

**Phospho-PLB(T17) Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3694A**

## Specification

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### Phospho-PLB(T17) Antibody - Product Information

Application	WB, DB,E
Primary Accession	<a href="#">P26678</a>
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

### Phospho-PLB(T17) Antibody - Additional Information

**Gene ID** 5350

**Other Names**

Cardiac phospholamban, PLB, PLN, PLB

**Target/Specificity**

This PLB Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T17 of human PLB.

**Dilution**

WB~~1:1000

DB~~1:500

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-PLB(T17) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Phospho-PLB(T17) Antibody - Protein Information

**Name** PLN ([HGNC:9080](#))

**Synonyms** PLB

**Function** Reversibly inhibits the activity of ATP2A2 in cardiac sarcoplasmic reticulum by decreasing the apparent affinity of the ATPase for Ca(2+) (PubMed:[28890335](#)). 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. Controls intracellular  $Ca^{2+}$  levels in elongated spermatids. May play a role in germ cell differentiation (By similarity).

#### Cellular Location

Endoplasmic reticulum membrane; Single-pass membrane protein. Sarcoplasmic reticulum membrane; Single-pass membrane protein. Mitochondrion membrane {ECO:0000250|UniProtKB:A4IFH6}; Single-pass membrane protein. Membrane {ECO:0000250|UniProtKB:P61014}; Single-pass membrane protein. Note=Colocalizes with HAX1 at the endoplasmic reticulum (PubMed:17241641). Colocalizes with DMPK at the sarcoplasmic reticulum (PubMed:15598648).

#### Tissue Location

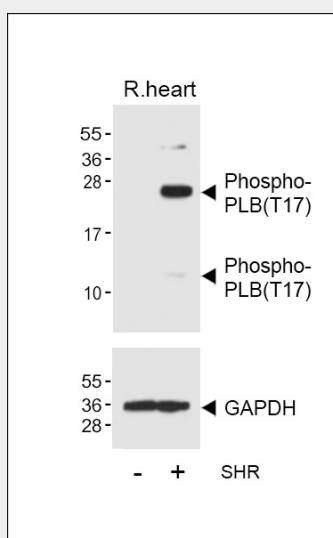
Heart muscle (at protein level).

### Phospho-PLB(T17) Antibody - Protocols

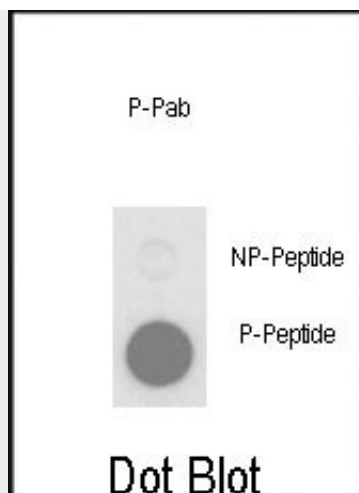
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho-PLB(T17) Antibody - Images



Western blot analysis of lysates from Rat heart tissue and spontaneous hypertensive (SHR) rat heart tissue lysate, using Phospho-PLB(T17) Antibody (Cat. #AP3694a) (upper) or GAPDH (lower).



Dot blot analysis of anti-Phospho-PLB-T17 Phospho-specific Pab (Cat. #AP3694a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

#### **Phospho-PLB(T17) Antibody - Background**

Phospholamban (PLB) is a 52 amino acid phosphoprotein which regulates the calcium pump of cardiac sarcoplasmic reticulum (SR). PLB is an oligomer of five identical subunits each having a cytoplasmic and transmembrane domain. The cytoplasmic domain (residues 1 to 25) contains the phosphorylation sites and is highly basic and readily cleaved by proteases; whereas the transmembrane domain (residues 25 to 52) is mostly hydrophobic, protease resistant and stabilizes the pentamer.