

**Phospho-PLB(S16) Antibody Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP3692a****Specification**

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**Phospho-PLB(S16) Antibody Blocking peptide - Product Information**Primary Accession [P26678](#)**Phospho-PLB(S16) Antibody Blocking peptide - Additional Information****Gene ID** 5350**Other Names**

Cardiac phospholamban, PLB, PLN, PLB

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP3692a](/products/AP3692a) was selected from the region of human Phospho-PLB-pS16. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Phospho-PLB(S16) Antibody Blocking peptide - 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:<http://www.uniprot.org/citations/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(S16) Antibody Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

**Phospho-PLB(S16) Antibody Blocking peptide - Images****Phospho-PLB(S16) Antibody Blocking peptide - 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.