

## Rabbit Anti-Cardiac Troponin I/TNNC1 antibody

SL0799R

**Product Name** Cardiac Troponin I/TNNC1

**Chinese Name** 心肌肌钙蛋白抗体

**Alias**

troponin I type 3 (cardiac); Cardiac troponin I; Troponin I, cardiac muscle; Cardiomyopathy, familial hypertrophic, 7, included; CMD1FF; CMD2A; CMH7; cTnI; Familial hypertrophic cardiomyopathy 7; MGC116817; RCM1; Tn1; Tni; TNN I3; TNNC 1; TNNC-1; TNNC1; TNNI3; Troponin I cardiac; Troponin I cardiac muscle; Troponin I cardiac muscle isoform; Troponin I type 3 cardiac; troponin I, cardiac 3; TroponinI; Troponin I; TNNI3\_HUMAN.

**Research Area**

Cardiovascular immunology

**Immunogen Species**

Rabbit

**Clonality**

Polyclonal

**React Species**

Mouse, (predicted: Human, Rat, Dog, Pig, Cow, Rabbit, )

**Applications**

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test  
(Paraffin sections need antigen repair)  
not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight**

23kDa

**Cellular localization**

cytoplasmic

**Form**

Liquid

**Concentration**

1mg/ml

**immunogen**

KLH conjugated synthetic peptide derived from human CTn1: 131-210/210

**Lsotype**

IgG

**Purification**

affinity purified by Protein A

**Buffer Solution**

1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

---

<b>Storage</b>	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
<b>Attention</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>PubMed</b>	<a href="#">PubMed</a> Troponin I (TnI), along with troponin T (TnT) and troponin C (TnC), is one of 3 subunits that form the troponin complex of the thin filaments of striated muscle. TnI is the inhibitory subunit; blocking actin-myosin interactions and thereby mediating striated muscle relaxation. The TnI subfamily contains three genes: TnI-skeletal-fast-twitch, TnI-skeletal-slow-twitch, and TnI-cardiac. This gene encodes the TnI-cardiac protein and is exclusively expressed in cardiac muscle tissues. Mutations in this gene cause familial hypertrophic cardiomyopathy type 7 (CMH7) and familial restrictive cardiomyopathy (RCM). [provided by RefSeq, Jul 2008]
<b>Product Detail</b>	<b>Function:</b> Troponin I is the inhibitory subunit of troponin, the thin filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity.
	<b>Subunit:</b> Binds to actin and tropomyosin. Interacts with TRIM63. Interacts with STK4/MST1.
	<b>Post-translational modifications:</b> Phosphorylated at Ser-42 and Ser-44 by PRKCE; phosphorylation increases myocardium contractile dysfunction. Phosphorylated at Ser-23 and Ser-24 by PRKD1; phosphorylation reduces myofilament calcium sensitivity. Phosphorylated preferentially at Thr-31. Phosphorylation by STK4/MST1 alters its binding affinity to TNNC1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T).
	<b>DISEASE:</b> Defects in TNNI3 are the cause of familial hypertrophic cardiomyopathy type 7 (CMH7) [MIM:613690]. Familial hypertrophic cardiomyopathy is a hereditary heart disorder characterized by ventricular hypertrophy, which is usually asymmetric and often involves the interventricular septum. The symptoms include dyspnea, syncope, collapse, palpitations, and chest pain. They can be readily provoked by exercise. The disorder has inter- and intrafamilial variability ranging from benign to malignant forms with high risk of cardiac failure and sudden cardiac death. Defects in TNNI3 are the cause of familial restrictive cardiomyopathy type 1 (RCM1) [MIM:115210]. RCM1 is a heart muscle disorder characterized by impaired filling of the ventricles with reduced diastolic volume, in the presence of normal or near normal wall thickness and systolic function. Defects in TNNI3 are the cause of cardiomyopathy dilated type 2A (CMD2A) [MIM:611880]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.

Defects in TNNI3 are the cause of cardiomyopathy dilated type 1FF (CMD1FF) [MIM:613286]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.

