

Product datasheet

Anti-Caveolin-3 antibody [EPR18975] α b182739

Recombinant RabMAb

8 Images

Overview

Product name	Anti-Caveolin-3 antibody [EPR18975]
Description	Rabbit monoclonal [EPR18975] to Caveolin-3
Host species	Rabbit
Tested applications	Suitable for: WB, IP, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal heart lysate; Human skeletal muscle lysate. IHC-P: Human skeletal muscle and cardiac muscle tissues. IP: Human fetal heart whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</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. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18975
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab182739 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		1/1000. Detects a band of approximately 17 kDa (predicted molecular weight: 17 kDa).
IP		1/20.
IHC-P		1/200. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function

May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein alpha subunits and can functionally regulate their activity. May also regulate voltage-gated potassium channels. Plays a role in the sarcolemma repair mechanism of both skeletal muscle and cardiomyocytes that permits rapid resealing of membranes disrupted by mechanical stress.

Tissue specificity

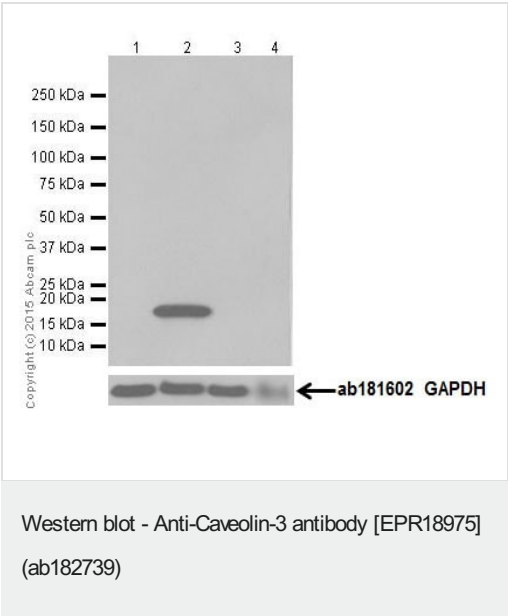
Expressed predominantly in muscle.

Involvement in disease

Defects in CAV3 are the cause of limb-girdle muscular dystrophy type 1C (LGMD1C) [MIM:607801]. LGMD1C is a myopathy characterized by calf hypertrophy and mild to moderate proximal muscle weakness. LGMD1C inheritance can be autosomal dominant or recessive. Defects in CAV3 are a cause of hyperCKmia (HYPCK) [MIM:123320]. It is a disease characterized by persistent elevated levels of serum creatine kinase without muscle weakness. Defects in CAV3 are a cause of rippling muscle disease (RMD) [MIM:606072]. RMD is a rare disorder characterized by mechanically triggered contractions of skeletal muscle. In RMD, mechanical stimulation leads to electrically silent muscle contractions that spread to neighboring fibers that cause visible ripples to move over the muscle. Defects in CAV3 are a cause of cardiomyopathy familial hypertrophic (CMH) [MIM:192600]; also designated FHC or HCM. 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 CAV3 are the cause of long QT syndrome type 9 (LQT9) [MIM:611818]. Long QT syndromes are heart disorders characterized by a prolonged QT interval on the ECG and polymorphic ventricular arrhythmias. They cause syncope and sudden death in response to exercise or emotional stress. They can present with a sentinel event of sudden cardiac death in infancy. Defects in CAV3 can be a cause of sudden infant death syndrome (SIDS) [MIM:272120]. SIDS is the sudden death of an infant younger than 1 year that remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of clinical history. Pathophysiologic mechanisms for SIDS may include respiratory dysfunction, cardiac dysrhythmias, cardiorespiratory instability, and inborn errors of metabolism, but definitive pathogenic mechanisms precipitating an infant sudden death remain elusive. Long QT syndromes-associated mutations can be responsible for some SIDS cases.

Sequence similarities	Belongs to the caveolin family.
Cellular localization	Golgi apparatus membrane. Cell membrane. Membrane > caveola. Potential hairpin-like structure in the membrane. Membrane protein of caveolae.

Images



All lanes : Anti-Caveolin-3 antibody [EPR18975] (ab182739) at 1/1000 dilution

- Lane 1 :** Human fetal liver lysate
- Lane 2 :** Human fetal heart lysate
- Lane 3 :** Human fetal kidney lysate
- Lane 4 :** Human fetal spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

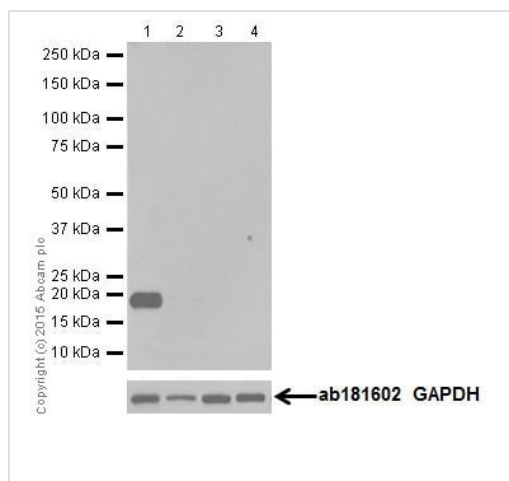
Predicted band size: 17 kDa

Observed band size: 17 kDa

Exposure time: 5 seconds

Blocking/Dilution buffer: 5% NFDm/TBST.

Expressed predominantly in muscle.



