

## ARG65299 anti-PLN / Phospholamban antibody

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Goat Polyclonal antibody recognizes PLN / Phospholamban
Tested Reactivity	Hu, Rat
Predict Reactivity	Cow, Pig
Tested Application	IHC-P, WB
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	PLN / Phospholamban
Species	Human
Immunogen	KVQYLTRSAIRR-C
Conjugation	Un-conjugated
Alternate Names	CMH18; PLB; CMD1P; Cardiac phospholamban

### Application Instructions

Application table	Application	Dilution
	IHC-P	3 - 5 µg/ml
	WB	0.01 - 0.03 µg/ml

**Application Note**  
WB: Recommend incubate at RT for 1h.  
IHC-P: Antigen Retrieval: Steam tissue section in Citrate buffer (pH 6.0).  
\* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

### Properties

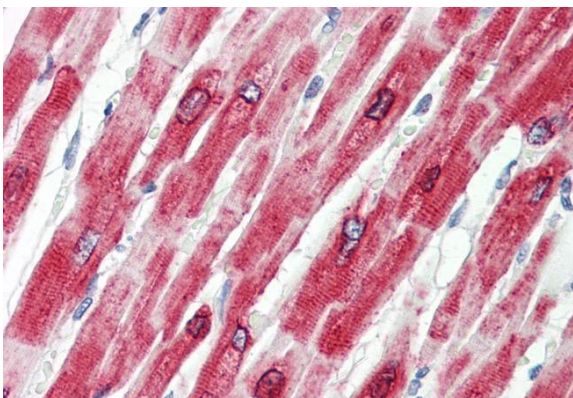
Form	Liquid
Purification	Purified from goat serum by antigen affinity chromatography.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

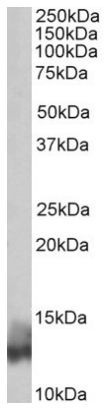
Database links	<a href="#">GeneID: 5350 Human</a> <a href="#">GeneID: 64672 Rat</a> <a href="#">Swiss-port # P26678 Human</a> <a href="#">Swiss-port # P61016 Rat</a>
Gene Symbol	PLN
Gene Full Name	phospholamban
Background	The protein encoded by this gene is found as a pentamer and is a major substrate for the cAMP-dependent protein kinase in cardiac muscle. The encoded protein is an inhibitor of cardiac muscle sarcoplasmic reticulum Ca(2+)-ATPase in the unphosphorylated state, but inhibition is relieved upon phosphorylation of the protein. The subsequent activation of the Ca(2+) pump leads to enhanced muscle relaxation rates, thereby contributing to the inotropic response elicited in heart by beta-agonists. The encoded protein is a key regulator of cardiac diastolic function. Mutations in this gene are a cause of inherited human dilated cardiomyopathy with refractory congestive heart failure. [provided by RefSeq, Jul 2008]
Function	Reversibly inhibits the activity of ATP2A2 in cardiac sarcoplasmic reticulum by decreasing the apparent affinity of the ATPase for Ca(2+). 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. [UniProt]
Research Area	Cell Biology and Cellular Response antibody; Controls and Markers antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	6 kDa
PTM	Phosphorylation by PKA abolishes the inhibition of ATP2A2-mediated calcium uptake. Phosphorylated at Thr-17 by CaMK2, and in response to beta-adrenergic stimulation. Phosphorylation by DMPK may stimulate sarcoplasmic reticulum calcium uptake in cardiomyocytes.

## Images



ARG65299 anti-PLN / Phospholamban antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human heart tissue. Antigen Retrieval: Steam tissue section in Citrate buffer (pH 6.0). The tissue section was stained with ARG65299 anti-PLN / Phospholamban antibody at 3.75 µg/ml dilution followed by AP-staining.



### ARG65299 anti-PLN / Phospholamban antibody WB image

Western blot: 35 µg of Human heart lysate (protein in RIPA buffer) stained with ARG65299 anti-PLN / Phospholamban antibody at 0.03 µg/ml dilution and incubated at RT for 1 hour.