**Similarity:**

Belongs to the troponin I family.

**SWISS:**

P19429

**Gene ID:**

7137

**Database links:**

[Entrez Gene: 7137](#) Human

[Entrez Gene: 21954](#) Mouse

[Entrez Gene: 100049696](#) Pig

[Entrez Gene: 29248](#) Rat

[Omim: 191044](#) Human

[SwissProt: P19429](#) Human

[SwissProt: P48787](#) Mouse

[SwissProt: P23693](#) Rat

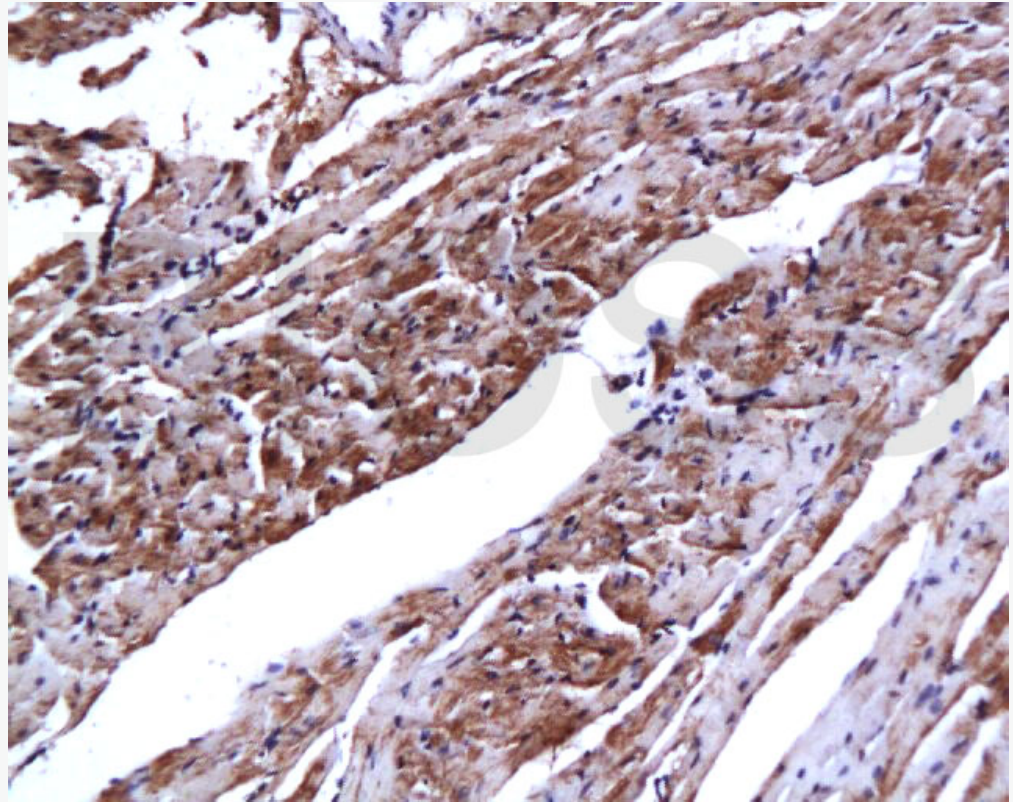
[Unigene: 709179](#) Human

[Unigene: 27674](#) Mouse

[Unigene: 64141](#) Rat

心肌肌钙蛋白（Cardiac Troponin CTn1）是心肌收缩的调节蛋白，存在于心肌收缩蛋白的细肌丝上。肌钙蛋白的作用之一是把原肌凝蛋白（Tropomyosin.Tm）附着于肌动蛋白（Action.A）上、主要用于心肌功能方面的研究。

**Product  
Picture**



Tissue/cell: mouse heart tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( 1M, pH 6.0 ), Boiling bathing for 15min; Block  
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal  
goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-CTn1/Troponin I/TNNC1 Polyclonal Antibody,  
Unconjugated(SL0799R) 1:200, overnight at 4°C, followed by conjugation to the  
secondary antibody(SP-0023) and DAB(C-0010) staining