

# Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free ab247885

Recombinant RabMAb

7 Images

### Overview

<b>Product name</b>	Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR5158] to Tropomyosin 1 (alpha) - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Human heart, Mouse heart, and Rat heart tissue lysates, and Recombinant Human TMP1 protein. IHC-P: Human cardiac muscle, Rat cardiac muscle, Mouse cardiac muscle, and Human prostatic hyperplasia tissues.
<b>General notes</b>	<p>ab247885 is the carrier-free version of <a href="#">ab109505</a>.</p> <p>Our <b>carrier-free</b> 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.</p> <p>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.</p> <p>Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.20 Constituent: 100% PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR5158
<b>Isotype</b>	IgG

## Applications

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**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab247885 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
<b>WB</b>		Use at an assay dependent concentration. Predicted molecular weight: 33 kDa.
<b>IHC-P</b>		Use at an assay dependent concentration. Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol. For antigen retrieval, heat up to 98 degree C, below boiling, and then let cool for 10-20 minutes.

## Target

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<b>Function</b>	Binds to actin filaments in muscle and non-muscle cells. Plays a central role, in association with the troponin complex, in the calcium dependent regulation of vertebrate striated muscle contraction. Smooth muscle contraction is regulated by interaction with caldesmon. In non-muscle cells is implicated in stabilizing cytoskeleton actin filaments.
<b>Tissue specificity</b>	Detected in primary breast cancer tissues but undetectable in normal breast tissues in Sudanese patients. Isoform 1 is expressed in adult and fetal skeletal muscle and cardiac tissues, with higher expression levels in the cardiac tissues. Isoform 10 is expressed in adult and fetal cardiac tissues, but not in skeletal muscle.
<b>Involvement in disease</b>	Defects in TPM1 are the cause of cardiomyopathy familial hypertrophic type 3 (CMH3) [MIM:115196]. 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 TPM1 are the cause of cardiomyopathy dilated type 1Y (CMD1Y) [MIM:611878]. 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 tropomyosin family.

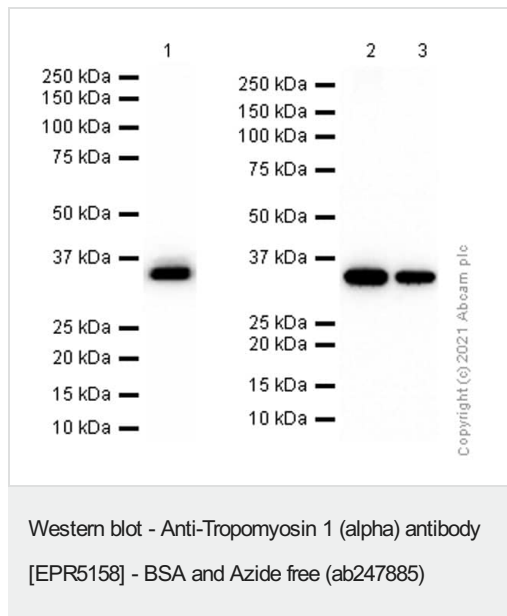
**Domain**

The molecule is in a coiled coil structure that is formed by 2 polypeptide chains. The sequence exhibits a prominent seven-residues periodicity.

**Cellular localization**

Cytoplasm > cytoskeleton.

**Images**



**All lanes :** Anti-Tropomyosin 1 (alpha) antibody [EPR5158] ([ab109505](#)) at 1/1000 dilution

**Lane 1 :** Human heart lysate at 15 µg

**Lane 2 :** Mouse heart lysate at 20 µg

**Lane 3 :** Rat heart lysate at 20 µg

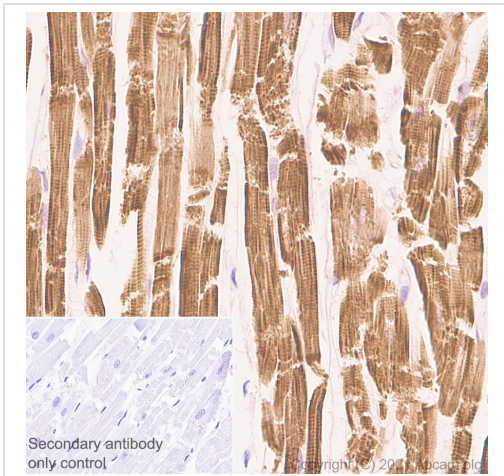
**Secondary**

**All lanes :** Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 33 kDa

**Observed band size:** 33 kDa

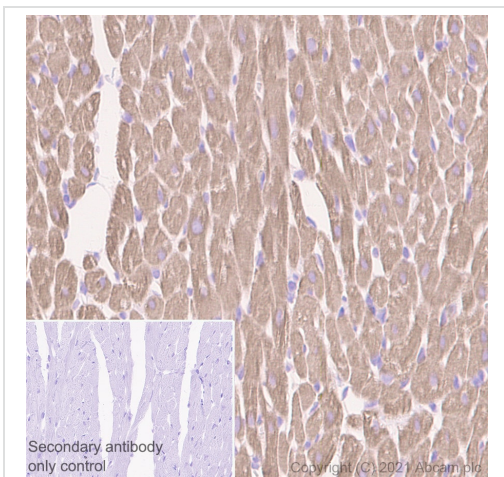
This data was developed using [ab109505](#), the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free (ab247885)

