

Anti-Cardiac Troponin T antibody [1C11] ab8295

★★★★★ [14 Abreviews](#) [243 References](#) [4 Images](#)

Overview

Product name	Anti-Cardiac Troponin T antibody [1C11]
Description	Mouse monoclonal [1C11] to Cardiac Troponin T
Host species	Mouse
Tested applications	Suitable for: ICC/IF, IHC-P, Sandwich ELISA
Species reactivity	Reacts with: Mouse, Rat, Dog, Human
Immunogen	Other Immunogen Type corresponding to Human Cardiac Troponin T aa 171-190. Database link: P45379
Positive control	Natural Human Cardiac Troponin T protein (ab9937) can be used as a positive control in WB. IHC: Human heart tissue. ICC/IF: ioSkeletal Myocytes - Human iPSC-Derived Skeletal Myocytes (ab277612).
General notes	<p>This antibody detects Troponin T in human cardiac muscle. No cross-reaction with skeletal troponin T, cTnI and TnC.</p> <p>This product was changed from ascites to tissue culture supernatant on 17th October 2017 and product received after this date will be from tissue culture supernatant.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	pH: 7.40 Preservative: 0.1% Sodium azide
Purity	Protein A purified
Purification notes	Purified from TCS

Primary antibody notes	This antibody detects Troponin T in human cardiac muscle. No cross-reaction with skeletal troponin T, cTnI and TnC.
Clonality	Monoclonal
Clone number	1C11
Myeloma	Sp2/0
Isotype	IgG1
Light chain type	unknown

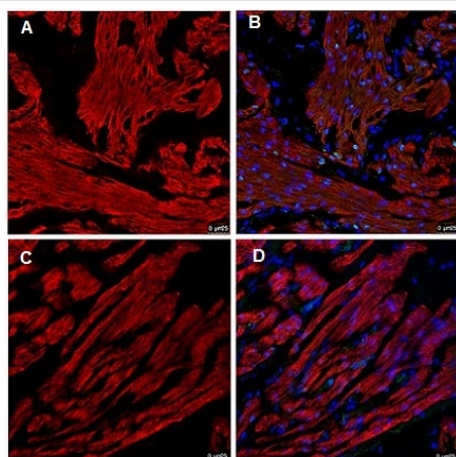
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab8295 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (6)	Use a concentration of 1 - 5 µg/ml.
IHC-P	★★★★★ (2)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
Sandwich ELISA		Use at an assay dependent concentration. Can be used as Capture or Detection antibody.

Target

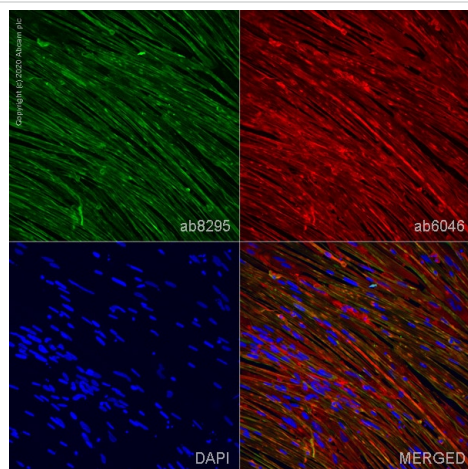
Function	Troponin T is the tropomyosin-binding subunit of troponin, the thin filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity.
Tissue specificity	Heart. The fetal heart shows a greater expression in the atrium than in the ventricle, while the 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.
Involvement in disease	<p>Defects in TNNT2 are the cause of cardiomyopathy familial hypertrophic type 2 (CMH2) [MIM:115195]. 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.</p> <p>Defects in TNNT2 are the cause of cardiomyopathy dilated type 1D (CMD1D) [MIM:601494]. 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.</p> <p>Defects in TNNT2 are the cause of cardiomyopathy familial restrictive type 3 (RCM3) [MIM:612422]. Restrictive cardiomyopathy is 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.</p>
Sequence similarities	Belongs to the troponin T family.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin T antibody [1C11] (ab8295)

Ye L et al. Decreased Yes-Associated Protein-1 (YAP1) Expression in Pediatric Hearts with Ventricular Septal Defects. PLoS One 10:e0139712 (2015).

Paraffin-embedded Normal human Heart and iVSD heart tissue (were blocked using 10% FBS for 30 min) stained for Cardiac Troponin T (Red) using ab8295 at 1/200 dilution at room temperature for 2 hours. The slides were then incubated with Fluor[®] 555-conjugated anti-mouse (Abcam, [ab150107](#); 1:1,000 dilution). The nuclear counterstain was DAPI (Blue).



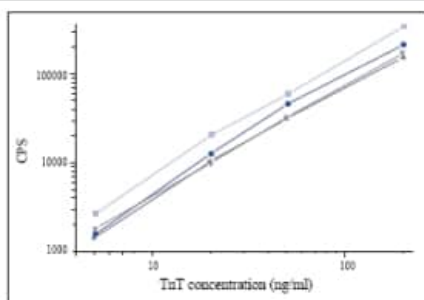
Immunocytochemistry/ Immunofluorescence - Anti-Cardiac Troponin T antibody [1C11] (ab8295)

Immunofluorescence staining of Cardiac Troponin T using ab8295 in ioSkeletal Myocytes - Human iPSC-Derived Skeletal Myocytes ([ab277612](#)), which were differentiated for 10 days post induction.

The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% PBS-Tween for 5 mins and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab8295 at 5 µg/mL and [ab6046](#), rabbit polyclonal to beta Tubulin, at 1/1000 dilution. Cells were then incubated with [ab150117](#), Goat Anti-Mouse IgG H&L (Alexa Fluor[®] 488) preadsorbed at 1/1000 dilution (shown in green) and [ab150088](#), Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 594) preadsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

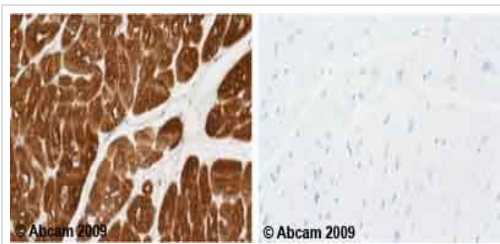
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown. Gamma is adjusted to 1.5 in all channels.

The antibody ab8295 gave comparable results using MeOH fixation (100%, 5 min).



Sandwich ELISA - Anti-Cardiac Troponin T antibody [1C11] (ab8295)

Calibration curves for sandwich cTnT fluoroimmunoassay with different animal TnTs as antigen. (dark blue) canine, (blue/grey) human, (grey) mouse, (black) rat. Monoclonal antibodies: capture, ab8295 [clone 1C11], 1 µg/well, detection **ab1454** [clone 7E7], 200 ng/well. Assay time, 30 min at room temperature.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin T antibody [1C11] (ab8295)

Ab8295 staining human normal heart. Staining is localised to the cytoplasm.

Left panel: with primary antibody at 1 µg/ml. Right panel: isotype control.

Sections were stained using an automated system DAKO Autostainer Plus, at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

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