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Product datasheet

Anti-SERCA2 ATPase antibody ab3625

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概述

产品名称	Anti-SERCA2 ATPase**抗体**
描述	**兔多克隆抗体**to SERCA2 ATPase
宿主	Rabbit
经测试应用	**适用于:** IP, WB, ICC/IF, IHC-P
种属反应性	**与反应:** Mouse, Rat, Rabbit, Human, Pig **预测可用于:** Chicken, Cat, Dog
免疫原	Synthetic peptide within Human SERCA2 ATPase aa 250-550. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please **contact** our Scientific Support team to discuss your requirements. NP_733765.1 (GeneID 488). Database link: **P16615**
阳性对照	WB: HeLa, HEK-293T, NIH/3T3 whole cell lysate. Pig and rabbit aorta homogenate. Rat aortic smooth muscle cell lysate. IHC-P: Human heart tissue. IP: SERCA2 ATPase IP in HEK-293T whole cell lysate. ICC/IF: HeLa cells.
常规说明	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	pH: 7 Preservative: 0.1% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
纯度	Immunogen affinity purified
克隆	**多克隆**

同种型 IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab3625于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IP	★★★★☆ (1)	Use a concentration of 1 - 4 µg/ml.
WB	★★★★☆ (3)	1/1000 - 1/5000. Predicted molecular weight: 115 kDa.
ICC/IF		Use a concentration of 1 µg/ml.
IHC-P	★★★★☆ (2)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

靶标

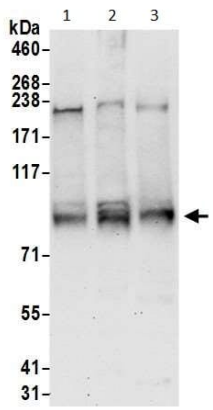
功能 This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Isoform 2 is involved in the regulation of the contraction/relaxation cycle.

组织特异性 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.

疾病相关 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.
序列相似性	Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIA subfamily.
翻译后修饰	Nitrated under oxidative stress. Nitration on the two tyrosine residues inhibits catalytic activity.
细胞定位	Endoplasmic reticulum membrane. Sarcoplasmic reticulum membrane.

图片



Western blot - Anti-SERCA2 ATPase antibody (ab3625)

All lanes : Anti-SERCA2 ATPase antibody (ab3625) at 0.1 µg/ml

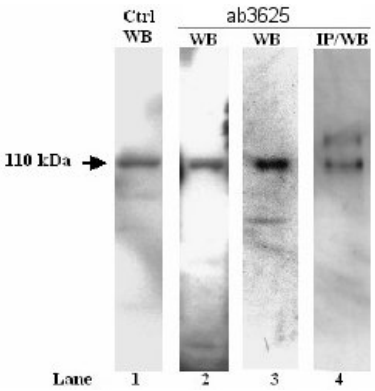
Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 3 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

Predicted band size: 115 kDa

Exposure time: 30 seconds

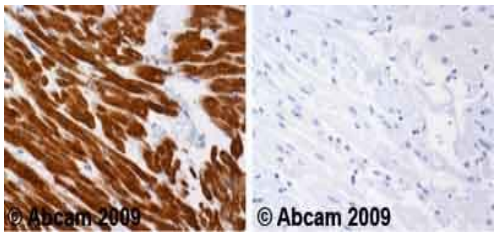


Western blot - Anti-SERCA2 ATPase antibody (ab3625)

Sample: Homogenate from Pig (lanes 1 and 2) or Rabbit (lane 4) aorta or lysate from cultured Rat aortic smooth muscle cells (lane 3)

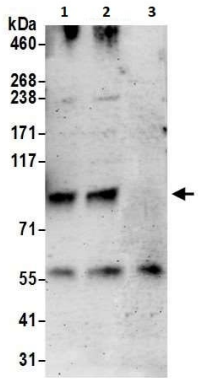
Affinity purified Rabbit anti-SERCA2 (ab3625) (lanes 2, 3 and IP for lane 4) or control (ctrl) monoclonal anti-SERCA2 (lanes 1 and WB for lane 4).

Dilutions: 1:1,000 (lanes 1, 2 and 4) or 1:2,500 (lane 3)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SERCA2 ATPase antibody (ab3625)

Ab3625 staining human heart. Staining is localised to the cytoplasm/sarcoplasm.
Left panel: with primary antibody at 1 ug/ml. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the DAKO 3-in-1 antigen retrieval buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Immunoprecipitation - Anti-SERCA2 ATPase antibody (ab3625)

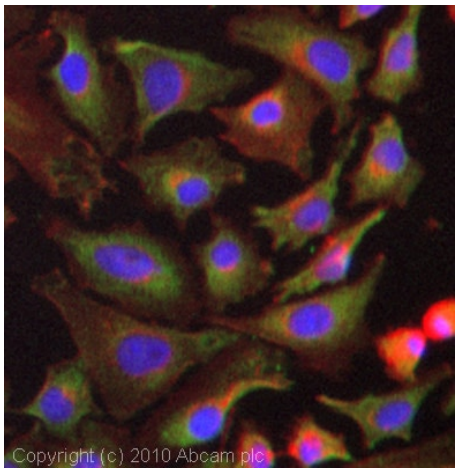
SERCA2 ATPase was immunoprecipitated from HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate (1 mg for IP, 20% of IP loaded) with ab3625 at 6 µg/mg lysate. Western blot was performed from the immunoprecipitate using ab3625 at 1 µg/ml.

Lane 1: ab3625 IP in HEK-293T whole cell lysate.

Lane 3: ab3625 IP in HEK-293T whole cell lysate.

Lane 2: Control IgG IP in HEK-293T whole cell lysate.

Detection: Chemiluminescence with exposure time of 3 minutes.



Immunocytochemistry/ Immunofluorescence - Anti-SERCA2 ATPase antibody (ab3625)

ICC/IF image of ab3625 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab3625, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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