

Product datasheet

Anti-SERCA1 ATPase antibody [VE121G9] ab2819

Recombinant

★★★★★ 6 Abreviews 26 References 10 Images

Overview

Product name	Anti-SERCA1 ATPase antibody [VE121G9]
Description	Mouse monoclonal [VE121G9] to SERCA1 ATPase
Host species	Mouse
Specificity	Detects Sarcoplasmic or Endoplasmic Reticulum Calcium 1 (SERCA 1) ATPase.
Tested applications	Suitable for: IHC-Fr, WB, IHC-P
Species reactivity	Reacts with: Mouse, Human
Immunogen	Full length native protein (purified) corresponding to Rabbit SERCA1 ATPase. Purified rabbit skeletal muscle sarcoplasmic reticulum.
Epitope	This antibody recognizes an epitope between amino acid residues 506 and the C-terminus of rabbit skeletal muscle ATPase, a region that is exposed in native sarcoplasmic reticulum.
Positive control	WB: Normal mouse and human skeletal muscle IHC-P: Normal mouse and human skeletal muscle IHC-Fr: Normal mouse and human skeletal muscle
General notes	This product was switched from a hybridoma to a recombinant production format on 25th October 2021.

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](#).

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA

Purity	Protein A purified
Clonality	Monoclonal
Clone number	VE121G9
Isotype	IgG1

Applications

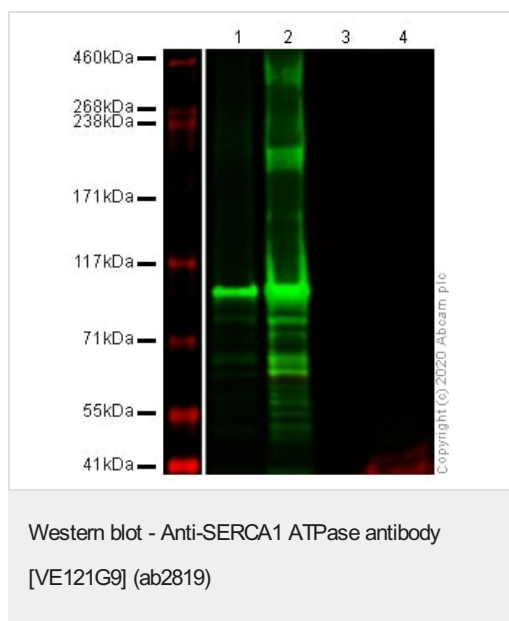
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2819 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★★ (1)	Use a concentration of 1 µg/ml.
WB	★★★★★ (4)	Use a concentration of 1 µg/ml. Detects a band of approximately 99 kDa (predicted molecular weight: 110 kDa).
IHC-P		Use a concentration of 1 µg/ml.

Target

Function	Key regulator of striated muscle performance by acting as the major Ca(2+) ATPase responsible for the reuptake of cytosolic Ca(2+) into the sarcoplasmic reticulum. Catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Contributes to calcium sequestration involved in muscular excitation/contraction.
Tissue specificity	Skeletal muscle, fast twitch muscle (type II) fibers.
Involvement in disease	Brody myopathy
Sequence similarities	Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIA subfamily.
Developmental stage	Isoform SERCA1A accounts for more than 99% of SERCA1 isoforms expressed in adult skeletal muscle, while isoform SERCA1B predominates in neo-natal skeletal muscle.
Cellular localization	Endoplasmic reticulum membrane. Sarcoplasmic reticulum membrane.

Images



All lanes : Anti-SERCA1 ATPase antibody [VE121G9] (ab2819) at 1 µg/ml

Lane 1 : Human Skeletal Muscle tissue lysate

Lane 2 : Mouse Skeletal Muscle tissue lysate

Lane 3 : Human Brain tissue lysate

Lane 4 : Mouse Brain tissue lysate

Lysates/proteins at 20 µg per lane.

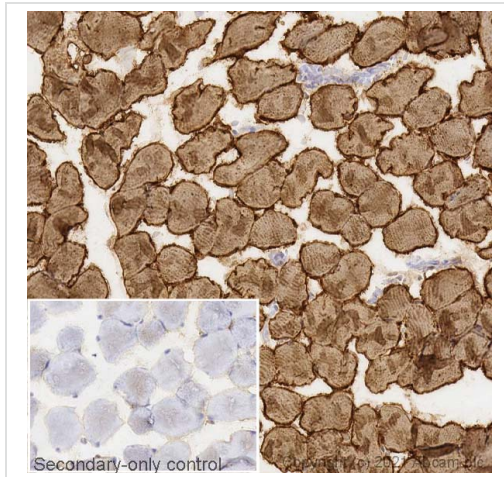
Secondary

All lanes : Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed ([ab216772](#)) at 1/20000 dilution

