

# Myosin Light Chain, Human Heart

<b>CATALOG NO:</b>	P1568-20      20 µg P1568-100    100 µg
<b>ALTERNATE NAMES:</b>	MLC, MYL3_Human
<b>MOL. WT.</b>	~20,000
<b>SOURCE:</b>	Human Heart
<b>PURITY:</b>	> 95% SDS - PAGE
<b>FORM:</b>	Lyophilized
<b>FORMULATION:</b>	Lyophilized from ammonium bicarbonate
<b>RECONSTITUTION:</b>	Reconstitute in neutral pH buffer of choice. Avoid extreme high and low pH
<b>CONCENTRATION:</b>	1 mg protein/mg solid ( $A_{280}$ , $E^{0.1\%}=0.211$ )
<b>STORAGE CONDITIONS:</b>	Store at -20°C.

**DESCRIPTION:** Myosin Light Chain is 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.

## RELATED PRODUCTS:

- Lipoprotein a [Lp(a)], Human Plasma (4930)
- Aspartate Aminotransferase (AST, GOT), Porcine Heart (P1300)
- Creatine Kinase (CK/CPK), Rabbit Muscle (P1301)
- Anti-Myosin-pan Antibody (A1213)

**FOR RESEARCH USE ONLY! Not to be used on humans.**