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Product datasheet for SC309074

Myosin light chain kinase (MYLK) (NM_053029) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Myosin light chain kinase (MYLK) (NM_053029) Human Untagged Clone
Tag:	Tag Free
Symbol:	Myosin light chain kinase
Synonyms:	KRP, MLCK, MLCK108, MLCK210, MSTP083, FLJ12216, DKFZp686I10125
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

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>OriGene sequence for NM_053029 edited
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_053029 unedited
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3' Read Nucleotide Sequence:

>OriGene 3' read for NM_053029 unedited
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TGGCTGAGGTAACGTTTGGCCCAAGGTTTCGTAAT

Restriction Sites: Please inquire

ACCN:	NM_053029
Insert Size:	5600 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).
OTI Annotation:	There is 5 nucleotide difference between the OriGene clone and the NCBI reference ORF. These result in the substitution of 5 aa.
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_053029.2, NP_444257.2
RefSeq Size:	7632 bp
RefSeq ORF:	7632 bp
Locus ID:	4638
Cytogenetics:	3q21.1
Domains:	pkinase, TyrKc, S_TKc, ig, IGc2, IG, FN3
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, Focal adhesion, Regulation of actin cytoskeleton, Vascular smooth muscle contraction

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 (4) does not utilize exon 27 and encodes the shortest nonmuscle isoform.