

#4002 Store at -20°C

Troponin I 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 M R	Endogenous	28	Rabbit	#P19429	7137

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	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.	
Specificity / Sensitivity	Troponin I Antibody detects endogenous levels of total troponin I, both skeletal muscle and cardiac isoforms.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with two synthetic peptides corresponding to the sequence of human troponin I. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Troponin, working in conjunction with tropomyosin, functions as a molecular switch that regulates muscle contraction in response to changes in the intracellular Ca ²⁺ concentration. Troponin consists of three subunits: the Ca ²⁺ -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 ²⁺ sensitivity by reducing the Ca ²⁺ binding affinity of TnC (1-3).	
Background References	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.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	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.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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