

Datasheet for 100-401-416**Myosin phospho S19/phospho S20 Antibody****Overview**

Description:	Anti-Myosin pS19/pS20 (RABBIT) Antibody - 100-401-416
Item No.:	100-401-416
Size:	100 µL
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

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 pS19/pS20 Antibody, Myosin regulatory light chain 12A, Myosin regulatory light chain MRLC3, Myosin regulatory light chain 2, nonsarcomeric, Myosin RLC, MLC-2B
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	MYL12A
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Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
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).
Purity/Specificity:	Anti-Myosin pS19/pS20 antibody is directed against the regulatory light chain of smooth and non-muscle myosin. This antiserum is phosphospecific and detects monophosphorylated and diphosphorylated forms 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.
Relevant Links:	• UniProtKB - P19105 • NCBI - AAH16372.1 • GeneID - 10627

Application Details

Tested Applications:	ELISA, WB
Application Note:	Anti-Myosin pS19/pS20 phospho specific polyclonal antibody was tested by ELISA 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 immunohistochemistry and immunoprecipitation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:20,000
IHC:	2.5 µg/ml
IP:	1:100
WB:	1:1,000 - 1:5,000

Formulation

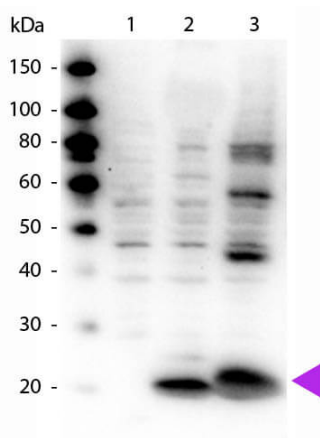
Physical State:	Liquid (sterile filtered)
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Concentration:	70 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

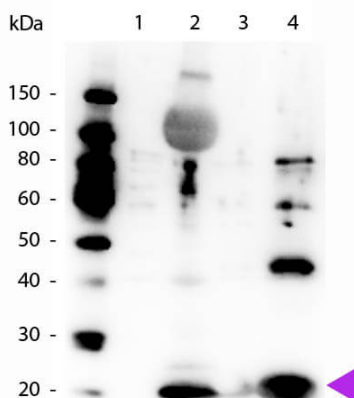
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of Rabbit Anti-Myosin pS19/pS20 antibody.
 Lane 1: HeLa whole cell lysate (p/n W09-000-364). Lane 2:
 HeLa whole cell lysate + smooth muscle recombinant
 phospho protein. Lane 3: HeLa whole cell lysate +
 regulatory light chain recombinant phospho protein. Load:
 10µg of whole cell lysate + 1.0µg of recombinant protein.
 Primary antibody: Myosin pS19/pS20 antibody at 1.0µg/mL
 overnight at 4°C. Secondary antibody: Peroxidase rabbit
 secondary antibody (p/n 611-103-122) at 1:40,000 for 30
 min at RT. Blocking: MB-070 for 30 min at RT.
 Predicted/Observed size: 20 kDa, 20 kDa for RLC.



Western Blot

Western Blot of Rabbit Anti-Myosin pS19/pS20 antibody.
 Lane 1: Smooth muscle recombinant non-phospho protein.
 Lane 2: Smooth muscle recombinant phospho protein. Lane
 3: Regulatory light chain recombinant non-phospho protein.
 Lane 4: Regulatory light chain recombinant phospho
 protein. Load: 1.0 ug of recombinant non-phospho protein,
 5.0 ug of recombinant phospho protein. Primary antibody:
 Myosin pS19/pS20 antibody at 1.0 ug/mL overnight at 4°C.
 Secondary antibody: Peroxidase rabbit secondary antibody
 at 1:40,000 for 30 min at RT. Blocking: MB-070 for 30 min at
 RT. Predicted/Observed size: 20 kDa, 20 kDa for RLC.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.