

**Anti-PLN Picoband Antibody**  
Catalog # ABO12072**Specification****Anti-PLN Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P26678</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Cardiac phospholamban(PLN) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-PLN Picoband Antibody - Additional Information**

**Gene ID** 5350

**Other Names**

Cardiac phospholamban, PLB, PLN, PLB

**Calculated MW**

6109 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Sarcoplasmic reticulum membrane; Single-pass membrane protein. Mitochondrion membrane ; Single- pass membrane protein . Endoplasmic reticulum membrane; Single-pass membrane protein.

**Tissue Specificity**

Heart muscle (at protein level). .

**Protein Name**

Cardiac phospholamban

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human PLN(1-35aa MEKVQYLTRSAIRRASTIEMPQQARQKLQNLFINF), different from the related mouse and rat sequences by one amino acid.

### Purification

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins.

### Storage

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

## Anti-PLN Picoband 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:<a href="http://www.uniprot.org/citations/28890335" target="\_blank">28890335</a>). 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 a the sarcoplasmic reticulum (PubMed:15598648).

### Tissue Location

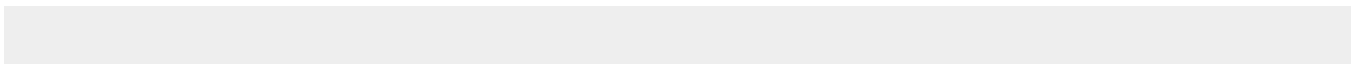
Heart muscle (at protein level).

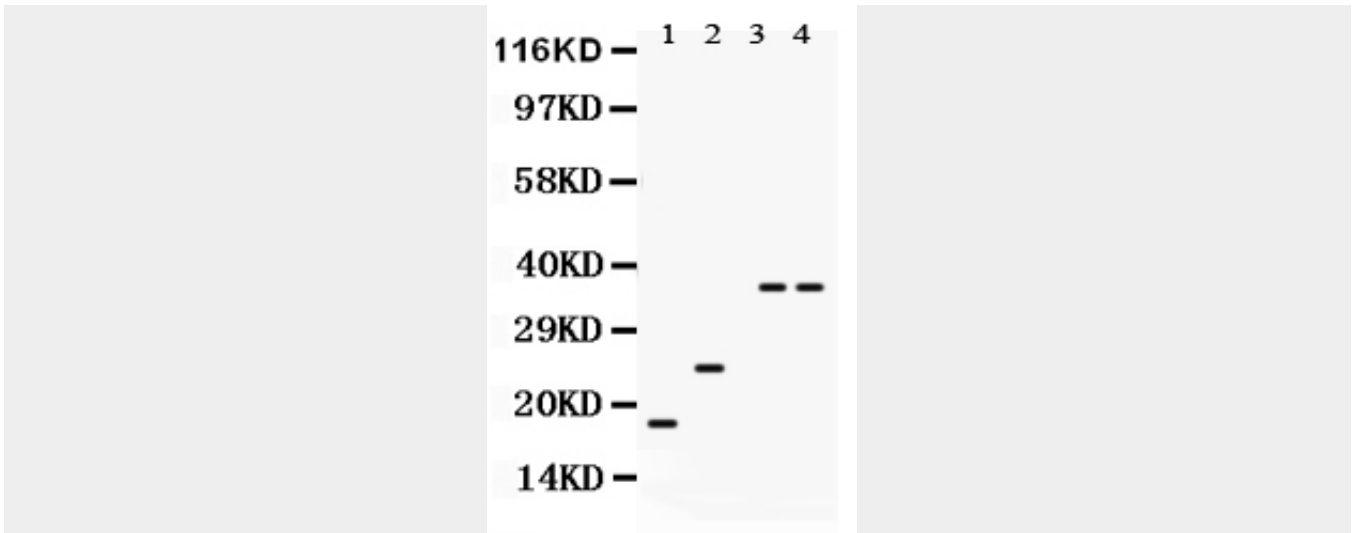
## Anti-PLN Picoband Antibody - Protocols

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](#)

## Anti-PLN Picoband Antibody - Images





Anti- PLN Picoband antibody, ABO12072, Western blotting All lanes: Anti PLN (ABO12072) at 0.5ug/ml Lane 1: Mouse Cardiac Muscle Tissue Lysate at 50ug Lane 2: Rat Cardiac Muscle Tissue Lysate at 50ug Lane 3: COLO320 Whole Cell Lysate at 40ug Lane 4: K562 Whole Cell Lysate at 40ug Predicted bind size: 6KD Observed bind size: 18, 24, 36KD

**Anti-PLN Picoband Antibody - Background**

Phospholamban is a 52 amino acid integral membrane protein that regulates the Ca<sup>2+</sup> pump in cardiac muscle and skeletal muscle cells. The subsequent activation of the Ca<sup>2+</sup> pump leads to enhanced muscle relaxation rates, thereby contributing to the inotropic response elicited in heart by beta-agonists. Phospholamban is also expressed in slow-twitch skeletal muscle and some smooth muscle cells. It is observed that human ventricle and quadriceps displayed high levels of phospholamban transcripts and proteins, with markedly lower expression observed in smooth muscles, while the right atrium also expressed low levels of phospholamban. The structure of the human phospholamban gene closely resembles that reported for chicken, rabbit, rat, and mouse. Comparison of the human to other mammalian phospholamban genes indicated a marked conservation of sequence for at least 217 bp upstream of the transcription start site.