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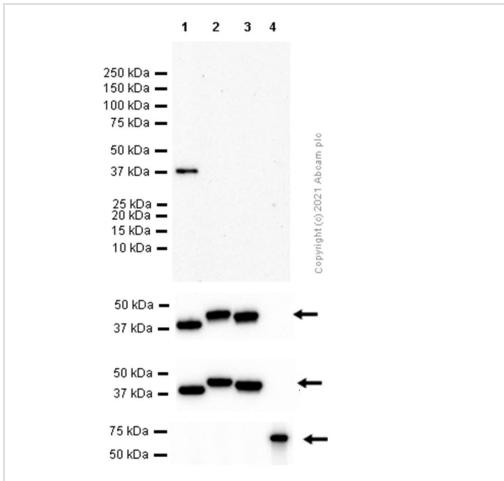
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cardiac muscle tissue sections labeling Tropomyosin 1 (alpha) with purified [ab109505](#) at 1:600 (0.343 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free (ab247885)

This data was developed using [ab109505](#), the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat cardiac muscle tissue sections labeling Tropomyosin 1 (alpha) with purified [ab109505](#) at 1:600 (0.343 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free (ab247885)

**All lanes** : Anti-Tropomyosin 1 (alpha) antibody [EPR5158] ([ab109505](#)) at 1/1000 dilution

**Lane 1** : MYC and DDK-tagged Recombinant Human TPM1 protein (Full length)

**Lane 2** : MYC and DDK-tagged Recombinant Human TPM2 protein (Full length)

**Lane 3** : MYC and DDK-tagged Recombinant Human TPM3 protein (Full length)

**Lane 4** : GST-tagged Recombinant Human TPM4 protein (Full length)

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 33 kDa

**Observed band size:** 37 kDa

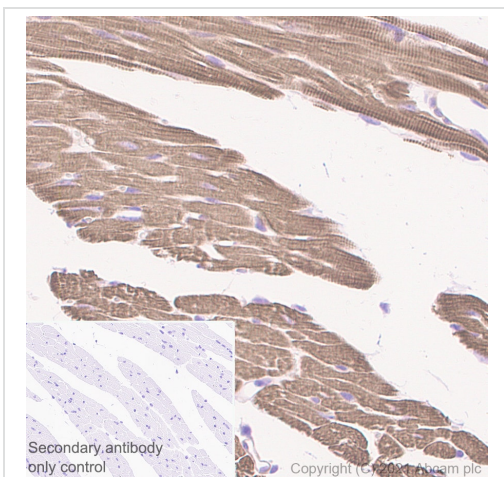
**Exposure time:** 60 seconds

Blocking and diluting buffer and concentration: 5% NFD/MTBST

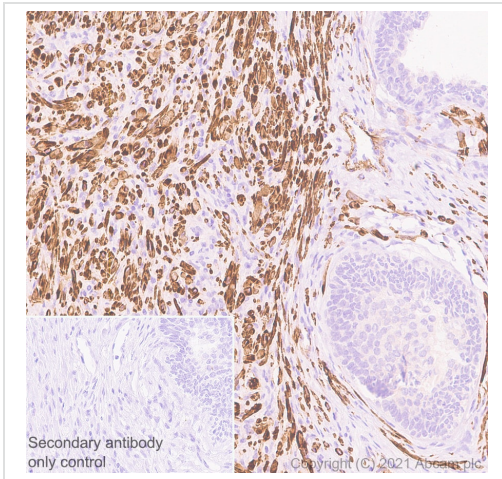
This data was developed using [ab109505](#), the same antibody clone in a different buffer formulation.

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse cardiac muscle tissue sections labeling Tropomyosin 1 (alpha) with purified [ab109505](#) at 1:600 (0.343 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free (ab247885)







This data was developed using **ab109505**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostatic hyperplasia tissue sections labeling Tropomyosin 1 (alpha) with purified **ab109505** at 1:600 (0.343 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tropomyosin 1 (alpha) antibody [EPR5158] - BSA and Azide free (ab247885)

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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