

Phospholamban Monoclonal Antibody (2D12)

Product Details	
Size	100 µg
Species Reactivity	Dog, Chicken, Guinea pig, Human, Mouse, Sheep, Pig, Rabbit, Rat
Published Species	Dog, Rabbit, Rat, Pig, Rodent, Human, Mouse, Guinea pig
Host/Isotype	Mouse / IgG2a
Class	Monoclonal
Type	Antibody
Clone	2D12
Conjugate	Unconjugated
Immunogen	Synthetic peptide corresponding to residues D(2) K V Q Y L T R S A I R R A S T I E M P Q Q A R (25) of canine Phospholamban.
Form	Liquid
Concentration	1 mg/mL
Purification	Protein A
Storage buffer	PBS with 1mg/mL BSA
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2252716

Applications	Tested Dilution	Publications
Western Blot (WB)	1:500-1:5,000	145 Publications
Immunohistochemistry (IHC)	-	6 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:200	-
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Immunocytochemistry (ICC/IF)	1:10-1:100	5 Publications
Immunoprecipitation (IP)	Assay-dependent	1 Publication
Neutralization (Neu)	-	1 Publication

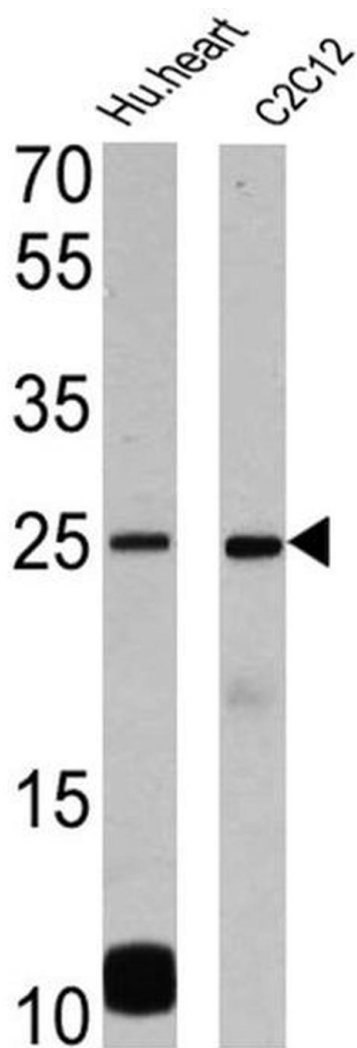
Product Specific Information

MA3-922 detects phospholamban (PLB) in rabbit, human, pig, sheep, chicken, canine, guinea porcine, rat, and mouse.

MA3-922 has been successfully used in Western blot, immunofluorescence, immunohistochemistry and immunoprecipitation procedures. By Western blot, this antibody detects a 25 kDa protein under non-reducing conditions representing the pentameric form of PLB and a 5 kDa protein under reducing conditions representing the monomeric form of PLB in canine cardiac extracts. Immunofluorescence staining of PLB in rat papillary muscle tissue with MA3-922 results in diffuse staining of the network sarcoplasmic reticulum (SR). MA3-922 can also be used to increase the calcium uptake in ventricular SR vesicles analogous to the phosphorylation of PLB following adrenergic stimulation. This antibody is recommended for immunofluorescent staining of tissues.

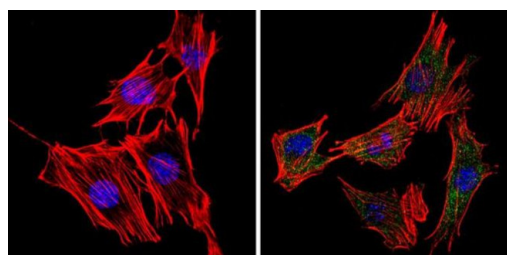
The MA3-922 immunogen is a synthetic peptide corresponding to residues D(2) K V Q Y L T R S A I R R A S T I E M P Q Q A R(25) of canine PLB. This antibody recognizes an epitope between amino acid residues 9-17 of canine PLB.