Predicted band size: 110 kDa

Observed band size: 110 kDa

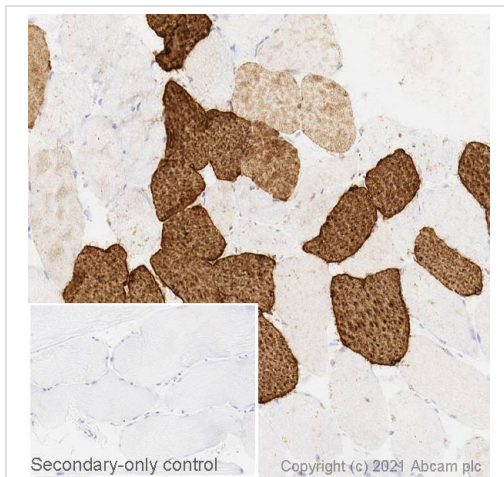
This blot was produced using 3-8% Tris-Acetate gel under the TA buffer system. The gel was run at 150V for 60 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was blocked for an hour using 3% milk before ab2819 was incubated overnight at 4°C at a 1µg/ml concentration. Antibody binding was detected using Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed ([ab216772](#)) secondary antibody at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Frozen sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

IHC image of SERCA1 ATPase staining in a section of frozen normal mouse skeletal muscle performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab2819, 1µg/ml for 15 mins at room temperature and then **ab125913**, Goat anti-Mouse IgG1 at 1.5ug/ml was added for 15 mins at room temperature. This was detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

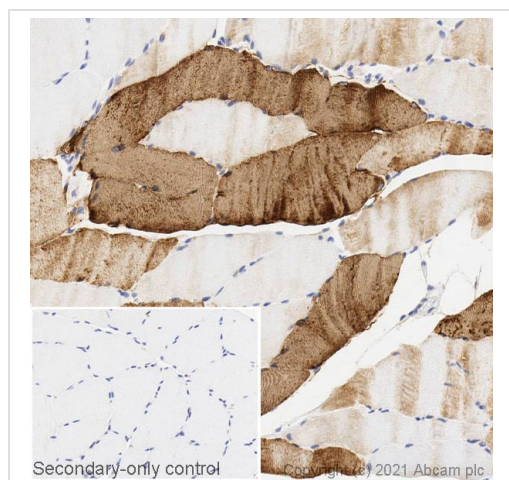


Immunohistochemistry (Frozen sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

IHC image of SERCA1 ATPase staining in a section of frozen normal human skeletal muscle* performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab2819, 1µg/ml for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

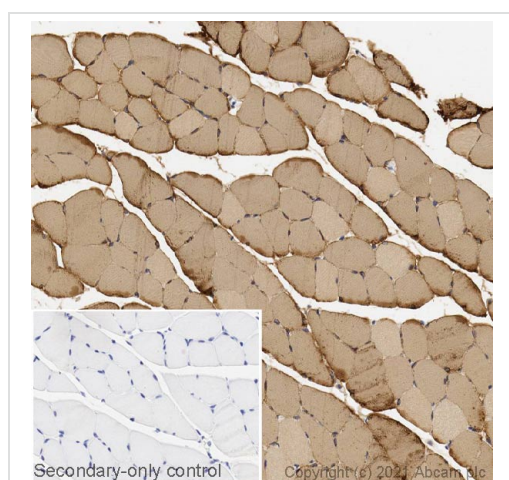


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

IHC image of SERCA1 ATPase staining in a section of formalin-fixed paraffin-embedded normal human skeletal muscle* performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab2819, 1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

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Western blot - Anti-SERCA1 ATPase antibody
[VE121G9] (ab2819)

This image is courtesy of an anonymous Abreview

Anti-SERCA1 ATPase antibody [VE121G9] (ab2819) at 1/1000 dilution (in PBS tweenb 0.05% for 1 hour at 22°C) + Whole tissue lysate of human neck muscle. at 20 µg

Secondary

An HRP-conjugated sheep anti-mouse polyclonal at 1/4000 dilution

Developed using the ECL technique.

