

PLN Blocking Peptide (N-term)
Synthetic peptide
Catalog # BP20550a**Specification**

PLN Blocking Peptide (N-term) - Product Information

Primary Accession [P26678](#)
Other Accession [P61016](#), [P61015](#), [P61013](#), [P61014](#), [A4IFH6](#)

PLN Blocking Peptide (N-term) - Additional Information

Gene ID 5350

Other Names

Cardiac phospholamban, PLB, PLN, PLB

Target/Specificity

The synthetic peptide sequence is selected from aa 8-22 of HUMAN PLN

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.

PLN Blocking Peptide (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:28890335). 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).

PLN Blocking Peptide (N-term) - Protocols

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

- [Blocking Peptides](#)

PLN Blocking Peptide (N-term) - Images**PLN Blocking Peptide (N-term) - Background**

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PLN Blocking Peptide (N-term) - References

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Minamisawa S.,et al.Biochem. Biophys. Res. Commun. 304:1-4(2003).
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