Product Images For Phospholamban Monoclonal Antibody (2D12)



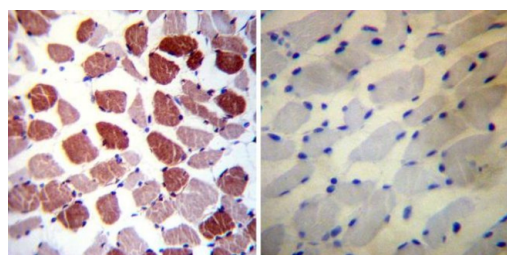
Phospholamban Antibody (MA3-922) in WB

Western blot analysis of Phospholamban was performed by loading 25 μ g of human heart (lane 1) and C2C12 (lane 2) onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked at 4°C overnight. The membrane was probed with a Phospholamban monoclonal antibody (Product # MA3-922) at a dilution of 1:1000 overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Chemiluminescent detection was performed using Pierce ECL Plus Western Blotting Substrate (Product # 32132). Results show a band at ~25 kDa.



Phospholamban Antibody (MA3-922) in ICC/IF

Immunofluorescent analysis of Phospholamban (green) showing staining in the cytoplasm of C2C12 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a Phospholamban monoclonal antibody (Product # MA3-922) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor 554 (red) and nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



Phospholamban Antibody (MA3-922) in IHC (P)

Immunohistochemistry was performed on normal deparaffinized Human skeletal muscle tissues. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:200 with a mouse monoclonal antibody recognizing Phospholamban (Product # MA3-922) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.

View more figures on [thermofisher.com](#)

159 References

Western Blot (145)

Frontiers in physiology

Saxagliptin but Not Sitagliptin Inhibits CaMKII and PKC via DPP9 Inhibition in Cardiomyocytes.

"MA3-922 was used in Western Blotting to investigate whether dipeptidyl peptidase 8/9 contribute to saxagliptin-mediated inhibition of calmodulin-dependent protein kinase II and protein kinase C activity."

Authors: Koyani CN,Trummer C,Shrestha N,Scheruebel S,Bourgeois B,Plastira I,Kickmaier S,Sourij H,Rainer PP,Madl T,Sattler W,Pelzmann B,Malle E,von Lewinski D

Year
2023

Species
Mouse

Dilution
1:2,000

Clinical science (London, England : 1979)

Increased 1-adrenergic receptor antibody confers a vulnerable substrate for atrial fibrillation via mediating Ca2+ mishandling and atrial fibrosis in active immunization rabbit models.

"Published figure using Phospholamban monoclonal antibody (Product # MA3-922) in Western Blot"

Authors: Sun H,Song J,Li K,Li Y,Shang L,Zhou Q,Lu Y,Zong Y,He X,Kari M,Yang H,Zhou X,Zhang L,Tang B

Year
2023

[View more WB references on thermofisher.com](#)

Immunohistochemistry (6)

Scientific reports

The phospholamban p.(Arg14del) pathogenic variant leads to cardiomyopathy with heart failure and is unresponsive to standard heart failure therapy.

"Published figure using Phospholamban monoclonal antibody (Product # MA3-922) in Immunohistochemistry"

Authors: Eijgenraam TR,Boukens BJ,Boogerd CJ,Schouten EM,van de Kolk CWA,Steghe NM,Te Rijdt WP,Hoorntje ET,van der Zwaag PA,van Rooij E,van Tintelen JP,van den Berg MP,van der Meer P,van der Velden J,Silljé HHW,de Boer RA

Year
2020

Species
Mouse

Nature communications

Integrin-linked kinase mediates force transduction in cardiomyocytes by modulating SERCA2a/PLN function.

"MA3-922 was used in Immunohistochemistry to show that integrin-linked kinase (ILK) mediates cardiomyocyte force transduction through regulation of sarcoplasmic/endoplasmic reticulum Ca(2+)ATPase isoform 2a (SERCA-2a) and phosphorylation of phospholamban (PLN) in the human heart."

Authors: Traister A,Li M,Aafaqi S,Lu M,Arab S,Radisic M,Gross G,Guido F,Sherret J,Verma S,Slorach C,Mertens L,Hui W,Roy A,Delgado-Olguin P,Hannigan G,Maynes JT,Coles JG

Year
2014

Species
Mouse

Dilution
1:100

[View more IHC references on thermofisher.com](#)

More applications with references on [thermofisher.com](#)

- IHC (F) (1)
- ICC/IF (5)
- IP (1)
- Neu (1)

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