abcam

Product datasheet

Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free ab223149

Recombinant RabMAb

10 Images

Overview

Product name	Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free
Description	Rabbit monoclonal [EPR20307] to Cardiac Troponin I - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP, IHC-Fr
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human heart and myocardium lysates; Mouse and rat heart lysates. IHC-P: Human, mouse and rat cardiac muscle tissues. IP: Human fetal heart lysate. IHC-Fr: Mouse heart tissue, Rat heart tissue
General notes	ab223149 is the carrier-free version of **ab209809**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20307
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab223149 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
WB		Use at an assay dependent concentration. Detects a band of approximately 28 kDa (predicted molecular weight: 24 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.

Target

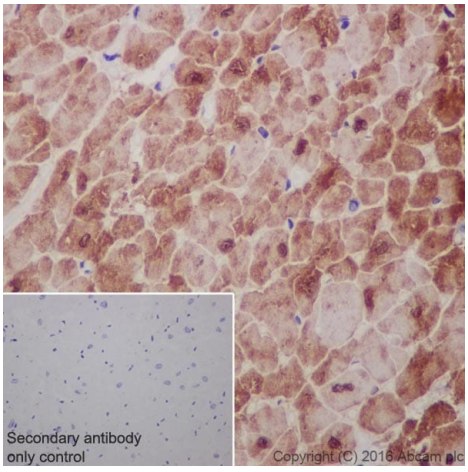
Function Troponin I is the inhibitory subunit of troponin, the thin filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity.

Involvement in disease Defects in TNNI3 are the cause of cardiomyopathy familial hypertrophic 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 cardiomyopathy familial restrictive type 1 (RCM1) [MIM:115210]. RCM1 is an 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.

Sequence similarities Belongs to the troponin I family.

Images



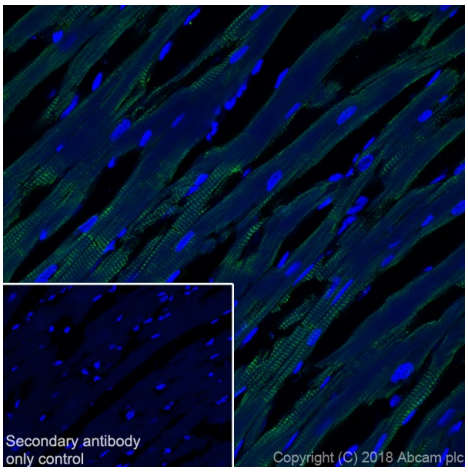
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Immunohistochemical analysis of paraffin-embedded human cardiac muscle tissue labeling Cardiac Troponin I with **ab209809** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Positive staining on human cardiomyocytes [PMID: 22828728]. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209809**).

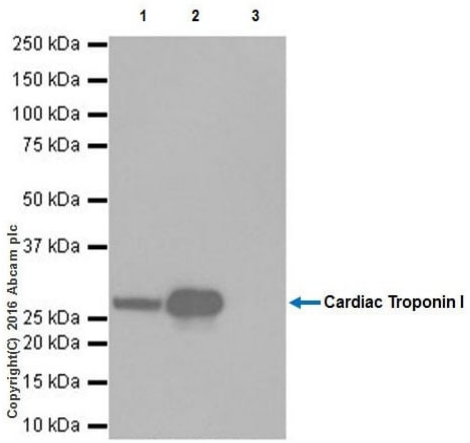
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Frozen sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Immunohistochemistry (Frozen) analysis of rat heart tissue section labeling Cardiac Troponin I with purified **ab209809** at 1/10 dilution (13.5 µg/ml). Sections were fixed in 0.2% Triton X-100 and permeabilized with DAPI. Antigen retrieval was 4% paraformaldehyde. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/500 dilution (4 µg/ml) dilution. Heat mediated antigen retrieval by using Tris-EDTA buffer (pH9.0) (**ab94681**) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209809**).



Immunoprecipitation - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Cardiac Troponin I was immunoprecipitated from 0.35 mg of Human fetal heart lysate with **ab209809** at 1/30 dilution. Western blot was performed from the immunoprecipitate using **ab209809** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: Human fetal heart lysate, 10 µg (Input).

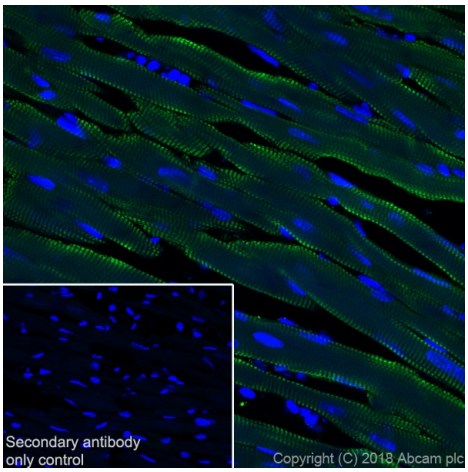
Lane 2: **ab209809** IP in Human fetal heart lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab209809** in Human fetal heart lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209809**).



