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Product datasheet

Anti-SDHB antibody [21A11AE7] ab14714

敲除验证

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概述

产品名称	Anti-SDHB抗体[21A11AE7]
描述	小鼠单克隆抗体[21A11AE7] to SDHB
宿主	Mouse
经测试应用	**适用于:** Flow Cyt, IHC-Fr, WB, ICC/IF
种属反应性	**与反应:** Mouse, Rat, Cow, Human **预测可用于:** Hamster, Pig, Zebrafish
免疫原	Full length protein corresponding to Cow SDHB. Purified SDH from bovine heart.
阳性对照	WB: Human, bovine, rat, and mouse heart mitochondria; Isolated mitochondria from HepG2 cells. IHC-Fr: Normal ageing human colon tissue. Flow Cyt: HEK-293 cells. ICC/IF: HeLa cells. HEK293 cells (HEK293-SDHB KO used as a negative cell line)
常规说明	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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 Product was previously marketed under the MitoSciences sub-brand.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C.
存储溶液	pH: 7.5 Preservative: 0.02% Sodium azide Constituent: HEPES buffered saline

纯度	IgG fraction
纯化说明	Near homogeneity as judged by SDS-PAGE. The antibody was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.
克隆	单克隆
克隆编号	21A11AE7
同种型	IgG2a
轻链类型	kappa

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab14714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。

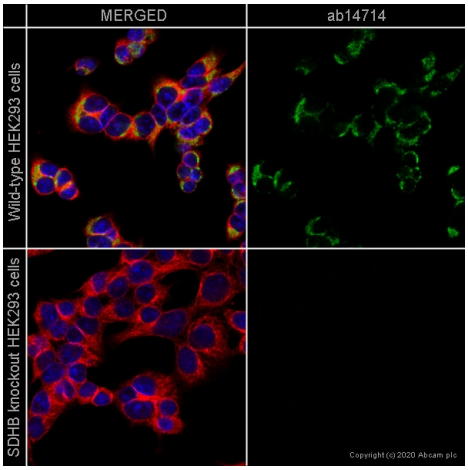
应用	Ab评论	说明
Flow Cyt		Use 1µg for 10^6 cells. **ab170191** - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
IHC-Fr		Use at an assay dependent concentration.
WB	★★★★★ (9)	Use a concentration of 5 µg/ml. Detects a band of approximately 28 kDa.
ICC/IF	★★★★★ (1)	Use a concentration of 1 µg/ml.

靶标

功能	Iron-sulfur protein (IP) subunit of succinate dehydrogenase (SDH) that is involved in complex II of the mitochondrial electron transport chain and is responsible for transferring electrons from succinate to ubiquinone (coenzyme Q).
通路	Carbohydrate metabolism; tricarboxylic acid cycle; fumarate from succinate (eukaryal route): step 1/1.
疾病相关	Defects in SDHB are a cause of susceptibility to pheochromocytoma (PCC) [MIM:171300]. A catecholamine-producing tumor of chromaffin tissue of the adrenal medulla or sympathetic paraganglia. The cardinal symptom, reflecting the increased secretion of epinephrine and norepinephrine, is hypertension, which may be persistent or intermittent. Defects in SDHB are the cause of hereditary paragangliomas type 4 (PGL4) [MIM:115310]; also known as familial non-chromaffin paragangliomas type 4. Paragangliomas refer to rare and mostly benign tumors that arise from any component of the neuroendocrine system. PGL4 is characterized by the development of mostly benign, highly vascular, slow growing tumors in the head and neck. In the head and neck region, the carotid body is the largest of all paraganglia and is also the most common site of the tumors. Defects in SDHB are a cause of paraganglioma and gastric stromal sarcoma (PGGSS) [MIM:606864]; also called Carney-Stratakis syndrome. Gastrointestinal stromal tumors may be sporadic or inherited in an autosomal dominant manner, alone or as a component of a syndrome associated with other tumors, such as in the context of neurofibromatosis type 1 (NF1). Patients

	have both gastrointestinal stromal tumors and paragangliomas. Susceptibility to the tumors was inherited in an apparently autosomal dominant manner, with incomplete penetrance. Defects in SDHB are a cause of Cowden-like syndrome (CWDLS) [MIM:612359]. Cowden-like syndrome is a cancer predisposition syndrome associated with elevated risk for tumors of the breast, thyroid, kidney and uterus.
序列相似性	Belongs to the succinate dehydrogenase/fumarate reductase iron-sulfur protein family. Contains 1 2Fe-2S ferredoxin-type domain. Contains 1 4Fe-4S ferredoxin-type domain.
细胞定位	Mitochondrion inner membrane.

