

Anti-Phospholamban Antibody [1G3]

RT1491



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IP, IF
Molecular Wt:	Oligomer: 25 kDa, Monomer: 6 kDa
Clone number:	1G3

Description:	The Sarco(endo)plasmic-reticulum (SER) regulatory protein, Phospholamban (PLB), is a small, plasma membrane-associated phospho-protein found in the SER of cardiac, smooth and slow-twitch muscle. Believed to assemble into a pentamer, PLB regulates cardiac contractility and Ca ²⁺ affinity for cardiac SER Ca ²⁺ ATPase (SERCA2a). Non-phosphorylated PLB associates with SERCA2a, and inhibits Ca ²⁺ reuptake into the SER. PLB activation occurs when key Serine/Threonine residues in PLB (Ser 10, Ser 16, Thr 17) are phosphorylated by numerous effectors, which include PKC, PKA, PKG, and CaM kinase. Phosphorylation of PLB causes dissociation from SERCA2a and a subsequent increase in the rate of Ca ²⁺ reuptake into the SER, which accelerates ventricular relaxation.
Immunogen:	Specific for an epitope mapping between amino acids 7-32 at the N-terminus of phospholamban of human origin.
Positive control:	Mouse heart tissue, human heart tissue.
Subcellular location:	Sarcoplasmic reticulum membrane Mitochondrion membrane, Endoplasmic reticulum membrane
Database links:	SwissProt: P26678 Human
Recommended Dilutions:	
WB	1:100-1:1,000
IP	1-2 µg per 100-500 µg of total protein(1 ml of cell lysate)
IF	1:50-1:500
Storage Buffer:	1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.
Storage Instruction:	Store at +4℃.
Purity:	Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

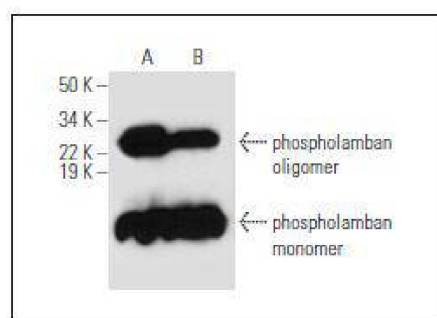


Fig1: Western blot analysis of phospholamban expression in mouse heart (A) and human heart (B) tissue extracts.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Zhai, J., et al. 2000. Cardiac-specific overexpression of a superinhibitory pentameric phospholamban mutant enhances inhibition of cardiac function in vivo. *J. Biol. Chem.* 275: 10538-10544.
2. Minamisawa, S., et al. 1999. Chronic phospholamban-sarcoplasmic reticulum calcium ATPase interaction is the critical calcium cycling defect in dilated cardiomyopathy. *Cell* 99: 313-322.

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