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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.
文献引用 PubMed :	**Specific References(5)**|SL0799R has been referenced in 5 publications. **[IF=7.60]**Liu, Meifang, et al. "The use of antibody modified liposomes loaded with AMO-1 to deliver oligonucleotides to ischemic myocardium for arrhythmia therapy." Biomaterials (2014).**IHC-P;Rat**. PubMed:24468403 **[IF=3.53]**Zhao, Lili, Gongshe Yang, and Xin Zhao. "Rho-Associated Protein Kinases Play an Important Role in the Differentiation of Rat Adipose-Derived Stromal Cells into Cardiomyocytes In Vitro." PLoS one 9.12 (2014): e115191.**Rat**. PubMed:25522345 **[IF=1.63]**Zhu, Li, et al. "Expression and Significance of DLL4-–Notch Signaling Pathway in the Differentiation of Human Umbilical Cord Derived Mesenchymal Stem Cells into Cardiomyocytes Induced by 5-Azacytidine."Cell biochemistry and biophysics 71.1 (2015): 249-253.**IF(ICC);Human**. PubMed:25343938 **[IF=1.86]**Ruan, Zhong-Bao, et al. "Inhibitor of p53–p21 pathway induces the

	differentiation of human umbilical cord derived mesenchymal stem cells into cardiomyogenic cells." Cytotechnology (2015): 1-9.**IF(ICC);Human**. PubMed:26044732 **[IF=2.33]**Ruan, Zhongbao, et al. "Overexpressing NKx2. 5 increases the differentiation of human umbilical cord drived mesenchymal stem cells into cardiomyocyte-like cells." Biomedicine & Pharmacotherapy 78 (2016): 110-115.**IF(ICC);Human**. PubMed:26898431
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	23kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CTn1:131-210/210
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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] **Function:** Troponin I is the inhibitory subunit of troponin, the thin filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity. **Subunit:** Binds to actin and tropomyosin. Interacts with TRIM63. Interacts with STK4/MST1.

Post-translational modifications:
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).

DISEASE:
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

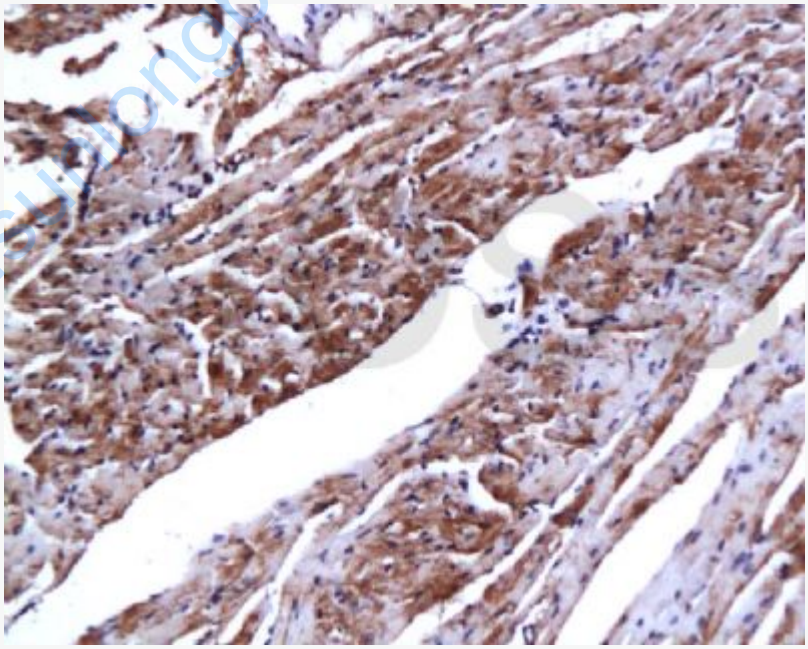
Database links:

Entrez Gene: 7137Human

Entrez Gene: 21954Mouse

Entrez Gene: 100049696Pig

Entrez Gene: 29248Rat

	Omim: 191044Human SwissProt: P19429Human SwissProt: P48787Mouse SwissProt: P23693Rat Unigene: 709179Human Unigene: 27674Mouse Unigene: 64141Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. 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。
Picture:	 Tissue/cell: mouse heart tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, 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℃ 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