

# Phospholamban Rabbit mAb

Catalog # AP75907

## Product Information

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<b>Application</b>	WB, IHC-P, IP
<b>Primary Accession</b>	<a href="#">P26678</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	6109

## Additional Information

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<b>Gene ID</b>	5350
<b>Other Names</b>	PLN
<b>Dilution</b>	WB~~1:500-1:1000 IHC-P~~N/A IP~~1:20-1:50
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	PLN ( <a href="#">HGNC:9080</a> )
<b>Synonyms</b>	PLB
<b>Function</b>	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="#">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 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 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).

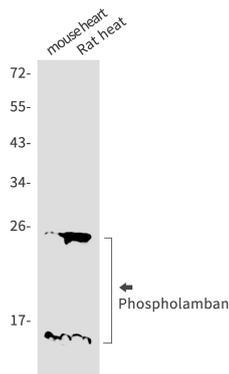
### Tissue Location

Heart muscle (at protein level).

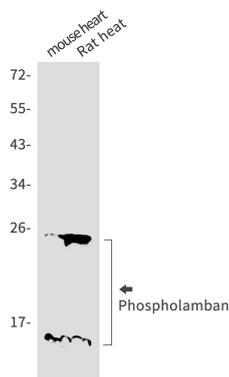
## Background

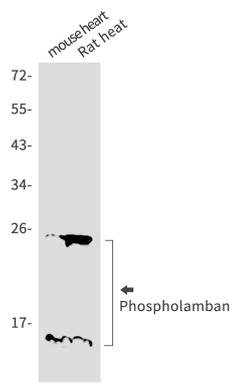
Reversibly inhibits the activity of ATP2A2 in cardiac sarcoplasmic reticulum by decreasing the apparent affinity of the ATPase for Ca<sup>2+</sup>. Modulates the contractility of the heart muscle in response to physiological stimuli via its effects on ATP2A2. Modulates calcium re-uptake during muscle 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.

## Images



Western blot analysis of Phospho-lamban in mouse heart, rat heart lysates using Phospho-lamban antibody.





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