

Product datasheet for **TA397425S**

MRCL3 (MYL12A) Rabbit Polyclonal Antibody

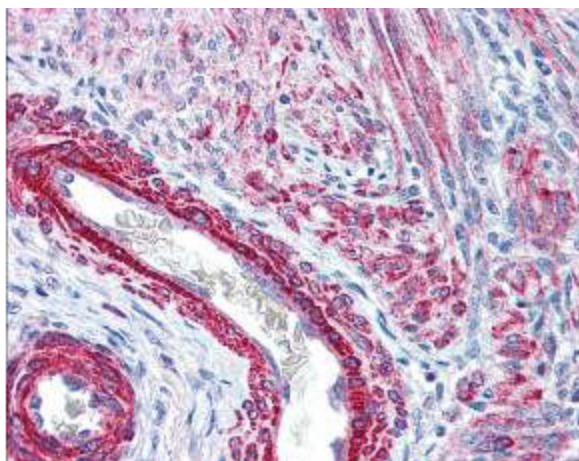
Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, IHC, IP, WB
Recommended Dilution:	WB: 1:1,000 - 1:5,000 IHC: 2.5 µg/ml ELISA: 1:10,000 - 1:30,000
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
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).
Specificity:	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.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	1.0 mg/mL - lot specific
Conjugation:	Unconjugated



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Storage:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Stability:	Expiration date is one (1) year from date of receipt.
Gene Name:	myosin light chain 12A
Database Link:	Entrez Gene 10627 Human P19105
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 ~200,000 daltons, and four light chains each ~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.
Synonyms:	rabbit anti-Myosin p19/pS20 antibody, Myosin regulatory light chain 12A, Myosin regulatory light chain MRCL3, Myosin regulatory light chain 2 nonsarcomeric, Myosin RLC, MLC-2B, HEL-S-24, Epididymis secretory protein Li 24, MLCB
Note:	This phospho specific polyclonal antibody was tested by ELISA, immunohistochemistry, and immunoblotting. Immunoblotting was used to show reactivity with unstimulated and stimulated cardiac myocytes. 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.

Product 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.