**

MYLK3 (NM_182493) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MYLK3 (NM_182493) Human Untagged Clone
Tag:	Tag Free
Symbol:	MYLK3
Synonyms:	caMLCK; MLCK; MLCK2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC323576 sequence for NM_182493 edited (data generated by NextGen Sequencing)

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ATGTCAGGAACCTCCAAGGAGAGTCTGGGGCATGGGGGGCTGCCAGGGTTGGGCAAGACC
TGCTTAACAACCATGGACACAAAGCTGAACATGCTGAACGAGAAGGTGGACCAGCTCCTG
CACTTCCAAGAAGATGTCACAGAGAAGTTGCAGAGCATGTGCCGAGACATGGGCCACCTG
GAGCGGGGCTGCACAGGCTGGAGGCTCCCGGGCACCAGGGCCCGGGCGGGGCTGATGGG
GTTCCCCACATTGACACCCAGGCTGGGTGGCCCGAGGCTCTGGAGCTGGTGAGGGCCATG
CAGCAGGATGCGGCCAGCACGGTGGCAGGCTGGAGGCCCTCTTCAAGATGGTGGCTGCG
GTGGACAGGGCCATCGTTTTGGTGGGGGCCACGTTCCAGAAATCAAAGGTGGCGATTTTC
CTCATGCAGGGCGTGTGCCCTGGAGGAGAGGCAGCCAGGTGACAGCCCTGAGGAGAAT
AAAGAGCGAGTGAAGAAGAGGGAGGAAAACAAAGCATGTGCTGAGCACCAGTGGGTTG
CAGTCTGATGCCAGGGAGCTGGGAAGAGAGCCAGAAGGCGGACGTGCTGGAGGGGACA
GCGGAGAGGCTGCCCCCATCAGAGCGTCAGGGCTGGGAGCTGACCCCGCCAGGCAGTG
GTCTACCGGGCCAGGGAGATGGTGTCTTGGCCAGCCAGGCATTCCCTGGCCACCTG
CCCCTGCCACAAAGGTGAAGCCAAGGCTCCTGAGACACCCAGCGAGAACCTCAGGACT
GGCCTGGAATTGGCTCCAGCACCCGGCAGGGTCAATGTGGTCTCCCCGAGCTGGAGTT
GCACCAGGTGCAGGACAAGGAGCATCGTCCAGCAGGCCTGACCCTGAGCCCTTAGAGGAA
GGCAGCAGGCTGACTCCAGGGCCTGGCCCTCAGTGCCAGGGCCTCCAGGGCTGCCAGCC
CAGGCCAGGGCAACCCACAGTGGTGGAGAAACCTCCAAGGATCTCCATCCACATACAA
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ACCACAGAGGCTCCAGCAGCTGCCAGCCAGGCAAGCAGGGCCCACTGGGACCGGGCGC
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TCCCCGTGCAGGAGAGCAGCAGCCCGGGGGAGTGAAGGCAGAGGAGGAGCAAAAGGGT
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GACTGTGCAGCCAGGGCTCCGGTGAAGAGCTGAAGCAGTAAGGAGGATGCCCCAGGCGCC
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GTAGTGAGCGTCAAGGAGACCTCCATCTCTGCGGGTTACGAGGTGTCCAGCAGCAAGTC
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CTGGCTGCCAWGATCATCAAAGTGAAGAGCGCCAAGGACCGGGAGGACGTGAAGAACGAG
ATCAACATCATGAACCAGCTCAGCCACGTGAACCTGATCCAGCTCTATGACGCCTTCGAG
AGCAAGCACAGCTGCACCCTTGTATGGAGTACGTGGACGGGGTGGAGCTCTTCGACCGG
ATCACAGATGAGAAGTACCACCTGACTGAGCTGGATGTGGTCTGTTCACCAGGCAGATC
TGTGAGGGTGTGCATTACCTGCACCAGCACTACATCCTGCACCTGGACCTCAAGCCGGAG
AACATATTGTGCGTCAATCAGACAGGACATCAAATTAAGATCATTGACTTTGGGCTGGCC
AGAAGGTACAAGCCTCGAGAGAAGCTGAAGGTGAACCTTCGGCACTCCTGAGTTCTGGCC
CCAGAAGTCGTCATTAAGTGTCTCATTCCCCACAGACATGTGGAGTGTGGGAGTC
ATCACCTACATGCTACTCAGTGGCTTGTCCCCATTTCTAGGGGAAACAGATGCAGAGACC
ATGAATTTCAATGTAACCTGTAGCTGGGATTTTGTGCTGACACCTTTGAAGGGCTCTCG
GAGGAGGCCAAGGACTTTGTTTCCCGTTGCTGGTCAAAGAGAAGAGCTGCAGAATGAGT
GCCACACAGTGCCTGAAACACGAGTGGCTGAATAATTTGCCTGCCAAAGCTTCAAGATCC
AAAACCTGCTCAAATCCCAACTACTGCTGCAGAAATACATAGCTCAAAGAAAATGGAAG
AAACATTTCTATGTGGTACTGCTGCCAACAGGTTAAGGAAATTTCCAACCTTCTCCCTAA

