

Anti-Phospholamban antibody [EPR21897] ab219626

Recombinant RabMAb

[1 References](#) [7 Images](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-Phospholamban antibody [EPR21897] |
| Description | Rabbit monoclonal [EPR21897] to Phospholamban |
| Host species | Rabbit |
| Tested applications | Suitable for: WB, IHC-P, IP |
| Species reactivity | Reacts with: Mouse, Rat, Human |
| Immunogen | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| Positive control | WB: Human heart and fetal heart tissue lysates; Mouse heart tissue lysate; Rat heart tissue lysate. IHC-P: Human, mouse and rat cardiac muscle tissue. IP: Human fetal heart tissue lysate. |
| General notes | <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> |

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 long term. Avoid freeze / thaw cycle. |
| Storage buffer | <p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p> |
| Purity | Protein A purified |
| Clonality | Monoclonal |
| Clone number | EPR21897 |
| Isotype | IgG |

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab219626 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 |
|-------------|-----------|--|
| WB | | 1/2000. Detects a band of approximately 10, 25 kDa (predicted molecular weight: 6 kDa). |
| IHC-P | | 1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |
| IP | | 1/30. |

Target

Function

Reversibly inhibits the activity of ATP2A2 in cardiac sarcoplasmic reticulum by decreasing the apparent affinity of the ATPase for Ca^{2+} . Modulates the contractility of the heart muscle in response to physiological stimuli via its effects on ATP2A2. Modulates calcium re-uptake during muscle relaxation and plays an important role in calcium homeostasis in the heart muscle. The degree of ATP2A2 inhibition depends on the oligomeric state of PLN. ATP2A2 inhibition is alleviated by PLN phosphorylation.

Tissue specificity

Heart muscle (at protein level).

Involvement in disease

Cardiomyopathy, dilated 1P
Cardiomyopathy, familial hypertrophic 18

Sequence similarities

Belongs to the phospholamban family.

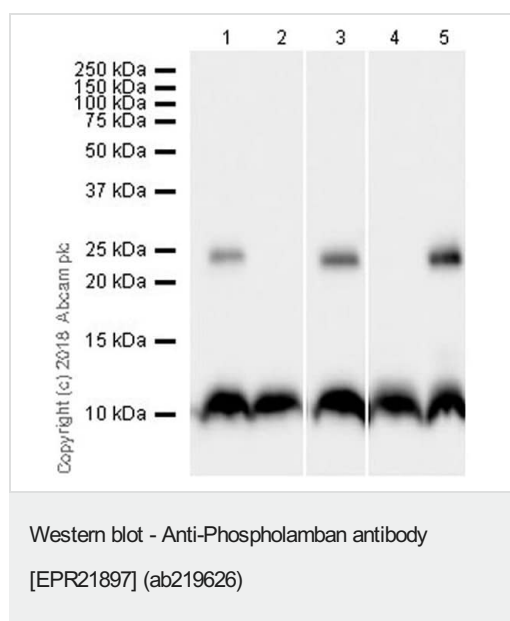
Post-translational modifications

Phosphorylation by PKA abolishes the inhibition of ATP2A2-mediated calcium uptake. Phosphorylated at Thr-17 by CaMK2, and in response to beta-adrenergic stimulation. Phosphorylation by DMPK may stimulate sarcoplasmic reticulum calcium uptake in cardiomyocytes.

Cellular localization

Endoplasmic reticulum membrane. Sarcoplasmic reticulum membrane. Mitochondrion membrane. Membrane. Colocalizes with HAX1 at the endoplasmic reticulum (PubMed:17241641). Colocalizes with DMPK at the sarcoplasmic reticulum (PubMed:15598648).

Images



All lanes : Anti-Phospholamban antibody [EPR21897] (ab219626)
at 1/2000 dilution

Lane 1 : Human heart tissue lysate

Lane 2 : Human fetal heart tissue lysate

Lane 3 : Mouse heart tissue lysate

Lanes 4-5 : Rat heart tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at
1/100000 dilution

Developed using the ECL technique.

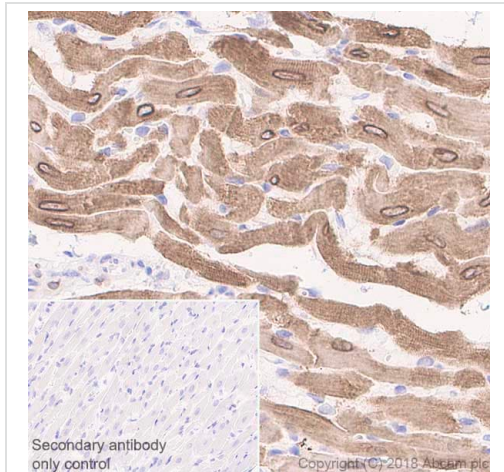
Predicted band size: 6 kDa

Observed band size: 10,25 kDa

Exposure time: 15 seconds

Blocking and dilution buffer: 5% NFDM/TBST.

