abcam

Product datasheet

Anti-MYL12A (phospho S19) antibody ab2480

18 Abreviews 133 References 3 Images

Overview

Product name	Anti-MYL12A (phospho S19) antibody
Description	Rabbit polyclonal to MYL12A (phospho S19)
Host species	Rabbit
Specificity	ab2480 can detect the phosphorylated serine residue in both the human and mouse protein. In human the phosphorylation site is pS19, while in mouse the site maps to pS20. This phospho specific polyclonal antibody is specific for phosphorylated pS19 of human myosin light chain. Reactivity with non-phosphorylated human myosin light chain is less than 1% by ELISA. 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. 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. Customers have seen variable performance with Xenopus laevis.
Tested applications	**Suitable for:** ELISA, ICC/IF, IHC-FoFr, WB, IHC-P, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human, Caenorhabditis elegans, Recombinant fragment **Predicted to work with:** Bird, Mammals
Immunogen	Synthetic peptide corresponding to Human MYL12A aa 1-100 (phospho S19) conjugated to keyhole limpet haemocyanin. Database link: **P19105** Run BLAST with Run BLAST with
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride
Purity	Immunogen affinity purified
Purification notes	This antibody 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.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2480 in the following tested applications.

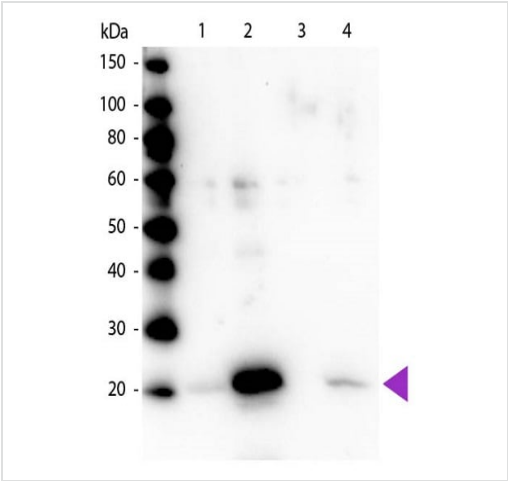
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.
ICC/IF	★★★★★ (6)	Use at an assay dependent concentration.
IHC-FoFr		Use at an assay dependent concentration. PubMed: 19279134 Trichloroacetic acid was used for tissue fixation.
WB	★★★★★ (7)	1/500 - 1/2000. Predicted molecular weight: 20 kDa. We recommend using BSA for blocking when using phospho-specific antibodies.
IHC-P	★★★★☆ (4)	Use a concentration of 2.5 µg/ml.
IP		Use at an assay dependent concentration.

Target

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.
Sequence similarities	Contains 3 EF-hand domains.
Post-translational modifications	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.

Images



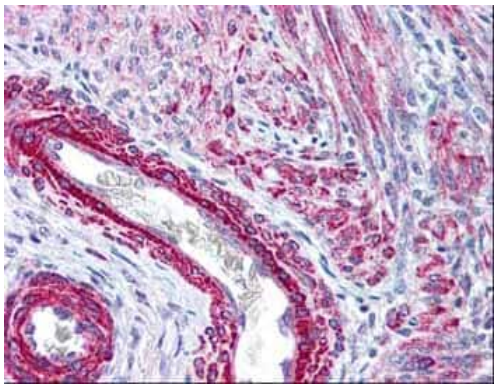
Western blot - Anti-MYL12A (phospho S19) antibody (ab2480)

All lanes : Anti-MYL12A (phospho S19) antibody (ab2480) at 1/1000 dilution

Lane 1 : Regulatory Light Chain Non-Phospho recombinant protein, 50 ng
Lane 2 : Regulatory Light Chain Phospho recombinant protein, 50 ng
Lane 3 : Smooth Muscle Non-Phospho recombinant protein, 50 ng
Lane 4 : Smooth Muscle Phospho recombinant protein, 50 ng

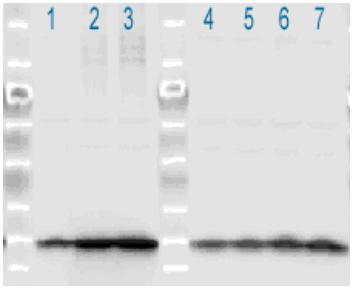
Secondary
All lanes : Peroxidase rabbit secondary antibody at 1/40000 dilution

Predicted band size: 20 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MYL12A (phospho S19) antibody (ab2480)

IHC-P of ab2480 at 2.5 µg/ml staining both vascular and myometrial smooth muscle cells of the human uterus. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain.



Western blot - Anti-MYL12A (phospho S19) antibody (ab2480)

Rabbit polyclonal to phospho Myosin Light Chain phospho Myosin Light Chain (Ser 20) (ab2480) used at a 1/5000 dilution to detect myosin light chain by Western blot. Either 13 ug (lanes 1-3) or 20 ug (lanes 4-7) of a mouse cardiac myocyte lysate was loaded on a 4-20% Criterion gel for SDS-PAGE. Samples were either mock-treated or CLA treated:
Lane 1 : untreated 45 min
Lane 2 : CLA 50 nm 45 min
Lane 3 : CLA 100 nm 45 min
Lane 4 : A21 untreated 45 min
Lane 5 : A22 A23187 5 min
Lane 6 : A23 A23187 15 min

Lane 7 : A24 A23187 60 min
After washing, a 1/5,000 dilution of **anti-rabbit HRP** (**ab7090**) was used as secondary.

Rabbit polyclonal to phospho Myosin Light Chain phospho Myosin Light Chain (Ser 20) (ab2480) used at a 1/5000 dilution to detect myosin light chain by Western blot. Either 13 ug (lanes 1-3) or 20 ug (lanes 4-7) of a mouse cardiac myocyte lysate was loaded on a 4-20

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