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Product datasheet for SC315379

Myosin light chain kinase (MYLK) (NM_053025) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Myosin light chain kinase (MYLK) (NM_053025) Human Untagged Clone
Tag:	Tag Free
Symbol:	MYLK
Synonyms:	AAT7; KRP; MLCK; MLCK1; MLCK108; MLCK210; MMIHS; MMIHS1; MSTP083; MYLK1; smMLCK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

>SC315379 representing NM_053025.
Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGGGGATGTGAAGCTGGTTGCCTCGTCACACATTTCCAAAACCTCCCTCAGTGTGGATCCCTCAAGA
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ATTCATGCTGTCCATGAGGAGGACAGGGGAAAGTATACCTGTGAAGCCACCAATGGCAGTGGTGCTCGC
CAGGTGACAGTGGAGTTGACAGTAGAAGGAAGTTTTGCGAAGCAGCTTGGTCAGCCTGTTGTTTCCAAA
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GAAGAGAGGAAGAGGCCAGCTCCTCCCCGTCCAGCCACCTTCCCCACCAGGCAGCCTGGCCTGGGGAGC
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ACATACAGCTGCACTGCTTCCAACGCCCAAGGCCAGCTGTCCTGTAGCTGGACCCTCCAAGTGGAAAGG

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CTTGCCGTGATGGAGGTGGCCCCCTCCTTCTCCAGTGTCCTGAAGGACTGCGCTGTTATTGAGGGCCAG
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GAAGAGGAAGAAGAGTGA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
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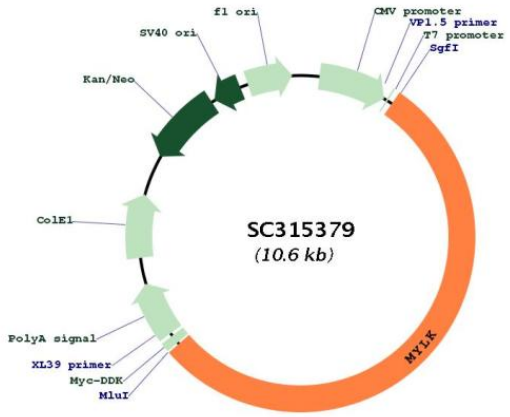
Restriction Sites: SgfI-MluI

Plasmid Map:



ACCN: NM_053025

Insert Size: 5745 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_053025.3
RefSeq Size:	7852 bp
RefSeq ORF:	5745 bp
Locus ID:	4638
UniProt ID:	Q15746
Cytogenetics:	3q21.1
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
MW:	210.7 kDa
Gene Summary:	This gene, a muscle member of the immunoglobulin gene superfamily, encodes myosin light chain kinase which is a calcium/calmodulin dependent enzyme. This kinase phosphorylates myosin regulatory light chains to facilitate myosin interaction with actin filaments to produce contractile activity. This gene encodes both smooth muscle and nonmuscle isoforms. In addition, using a separate promoter in an intron in the 3' region, it encodes telokin, a small protein identical in sequence to the C-terminus of myosin light chain kinase, that is independently expressed in smooth muscle and functions to stabilize unphosphorylated myosin filaments. A pseudogene is located on the p arm of chromosome 3. Four transcript variants that produce four isoforms of the calcium/calmodulin dependent enzyme have been identified as well as two transcripts that produce two isoforms of telokin. Additional variants have been identified but lack full length transcripts. [provided by RefSeq, Jul 2008] Transcript Variant: This variant (1) is the full-length transcript and encodes the full-length nonmuscle isoform.