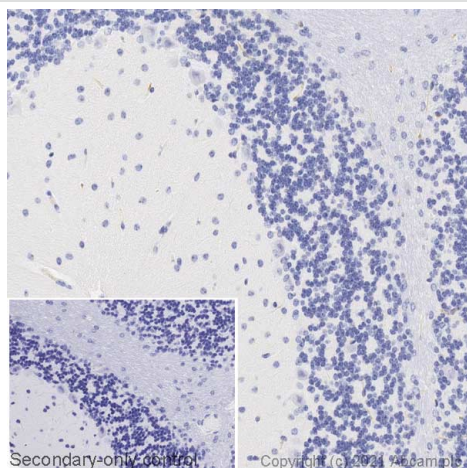
Predicted band size: 110 kDa

Observed band size: 110 kDa

Exposure time: 5 minutes

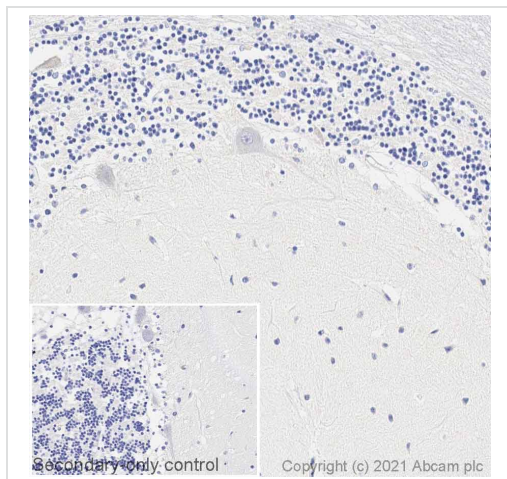
Blocking Step: 5% milk for 16 hours at 22°C

This image was generated from the Hybridoma version.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

Negative control image: IHC image of SERCA1 ATPase staining in a section of formalin-fixed paraffin-embedded normal mouse cerebellum performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab2819, 1ug/ml, for 15 mins at room temperature and then **ab125913**. Goat anti-Mouse IgG1 at 1.5ug/ml was added for 15 mins at room temperature. This was detected using an HRP conjugated compact polymer system DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

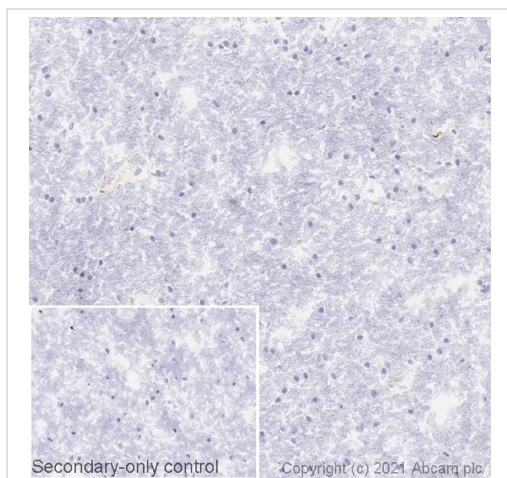


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

Negative control image: IHC image of SERCA1 ATPase staining in a section of formalin-fixed paraffin-embedded normal human cerebellum* performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab2819, 1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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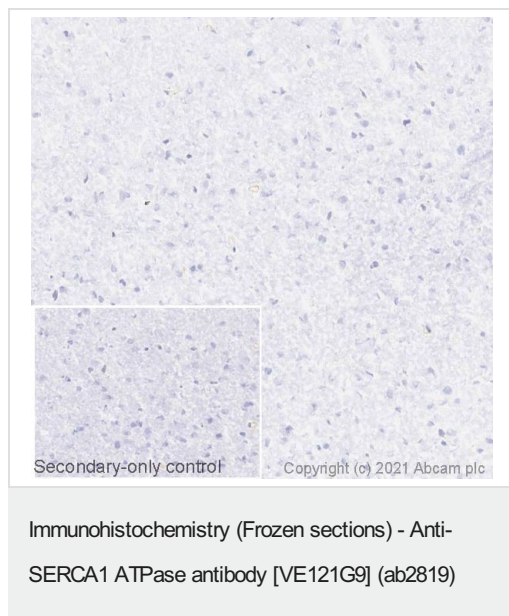


Immunohistochemistry (Frozen sections) - Anti-SERCA1 ATPase antibody [VE121G9] (ab2819)

Negative control image: IHC image of SERCA1 ATPase staining in a section of frozen normal human cerebral cortex* performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab2819, 1ug/ml for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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Negative control image: IHC image of SERCA1 ATPase staining in a section of frozen normal mouse cerebral cortex performed on a Leica BOND™ system using the standard protocol. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab2819, 1ug/ml for 15 mins at room temperature and then **ab125913**, Goat anti-Mouse IgG1 at 1.5ug/ml was added for 15 mins at room temperature. This was detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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