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## Phospho-Troponin I (Cardiac) (Ser23/24) Antibody

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 28	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P19429	<b>Entrez-Gene Id:</b> 7137
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity/Sensitivity</b>	Phospho-Troponin I (Cardiac) (Ser23/24) Antibody detects endogenous levels of cardiac troponin I only when phosphorylated at Ser23/24. This antibody does not cross-react with phosphorylated skeletal muscle troponin I.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser23/24 of human troponin I (cardiac). Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	Troponin, working in conjunction with tropomyosin, functions as a molecular switch that regulates muscle contraction in response to changes in the intracellular Ca <sup>2+</sup> concentration. Troponin consists of three subunits: the Ca <sup>2+</sup> -binding subunit troponin C (TnC), the tropomyosin-binding subunit troponin T (TnT), and the inhibitory subunit troponin I (TnI) (1). In response to β-adrenergic stimulation of the heart, Ser23 and Ser24 of TnI (cardiac) are phosphorylated by PKA and PKC. This phosphorylation stimulates a conformational change of the regulatory domain of TnC, reduces the association between TnI and TnC, and decreases myofilament Ca <sup>2+</sup> sensitivity by reducing the Ca <sup>2+</sup> binding affinity of TnC (1-3).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Ward, D.G. et al. (2002) <i>J. Biol. Chem.</i> 277, 41795-41801.</li> <li>2. Noland, T.A. et al. (1995) <i>J. Biol. Chem.</i> 270, 25445-25454.</li> <li>3. Gaponenko, V. et al. (1999) <i>J. Biol. Chem.</i> 274, 16681-16684.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	<b>IMPORTANT:</b> For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>W:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> Human <b>M:</b> Mouse <b>R:</b> Rat
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