

Product datasheet

Anti-SERCA2 ATPase antibody ab183531

1 Image

Overview

<b>Product name</b>	Anti-SERCA2 ATPase antibody
<b>Description</b>	Goat polyclonal to SERCA2 ATPase
<b>Host species</b>	Goat
<b>Specificity</b>	ab183531 is expected to recognize all 5 reported isoforms.
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Rabbit, Cat, Dog, Pig 
<b>Immunogen</b>	Synthetic peptide corresponding to Human SERCA2 ATPase aa 658-671 (internal sequence). Sequence: DELNPSAQRDACLN  Database link: <a href="#">P16615</a>   <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	Human, mouse and rat heart lysates.
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 99% Tris buffered saline, 0.5% BSA
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	ab183531 was purified from goat serum by ammonium sulfate precipitation followed by antigen affinity chromatography using the immunizing peptide.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab183531** 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 a concentration of 0.1 - 0.3 µg/ml. Detects a band of approximately 110 kDa (predicted molecular weight: 115 kDa). 1 hour primary incubation is recommended for this product.

## Target

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<b>Function</b>	This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Isoform 2 is involved in the regulation of the contraction/relaxation cycle.
<b>Tissue specificity</b>	Isoform 1 is widely expressed in smooth muscle and nonmuscle tissues such as in adult skin epidermis, with highest expression in liver, pancreas and lung, and intermediate expression in brain, kidney and placenta. Also expressed at lower levels in heart and skeletal muscle. Isoforms 2 and 3 are highly expressed in the heart and slow twitch skeletal muscle. Expression of isoform 3 is predominantly restricted to cardiomyocytes and in close proximity to the sarcolemma. Both isoforms are mildly expressed in lung, kidney, liver, pancreas and placenta. Expression of isoform 3 is amplified during monocytic differentiation and also observed in the fetal heart.
<b>Involvement in disease</b>	Defects in ATP2A2 are a cause of acrokeratosis verruciformis (AKV) [MIM:101900]; also known as Hopf disease. AKV is a localized disorder of keratinization, which is inherited as an autosomal dominant trait. Its onset is early in life with multiple flat-topped, flesh-colored papules on the hands and feet, punctate keratoses on the palms and soles, with varying degrees of nail involvement. The histopathology shows a distinctive pattern of epidermal features with hyperkeratosis, hypergranulosis, and acanthosis together with papillomatosis. These changes are frequently associated with circumscribed elevations of the epidermis that are said to resemble church

spires. There are no features of dyskeratosis or acantholysis, the typical findings in lesions of Darier disease.

Defects in ATP2A2 are the cause of Darier disease (DD) [MIM:124200]; also known as Darier-White disease (DAR). DD is an autosomal dominantly inherited skin disorder characterized by loss of adhesion between epidermal cells (acantholysis) and abnormal keratinization. Patients with mild disease may have no more than a few scattered keratotic papules or subtle nail changes, whereas those with severe disease are handicapped by widespread malodorous keratotic plaques. In a few families, neuropsychiatric abnormalities such as mild mental retardation, schizophrenia, bipolar disorder and epilepsy have been reported. Stress, UV exposure, heat, sweat, friction, and oral contraception exacerbate disease symptoms. Prevalence has been estimated at 1 in 50000. Clinical variants of DD include hypertrophic, vesicobullous, hypopigmented, cornifying, zosteriform or linear, acute and comedonal subtypes. Comedonal Darier disease (CDD) is characterized by the coexistence of acne-like comedonal lesions with typical Darier hyperkeratotic papules on light-exposed areas. At histopathologic level, CDD differs from classic DD in the prominent follicular involvement and the presence of greatly elongated dermal villi.

#### Sequence similarities

Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIA subfamily.

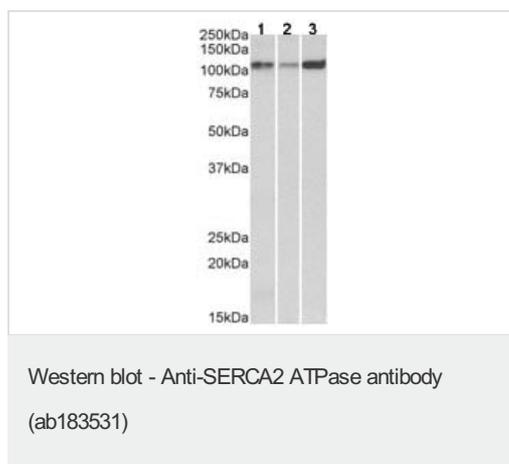
#### Post-translational modifications

Nitrated under oxidative stress. Nitration on the two tyrosine residues inhibits catalytic activity.

#### Cellular localization

Endoplasmic reticulum membrane. Sarcoplasmic reticulum membrane.

## Images



**All lanes :** Anti-SERCA2 ATPase antibody (ab183531) at 0.1  $\mu\text{g/ml}$

**Lane 1 :** Human heart lysate (in RIPA buffer)

**Lane 2 :** Mouse heart lysate (in RIPA buffer)

**Lane 3 :** Rat heart lysate (in RIPA buffer)

Lysates/proteins at 35  $\mu\text{g}$  per lane.

Developed using the ECL technique.

**Predicted band size:** 115 kDa

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

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