SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-Cardiac Troponin T antibody

Catalog Number: SL10648R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Cardiac Troponin T
Immunogen:	KLH conjugated synthetic peptide derived from human Cardiac Troponin T: 201-298/298
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 ICC/IF=1:100-500 IF=1:100-500 Flow-Cyt=1μg/Test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human, Mouse, Rat, (predicted: Dog, Pig, Cow)
Predicted MW.:	36kDa
Subcellular Location:	cytoplasmic
Background:	The protein encoded by this gene is the tropomyosin-binding subunit of the troponin complex, which is located on the thin filament of striated muscles and regulates muscle contraction in response to alterations in intracellular calcium ion concentration. Mutations in this gene have been associated with familial hypertrophic cardiomyopathy as well as with dilated cardiomyopathy. Transcripts for this gene undergo alternative splicing that results in many tissue-specific isoforms, however, the full-length nature of some of these variants has not yet been determined. [provided by RefSeq]. **Function:** Troponin T is the tropomyosin-binding subunit of troponin, the thin

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	filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity. **Subcellular Location:** Cytoplasm. **Tissue Specificity:** Heart. The fetal heart shows a greater expression in the atrium than in the ventricle, while the adult heart shows a greater expression in the ventricle than in the atrium. Isoform 6 predominates in normal adult heart. Isoforms 1, 7 and 8 are expressed in fetal heart. Isoform 7 is also expressed in failing adult heart. DISEASE: Cardiomyopathy, familial hypertrophic 2 (CMH2) [MIM:115195]: 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. Note=The disease is caused by mutations affecting the gene represented in this entry. Cardiomyopathy, dilated 1D (CMD1D) [MIM:601494]: A disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Note=The disease is caused by mutations affecting the gene represented in this entry. Cardiomyopathy, familial restrictive 3 (RCM3) [MIM:612422]: A heart 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. Note=The disease is caused by mutations affecting the gene represented in this entry. **Similarity:** Belongs to the troponin T family. **Database links:** **Entrez Gene:** 493940 Cat **Entrez Gene:** 286816 Cow **Entrez Gene:** 403532 Dog **Entrez Gene:** 7139 Human **Entrez Gene:** 21956 Mouse **Entrez Gene:** 100622450 Pig **Entrez Gene:** 100009428 Rabbit **Entrez Gene:** 24837 Rat Omim: 191045 Human **SwissProt:** P13789 Cow **SwissProt:** P45379 Human **SwissProt:** P50752 Mouse

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	SwissProt: P09741 Rabbit **SwissProt:** P50753 Rat **Unigene:** 533613 Human **Unigene:** 247470 Mouse **Unigene:** 9965 Rat

[VALIDATION IMAGES]

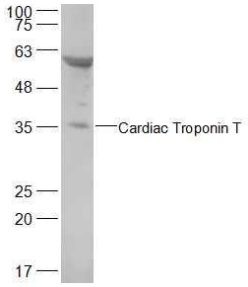


Figure 1. Sample: H9C2(Rat) Cell Lysate at 30 ug Primary: Anti-alpha smooth muscle Actin (SL10648R) at 1/500 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 36 kD Observed band size: 36 kD

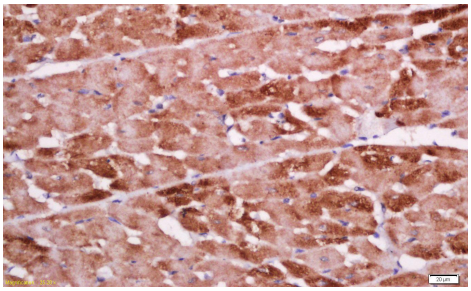


Figure 2. Tissue/cell: rat heart tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-TNNT2 Polyclonal Antibody, Unconjugated(SL10648R) 1:500, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

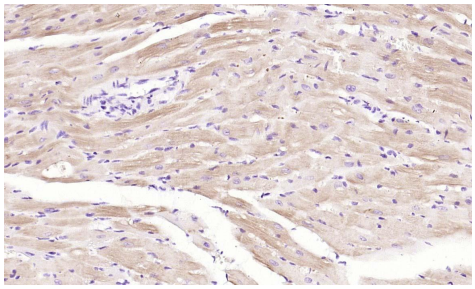


Figure 3. Paraformaldehyde-fixed, paraffin embedded (mouse heart); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Cardiac Troponin T) Polyclonal Antibody, Unconjugated (SL10648R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

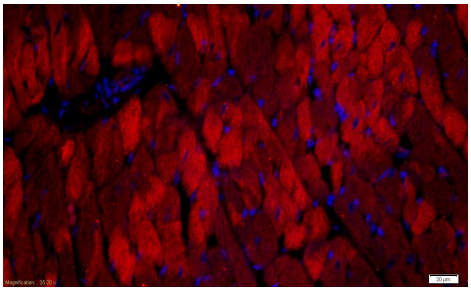


Figure 4. Tissue/cell: rat heart tissue;4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-TNNT2 Polyclonal Antibody, Unconjugated(SL10648R) 1:500, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, Cy3 conjugated(SL0295G-Cy3)used at 1:200 dilution for 40 minutes at 37°C. DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei

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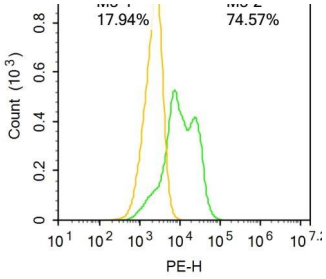


Figure 5. Blank control:U-2OS. Primary Antibody (green line): Rabbit Anti-TNNT2 antibody (SL10648R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG. Secondary Antibody: Goat anti-rabbit IgG-BF647 Dilution: 1μg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at-20℃. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature.Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed

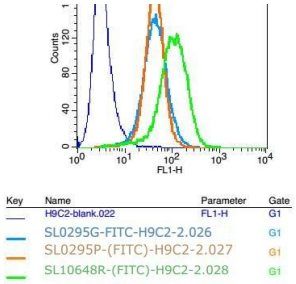


Figure 7. Positive control: H9C2 cells Concentration: 2μg/10^6 cells Incubation conditions: Avoid light, 30 minutes on the ice

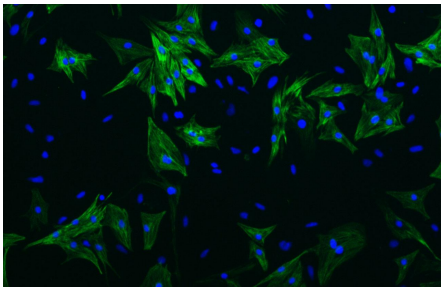


Figure 6. Cell: Neonatal rat ventricular cardiomyocytes; Dilution: 1:400; Incubation: Anti-Cardiac Troponin T Antibody, unconjugated (SL10648R); DAPI was used to stain the cell nuclei. The image is provided by Tongji University

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