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Clone variation with respect to NM_182493.2
538 g=>t;1631 a=>>w

5' Read Nucleotide Sequence:	>OriGene 5' read for mutant NM_182493 unedited CACCCCCCGTTGAAACCCAAGGGCCGGGAGGCGTGGCAGAAAAAGGTCTACACAAGCCGAGCTCGTT TAGGGAACCGAAAAAATTCGGTCCACCACTACTATAGGGCGGGCGCAATTCGACAGGCTGACAGC AGTCTGTAACACTACGGAGGACAATGACCTTGACACACCAATGCCTGAGTGAAAACCATGGGTCTGTGCC TCTCCTTATTCCTCCTCATGCCCTTGCCGCCCTTCCCACCGTTTGGAACTCCCAGAGAGTCTGGGG GCAGGGGGGCGCCAGGGATGAGCAAAACCTGCTTAACACACTGGACCCAAAACCTGAACTTGCTTATT GAATATGGTGAACCCATCCCGCACTCCCAAAAAATTTAAAACACCAATTTCCAAGACATGTCCCAGA AATAGGCCACGTGAACAGGGGCTTGAAGCCTTGAAGACCCCGGACCCGGGCCAGACAGGGA TAAAAGGGCTCCCCAAAATGACACCAACTAGGATGTTCCAGGTTCTCCAAACC
Kinase Domain Sequence:	>SC323576 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation AWATCTCTGCGGATMGAGGTGTGCCAGCACGAAGTCTTGGGAGGGGTCGGTTTGCCAGGTCCACAGGT GCACAGAGAAGTCCACAGGCTCCCACTGGCTGCCATGATCATCAAAGTGAAGAGCGCAAGGACCGGGA GGACGTGAAGAACGAGATCAACATCATGAACCAGCTCAGCCACGTGAACCTGATCCAGCTCTATGACGCC TTCGAGAGCAAGCACAGCTGCACCCTTGTGATGGAGTACGTGGAC
Restriction Sites:	Please inquire
ACCN:	NM_182493
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).
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.
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:	<ol style="list-style-type: none"> 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_182493.1 , NP_872299.1
RefSeq Size:	2760 bp
RefSeq ORF:	2388 bp
Locus ID:	91807
UniProt ID:	Q32MK0
Cytogenetics:	16q11.2

Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
Gene Summary:	<p>Phosphorylation of cardiac myosin heavy chains (see MYH7B, MIM 609928) and light chains (see MYL2, MIM 160781) by a kinase, such as MYLK3, potentiates the force and rate of cross-bridge recruitment in cardiac myocytes (Chan et al., 2008 [PubMed 18202317]).[supplied by OMIM, Jul 2008]</p> <p>Transcript Variant: This variant (1) represents the longer transcript and encodes the longer protein (isoform 1).</p>