

**Phospho-Ser23/24 Troponin I (cardiac) Antibody**  
**Affinity purified rabbit polyclonal antibody**  
**Catalog # AN1223****Specification**

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**Phospho-Ser23/24 Troponin I (cardiac) Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P48787</a>
Reactivity	Mouse, Rat
Predicted	Human, Monkey
Host	Rabbit
Clonality	polyclonal
Calculated MW	25 KDa

**Phospho-Ser23/24 Troponin I (cardiac) Antibody - Additional Information**

Gene ID	21954
Gene Name	TNNI3

**Other Names**

Troponin I, cardiac muscle, Cardiac troponin I, Tnni3

**Target/Specificity**

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser23/24 conjugated to KLH.

**Dilution**

WB~~ 1:1000

**Format**

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephospho-peptide affinity columns.

**Antibody Specificity**

Specific for the ~25k cardiac troponin I protein phosphorylated at Ser23/24.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-Ser23/24 Troponin I (cardiac) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

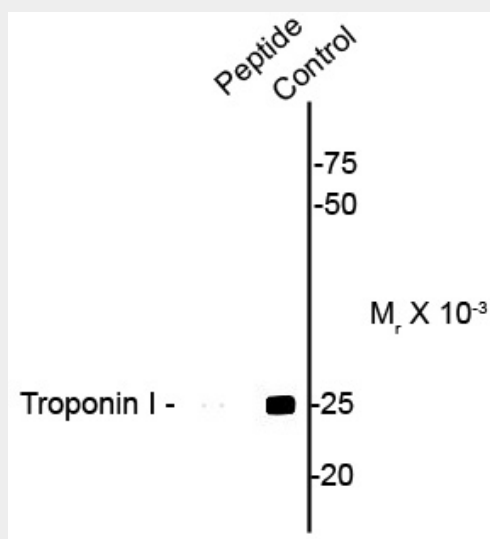
Blue Ice

**Phospho-Ser23/24 Troponin I (cardiac) Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho-Ser23/24 Troponin I (cardiac) Antibody - Images



Western blot of mouse heart homogenate showing specific immunolabeling of the ~25k cTnI protein phosphorylated at Ser23/24 (control). Immunolabeling is blocked by preadsorption with the phospho-peptide used as antigen (Peptide), but not by the corresponding dephospho-peptide (not shown).

### Phospho-Ser23/24 Troponin I (cardiac) Antibody - Background

Troponin I (cTnI) is 1 of 3 subunits, along with troponin C (TnC) and troponin T (TnT) of troponin complex found in cardiac muscle. cTnI binds to actin in thin myofilaments to hold the troponin-tropomyosin complex in place, and when cTnI is phosphorylated by protein kinase C and protein kinase A at Ser23/24 it causes regulation of  $\text{Ca}^{2+}$ -stimulated ATPase (Noland et al, 1995). Evidence suggests that phosphorylation of both serines 23 and 24 is required for the reduction in  $\text{Ca}^{2+}$ -sensitivity and beneficial for relaxation of the heart (Kooij et al, 2010). Ser23/24 phosphorylation is important for enhanced relaxation in response to prolonged activation of protein kinase C by endothelin in intact myocytes, while Thr144 plays an important role in the acute acceleration of relaxation (Westfall et al, 2005).

### Phospho-Ser23/24 Troponin I (cardiac) Antibody - References

Thomas A. Noland, Jr., Xiaodu Guo, Robert L. Raynor, Nathan M. Jideama, Vera Averyhart-Fullard, R. John Solaro, and J.F. Kuo (1995) Cardiac Troponin I Mutants. *J of Biol Chem* 270 (43): 25445-25454.  
Viola Kooij, Martina Saes, Kornelia Jaquet, Ruud Zaremba, D. Brian Foster, Anne M. Murphy, Cris dos Remedios, Joland van der Velden, Ger J.M. Stienen (2010) Effect of Troponin I ser23/24 phosphorylation on  $\text{Ca}^{2+}$ -sensitivity in human myocardium depends on the phosphorylation background. *J of Mol Cell Card* 48: 954-963.

Margaret V. Westfall, Adonia M. Lee, and Dustin A. Robinson (2005) Differential Contribution of Troponin I Phosphorylation Sites to