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# Product datasheet for TR320427

## Myosin light chain kinase (MYLK) Human shRNA Plasmid Kit (Locus ID 4638)

### Product data:

| | |
|---|---|
| **Product Type:** | shRNA Plasmids |
| **Product Name:** | Myosin light chain kinase (MYLK) Human shRNA Plasmid Kit (Locus ID 4638) |
| **Locus ID:** | 4638 |
| **Synonyms:** | KRP, MLCK, MLCK108, MLCK210, MSTP083, FLJ12216, DKFZp686I10125 |
| **Vector:** | pRS (TR20003) |
| **E. coli Selection:** | Ampicillin |
| **Mammalian Cell Selection:** | Puromycin |
| **Format:** | Retroviral plasmids |
| **Components:** | MYLK - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 4638). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free. |
| **RefSeq:** | NM_005965, NM_053025, NM_053026, NM_053027, NM_053028, NM_053029, NM_053030, NM_053031, NM_053032, NM_001321309, NM_053025.1, NM_053025.2, NM_053025.3, NM_053032.1, NM_053032.2, NM_053032.3, NM_053031.1, NM_053031.2, NM_053031.3, NM_053026.1, NM_053026.2, NM_053026.3, NM_053028.1, NM_053028.2, NM_053028.3, NM_053027.1, NM_053027.2, NM_053027.3, NM_005965.3, NM_053029.2, BC015838, BC017811, BC034911, BC040115, BC062755, BC064420, BC064695, BC100761, BC100762, BC100763, BC107783, BC113456, BC113458, BM723621, NM_053028.4, NM_053027.4, NM_053032.4, NM_053026.4, NM_053031.4, NM_053025.4 |
| **UniProt ID:** | Q15746 |

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**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]

**shRNA Design:**

These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

**Performance Guaranteed:**

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).