Western blot - Anti-Caveolin-3 antibody [EPR18975]
(ab182739)

All lanes : Anti-Caveolin-3 antibody [EPR18975] (ab182739) at 1/1000 dilution

Lane 1 : Human skeletal muscle lysate

Lane 2 : Human fetal lung lysate

Lane 3 : HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate

Lane 4 : A-673 (Human muscle Ewing's Sarcoma cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

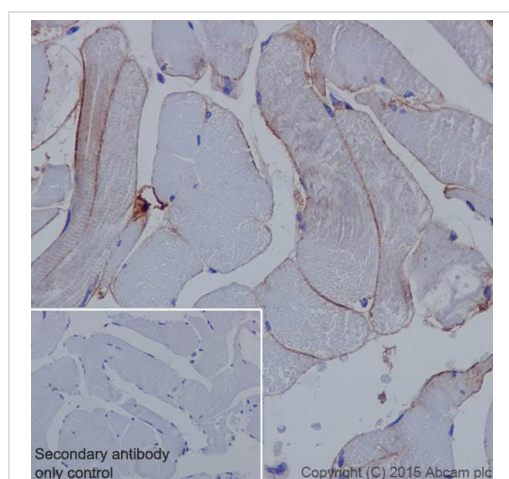
Predicted band size: 17 kDa

Observed band size: 17 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

Expressed predominantly in muscle.

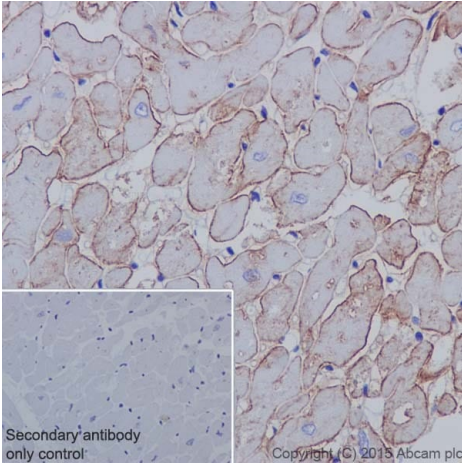


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caveolin-3 antibody [EPR18975] (ab182739)

Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labeling Caveolin-3 with ab182739 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Membrane staining on Human skeletal muscle was observed. 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.

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

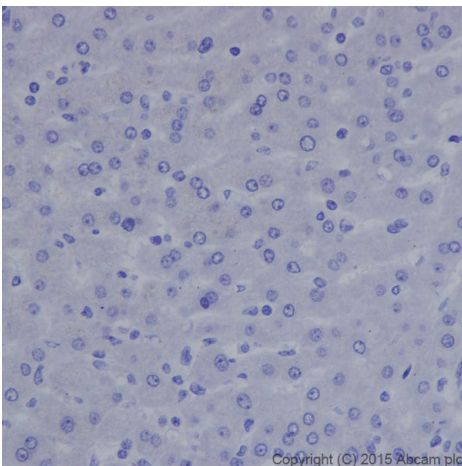


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caveolin-3 antibody [EPR18975] (ab182739)

Immunohistochemical analysis of paraffin-embedded Human cardiac muscle tissue labeling Caveolin-3 with ab182739 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Membrane staining on Human cardiac muscle was observed. 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.

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

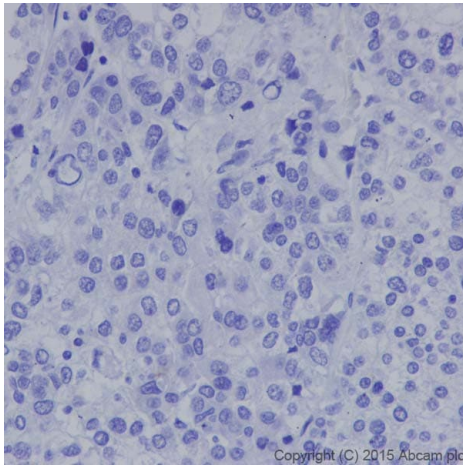


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caveolin-3 antibody [EPR18975] (ab182739)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Caveolin-3 with ab182739 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Negative on Human liver. 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.

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

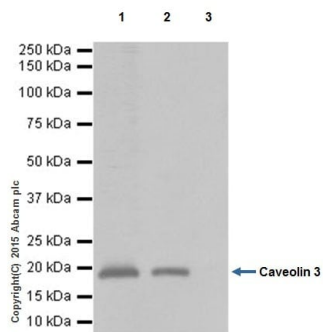


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caveolin-3 antibody [EPR18975] (ab182739)

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling Caveolin-3 with ab182739 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Negative on Human hepatocellular carcinoma. 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.

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



Immunoprecipitation - Anti-Caveolin-3 antibody [EPR18975] (ab182739)

Caveolin-3 was immunoprecipitated from 1mg of Human fetal heart whole cell lysate with ab182739 at 1/20 dilution. Western blot was performed from the immunoprecipitate using ab182739 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

Lane 1: Human fetal heart whole cell lysate 10ug (Input).

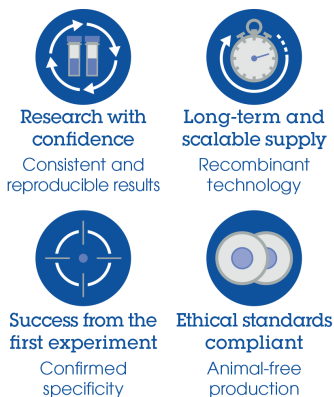
Lane 2: ab182739 IP in Human fetal heart whole cell lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab182739 in Human fetal heart whole cell lysate.

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

Exposure time: 10 seconds.

Why choose a recombinant antibody?



Anti-Caveolin-3 antibody [EPR18975] (ab182739)

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

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