Mouse Anti-MYL9 (Phosphorylated S20) Recombinant Antibody

Cat. No.: **PTM-CBMAB-0978LY**
This product is for research use only and is not intended for diagnostic use.

Summary

Host Animal	Mouse
Specificity	Human, Mouse, Rat, Cattle, Pig
Antibody Isotype	IgG1
Application	WB, IF

Basic Information

Specificity	Human, Mouse, Rat, Cattle, Pig
Antibody Isotype	IgG1
Clonality	Monoclonal
Application Notes	The COA includes recommended starting dilutions, optimal dilutions should be determined by the end user.

Formulations & Storage *[For reference only, actual COA shall prevail!]*

Format	Liquid
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C long term. Avoid repeated freezethaw cycles.

Target

Introduction	Myosin, a structural component of muscle, consists of two heavy chains and four light chains. The protein encoded by this gene is a myosin light chain that may regulate muscle contraction by modulating the ATPase activity of myosin heads. The encoded protein binds calcium and is activated by myosin light chain kinase. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

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Entrez Gene ID	Human 10398 Mouse 98932 Rat 296313 Pig 100157760 Cattle 505964
UniProt ID	Human P24844 Mouse Q9CQ19 Rat Q64122 Pig P29269 Cattle Q5E9E2
Function	Myosin regulatory subunit that plays an important role in regulation of both smooth muscle and nonmuscle cell contractile activity via its phosphorylation. Implicated in cytokinesis, receptor capping, and cell locomotion (PubMed:11942626, PubMed:2526655). In myoblasts, may regulate PIEZO1-dependent cortical actomyosin assembly involved in myotube formation (By similarity).
Biological Process	Myofibril assembly Source: GO_Central Platelet aggregation Source: UniProtKB Regulation of muscle contraction Source: ProtInc
Cellular Location	Cytoskeleton Other locations cell cortex Note: Colocalizes with F-actin, MYH9 and PIEZO1 at the actomyosin cortex in myoblasts.
Involvement in disease	Megacystis-microcolon-intestinal hypoperistalsis syndrome 4 (MMIHS4): A form of megacystis-microcolon-intestinal hypoperistalsis syndrome, a congenital visceral myopathy primarily affecting females, and characterized by loss of smooth muscle contraction in the bladder and intestine. Affected individuals present at birth with functional obstruction of intestine, microcolon, dilation of bladder, and secondary hydronephrosis. The majority of cases have a fatal outcome due to malnutrition and sepsis, followed by multiorgan failure. MMIHS4 inheritance is autosomal recessive.
PTM	Phosphorylation increases the actin-activated myosin ATPase activity and thereby regulates the contractile activity. It is required to generate the driving force in the migration of the cells but not necessary for localization of myosin-2 at the leading edge. Phosphorylation is required for myotube formation.

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