# Troponin T (Cardiac) Antibody

## Applications: WB

### Reactivity: H R

### Sensitivity: Endogenous

### MW (kDa): 40

### Source: Rabbit

### UniProt ID: #P45379

### Entrez-Gene Id: 7139

## Product Usage Information

<table>
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<th>Application</th>
<th>Dilution</th>
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<td>Western Blotting</td>
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## 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 T (Cardiac) Antibody detects endogenous levels of total cardiac Troponin T protein.

## Species predicted to react based on 100% sequence homology:

- Monkey

## Source / Purification

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.

## 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).

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.

## Background References


## 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
- V: 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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