

Human myosin light chain kinase ELISA Kit | MYLK elisa kit

Human myosin light chain kinase, MLCK ELISA Kit

CATALOG #
AAA80532

REACTIVITY
Human

PRODUCT SYNONYMS

myosin light chain kinase; Human myosin light chain kinase; MLCK ELISA Kit; DKFZp686I10125; FLJ12216; KRP; MLCK; MLCK1; MLCK108; MLCK210; MSTP083; MYLK1; smMLCK; OTTHUMP00000180642; myosin; light polypeptide kinase; smooth muscle myosin light chain kinase; MYLK elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	This assay has high sensitivity and excellent specificity for detection of Human MYLK. No significant cross-reactivity or interference between Human MYLK and analogues was observed.
Sequence Length	1914
Samples	Serum, plasma, tissue homogenates, Cell lysates
Detection Range	0.78 ng/ml-50 ng/ml
Sensitivity	0.195 ng/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for MYLK elisa kit

Introduction: Myosin-light-chain kinase also known as MYLK or MLCK is a serine/threonine-specific protein kinase that phosphorylates the regulatory light chain of myosin II. These enzymes are important in the mechanism of contraction in muscle. Once there is an influx of calcium cations (Ca⁺⁺) into the muscle, either from the sarcoplasmic reticulum or, more importantly, from the extracellular space, contraction of smooth muscle fibers may begin. First, the calcium will bind to calmodulin. This binding will activate MLCK, which will go on to phosphorylate the myosin light chain at serine residue 19. This will enable the myosin crossbridge to bind to the actin filament and allow contraction to begin (through the crossbridge cycle). Since smooth muscle does not contain a troponin complex like striated muscle does, this mechanism is the main pathway for regulating smooth muscle contraction.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to MLCK. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for MLCK and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain MLCK, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of MLCK in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	116008192
NCBI GeneID	4638
NCBI Accession #	NP_444253.3
NCBI GenBank Nucleotide #	NM_053025.3
UniProt Accession #	Q15746 ; O95796 ; O95797 ; O95798 ; O95799 ; Q14844 ; Q16794 ; Q17S15 ; Q3ZCP9 ; Q5MY99 ; B4DUE3 ; D3DN97
Molecular Weight	210,715 Da
NCBI Official Full Name	myosin light chain kinase, smooth muscle isoform 1
NCBI Official Synonym Full Names	myosin light chain kinase
NCBI Official Symbol	MYLK
NCBI Official Synonym Symbols	KRP; AAT7; MLCK; MLCK1; MYLK1; smMLCK; MLCK108; MLCK210; MSTP083
NCBI Protein Information	myosin light chain kinase, smooth muscle; telokin; kinase-related protein; myosin, light polypeptide kinase; smooth muscle myosin light chain kinase
UniProt Protein Name	Myosin light chain kinase, smooth muscle
UniProt Gene Name	MYLK
UniProt Synonym Gene Names	MLCK; MLCK1; MYLK1; MLCK; smMLCK; KRP
UniProt Entry Name	MYLK_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/mylk-human-elisa-kits/myosin-light-chain-kinase/80532>