

#5593  
Store at -20°C

## Troponin T (Cardiac) Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H R	Endogenous	40	Rabbit	#P45379	7139

<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>	Troponin T (Cardiac) Antibody detects endogenous levels of total cardiac Troponin T protein.	
<b>Species predicted to react based on 100% sequence homology:</b>	Monkey	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a region surrounding Pro69 of human cardiac Troponin T protein. 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). The tropomyosin binding subunit of the troponin complex TnT exists as different isoforms in slow skeletal muscle (ssTnT/TNNT1), fast skeletal muscle (fsTnT/TNNT3) and in cardiac muscle (cTnT/TNNT2). Each of these may also contain multiple alternatively spliced variants. Assays for measuring serum concentrations of cTnT, as well as cTnI, have been reported for analyzing cardiac injury.	
<b>Background References</b>	1. Ward, D.G. et al. (2002) <i>J. Biol. Chem.</i> 277, 41795-41801. 2. Noland, T.A. et al. (1995) <i>J. Biol. Chem.</i> 270, 25445-25454. 3. Gaponenko, V. et al. (1999) <i>J. Biol. Chem.</i> 274, 16681-16684.	

<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>	IMPORTANT: 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>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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