Immunohistochemistry (Frozen sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Immunohistochemistry (Frozen) analysis of mouse heart tissue section labeling Cardiac Troponin I with purified **ab209809** at 1/10 dilution (13.5 µg/ml). Sections were fixed in 0.2% Triton X-100 and permeabilized with DAPI. Antigen retrieval was 4% paraformaldehyde. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/500 dilution (4 µg/ml) dilution. Heat mediated antigen retrieval by using Tris-EDTA buffer (pH9.0) (**ab94681**) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

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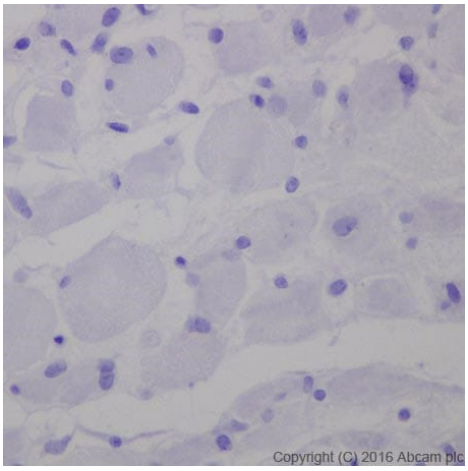


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

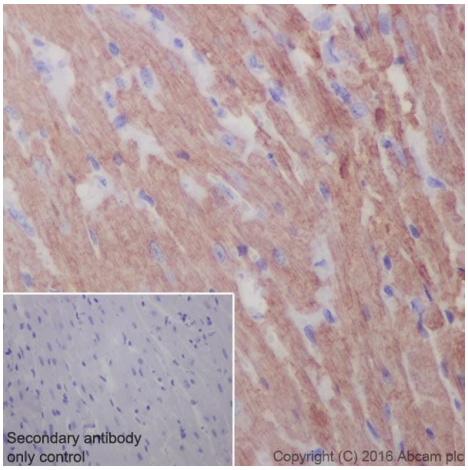
Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue labeling Cardiac Troponin I with **ab209809** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Negative control: No staining on human skeletal muscle [PMID: 22828728].

Counter stained with Hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209809**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Immunohistochemical analysis of paraffin-embedded mouse cardiac muscle tissue labeling Cardiac Troponin I with **ab209809** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Positive staining on mouse cardiomyocytes [PMID: 22828728]. Counter stained with Hematoxylin.

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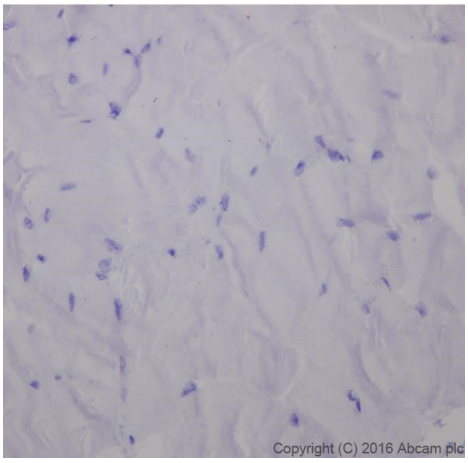

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Negative control: No staining on mouse skeletal muscle [PMID: 22828728].

Counter stained with Hematoxylin.

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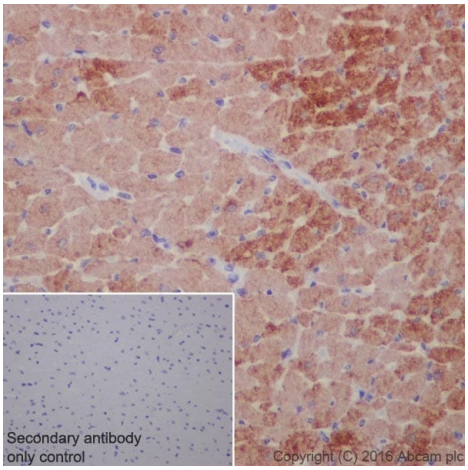

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

Immunohistochemical analysis of paraffin-embedded rat cardiac muscle tissue labeling Cardiac Troponin I with **ab209809** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Positive staining on rat cardiomyocytes [PMID: 22828728]. Counter stained with Hematoxylin.

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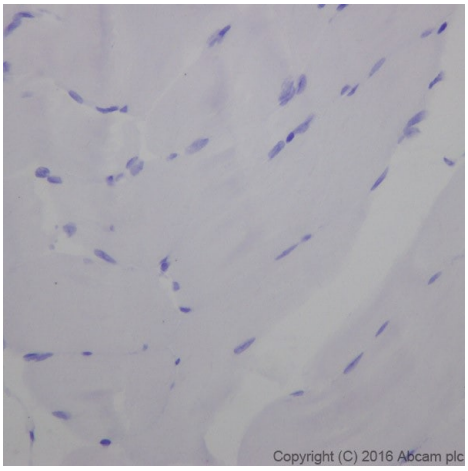

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Immunohistochemical analysis of paraffin-embedded rat skeletal muscle tissue labeling Cardiac Troponin I with **ab209809** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

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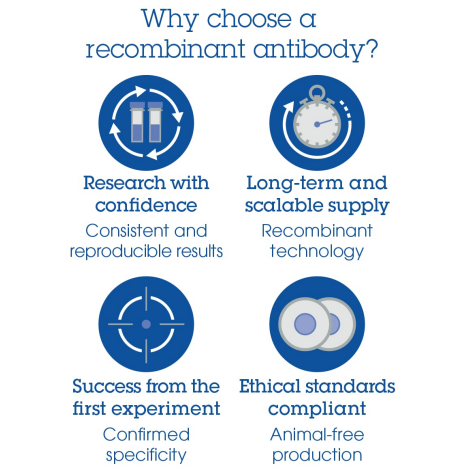

Anti-Cardiac Troponin I antibody [EPR20307] - BSA and Azide free (ab223149)

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