WB bands are consistent with reference (PMID 20696159; PMID 22144574)

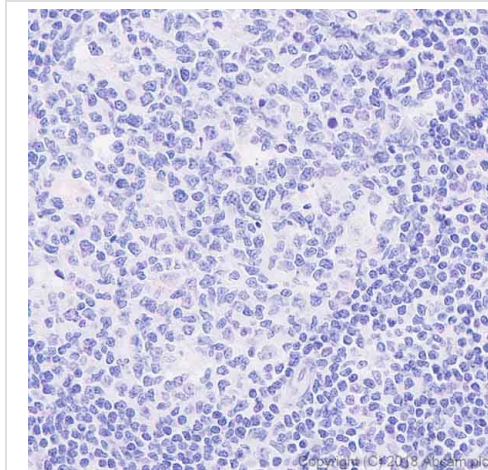


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Phospholamban antibody [EPR21897] (ab219626)

Immunohistochemical analysis of paraffin embedded rat cardiac muscle tissue labeling Phospholamban with ab219626 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on human cardiac muscle (PMID: 28759816, PMID: 27642167) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



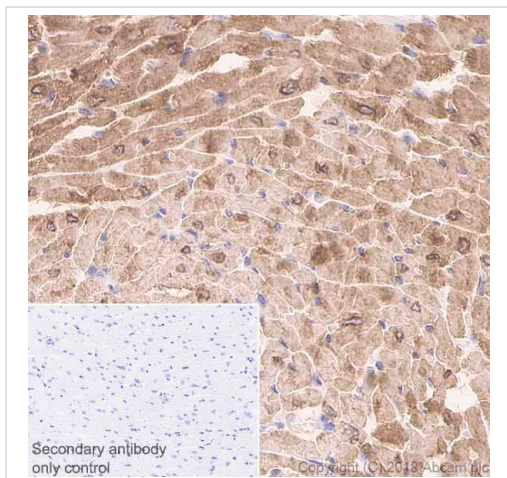
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Phospholamban antibody [EPR21897] (ab219626)

Negative control: No staining shown in human tonsil tissue.

Immunohistochemical analysis of paraffin embedded human tonsil tissue labeling Phospholamban with ab219626 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. No staining on human tonsil is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

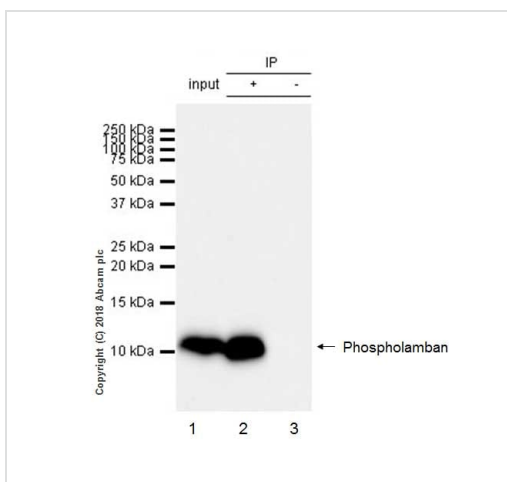


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Phospholamban antibody [EPR21897] (ab219626)

Immunohistochemical analysis of paraffin embedded mouse cardiac muscle tissue labeling Phospholamban with ab219626 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on mouse cardiac muscle (PMID: 28759816, PMID: 27642167) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Immunoprecipitation - Anti-Phospholamban antibody [EPR21897] (ab219626)

Phospholamban was immunoprecipitated from 0.35 mg of human fetal heart tissue lysate with ab219626 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab219626 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

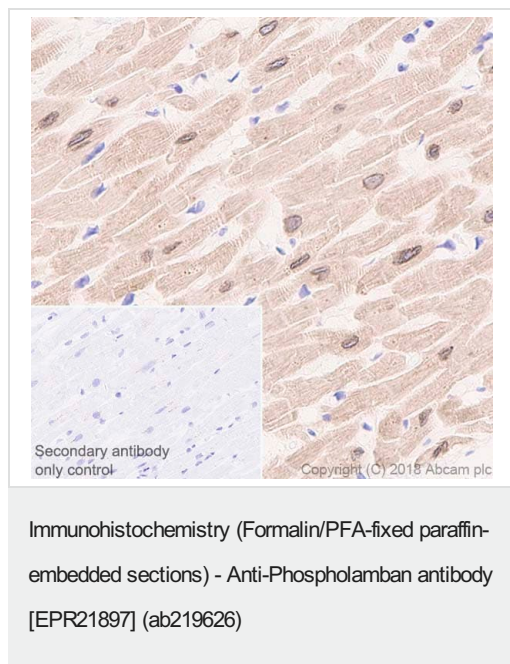
Lane 1: Human fetal heart tissue lysate 10 µg (Input).

Lane 2: ab219626 IP in human fetal heart tissue lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab219626 in human fetal heart tissue lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.



Immunohistochemical analysis of paraffin embedded human cardiac muscle tissue labeling Phospholamban with ab219626 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on human cardiac muscle (PMID: 28759816, PMID: 27642167) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

Why choose a recombinant antibody?

| | |
|--|--|
|  <p>Research with confidence Consistent and reproducible results</p> |  <p>Long-term and scalable supply Recombinant technology</p> |
|  <p>Success from the first experiment Confirmed specificity</p> |  <p>Ethical standards compliant Animal-free production</p> |

Anti-Phospholamban antibody [EPR21897] (ab219626)

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