

**Phospholamban / PLN Antibody (N-Term)**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF3279a****Specification**

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**Phospholamban / PLN Antibody (N-Term) - Product Information**

Application	WB
Primary Accession	<a href="#">P26678</a>
Other Accession	<a href="#">NP_002658.1</a> , <a href="#">5350</a> , <a href="#">64672 (rat)</a>
Reactivity	Human, Rat
Predicted	Pig
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	6109

**Phospholamban / PLN Antibody (N-Term) - Additional Information****Gene ID** 5350**Other Names**

Cardiac phospholamban, PLB, PLN, PLB

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospholamban / PLN Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospholamban / PLN Antibody (N-Term) - Protein Information****Name** PLN ([HGNC:9080](#))**Synonyms** PLB**Function**

Reversibly inhibits the activity of ATP2A2/SERCA2 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>). Binds preferentially to the ATP- bound E1 conformational form of ATP2A2 which predominates at low Ca(2+) concentrations during the diastolic phase of the cardiac cycle (By similarity). Inhibits

ATP2A2  $\text{Ca}^{2+}$  affinity by disrupting its allosteric activation by ATP (By similarity). 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 (By similarity). Also inhibits the activity of ATP2A3/SERCA3 (By similarity). Controls intracellular  $\text{Ca}^{2+}$  levels in elongated spermatids and may play a role in germ cell differentiation (By similarity). In the thalamic reticular nucleus of the brain, plays a role in the regulation of sleep patterns and executive functioning (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

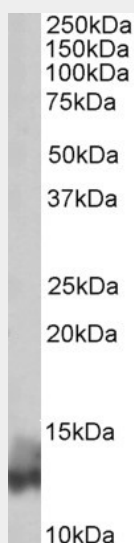
Heart muscle (at protein level).

### Phospholamban / PLN Antibody (N-Term) - 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](#)

### Phospholamban / PLN Antibody (N-Term) - Images



AF3279a (0.03  $\mu\text{g/ml}$ ) staining of Human Heart lysate (35  $\mu\text{g}$  protein in RIPA buffer). Primary

incubation was 1 hour. Detected by chemiluminescence.

#### **Phospholamban / PLN Antibody (N-Term) - References**

The role of Lamin A/C mutations in Danish patients with idiopathic dilated cardiomyopathy. Møller DV, Pham TT, Gustafsson F, Hedley P, Ersbøll MK, Bundgaard H, Andersen CB, Torp-Pedersen C, Køber L, Christiansen M. European journal of heart failure : journal of the Working Group on Heart Failure of the European Society of Cardiology 2009 Nov 11 (11): 1031-5. PMID: 19875404