

**Anti-Myosin pS19/pS20 (RABBIT) Antibody**  
**Myosin phospho S19/phospho S20 Antibody**  
**Catalog # ASR5210**

**Specification**

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**Anti-Myosin pS19/pS20 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human, Mouse
Clonality	Polyclonal
Application	WB, IHC, E, IP, I, LCI
Application Note	Rabbit Anti-Myosin pS19/pS20 Antibody was tested by ELISA, immunohistochemistry, and western blotting. Immunoblotting was used to show reactivity with unstimulated and stimulated cardiac myocytes, 3T3 whole cell lysates, and regulatory light chain and smooth muscle phospho recombinant protein. The antibody was also reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. Although not tested, this antibody is likely functional by immunoprecipitation.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Human Myosin Light Chain phospho peptide corresponding to a region near the amino terminus of the human smooth/non-muscle form of myosin regulatory light chain conjugated to Keyhole Limpet Hemocyanin (KLH).
Preservative	0.01% (w/v) Sodium Azide

**Anti-Myosin pS19/pS20 (RABBIT) Antibody - Additional Information**

**Gene ID** 10627

**Other Names**  
10627

**Purity**

This affinity purified antibody is directed against the regulatory light chain of smooth and non-muscle myosin. The antibody is phosphospecific and detects monophosphorylated and diphosphorylated forms of the protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated

form of the immunizing peptide. The resultant affinity purified antibody was then cross-adsorbed against the non-phosphorylated form of the immunizing peptide. This phosphospecific polyclonal antibody is specific for the phosphorylated pS19/pS20 form of the protein, depending on the source origin of the protein. Reactivity with non-phosphorylated myosin light chain is less than 1% by ELISA. Cross reactivity is expected with myosin light chain from human and mouse. Reactivity with the protein from other species has not been determined. However, the sequence of the immunogen is nearly identical in mammalian and avian species. BLAST search analysis was used to determine that the smooth and non-muscle forms of myosin regulatory light chain have identical sequences. Cross reactivity is expected.

#### **Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

#### **Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

### **Anti-Myosin pS19/pS20 (RABBIT) Antibody - Protein Information**

**Name** MYL12A

**Synonyms** MLCB, MRLC3, RLC

#### **Function**

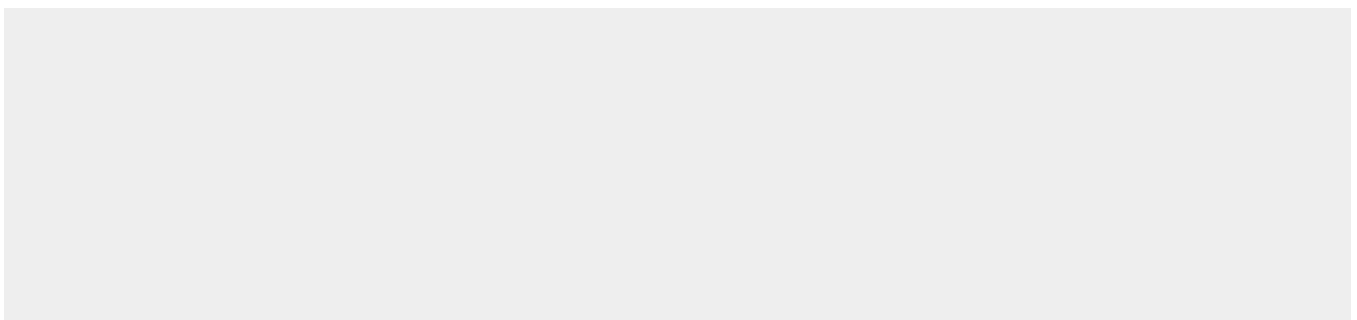
Myosin regulatory subunit that plays an important role in regulation of both smooth muscle and nonmuscle cell contractile activity via its phosphorylation. Implicated in cytokinesis, receptor capping, and cell locomotion (By similarity).

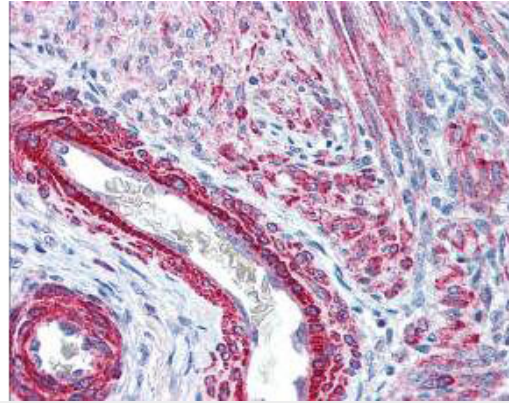
### **Anti-Myosin pS19/pS20 (RABBIT) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-Myosin pS19/pS20 (RABBIT) Antibody - Images**





Rockland's affinity purified anti-Monophosphorylated RLC Smooth and Non-Muscle Myosin pS19/20 antibody was used at 2.5  $\mu\text{g/ml}$  to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows strong staining of both vascular and myometrial smooth muscle cells of the uterus. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.

#### **Anti-Myosin pS19/pS20 (RABBIT) Antibody - Background**

Myosin is the major component of thick muscle filaments, and is a long asymmetric molecule containing a globular head and a long tail. The molecule consists of two heavy chains each  $\sim 200,000$  daltons, and four light chains each  $\sim 16,000 - 21,000$  daltons. Activation of smooth and cardiac muscle primarily involves pathways that increase calcium levels and myosin phosphorylation, resulting in contraction. Myosin light chain phosphatase acts to regulate muscle contraction by dephosphorylating activated myosin light chain. This antibody is specific for the phosphorylated form of myosin light chain. The selected peptide sequence used to generate the polyclonal antibody is located near the amino terminal end of the polypeptide corresponding to the smooth/non-muscle form of myosin regulatory light chain found in cardiac myocytes in addition to smooth and non-muscle cells. This sequence differs from that of the sarcomeric/cardiac form of myosin regulatory light chain that has a different sequence around the phosphorylation site. Human and mouse have almost identical sequences. In human the phosphorylation site is pS19, while in mouse the site maps to pS20. Myosin may play a role in disorders such as cardiomyopathies. Anti-Myosin pS19/pS20 Antibody is useful for researcher interested in stem cell and enzyme researcher.