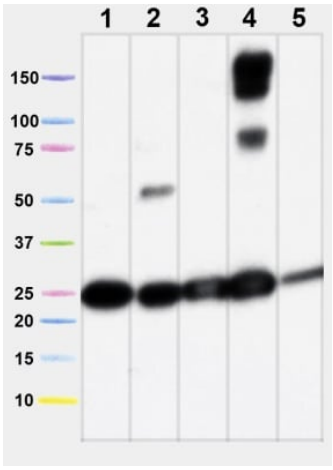
图片



Immunocytochemistry/ Immunofluorescence - Anti-SDHB antibody [21A11AE7] (ab14714)

ab14714 staining SDHB in wild-type HEK293 cells (top panel) and SDHB knockout HEK293 cells (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab14714 at 5µg concentration and **ab6046** (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (**ab150117**) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (**ab150080**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Western blot - Anti-SDHB antibody [21A11AE7] (ab14714)

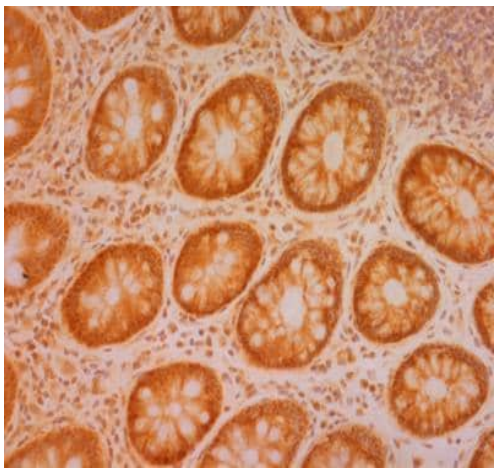
All lanes : Anti-SDHB antibody [21A11AE7] (ab14714) at 5 µg/ml

Lane 1 : Isolated mitochondria from Human heart at 5 µg
Lane 2 : Isolated mitochondria from Bovine Heart at 1 µg
Lane 3 : Isolated mitochondria from Rat heart at 10 µg
Lane 4 : Isolated mitochondria from Mouse heart at 10 µg
Lane 5 : Isolated mitochondria from HepG2 (human liver hepatocellular carcinoma cell line) cells at 20 µg

Secondary
All lanes : Goat anti-Mouse secondary

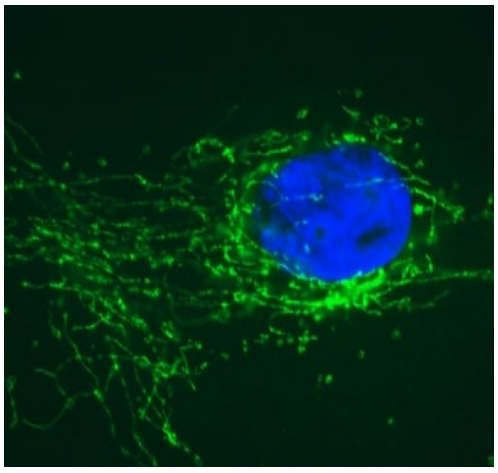
Observed band size: 28 kDa
Additional bands at: 55 kDa. We are unsure as to the identity of these extra bands.

Extra bands in the mouse sample (lane 4) are due to the reaction of the IgG-specific goat anti-mouse secondary antibody with residual mouse blood in the heart tissue, as it is very difficult to entirely remove the blood from these small organs.



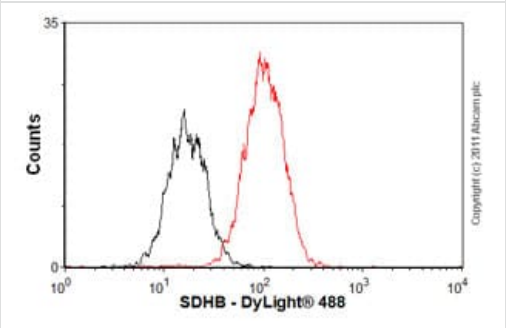
Immunohistochemistry (Frozen sections) - Anti-SDHB antibody [21A11AE7] (ab14714)

ab14714 staining SDHB in normal ageing human colon tissue by Immunohistochemistry (Frozen sections).



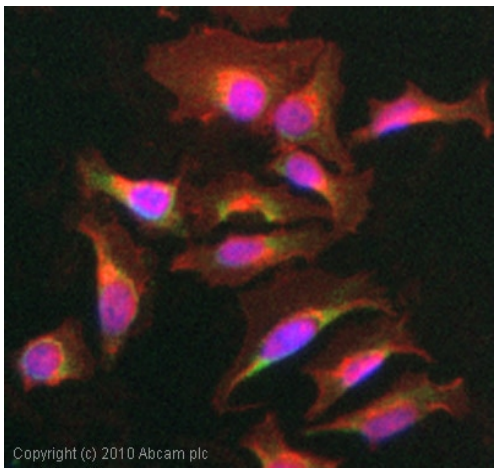
Immunocytochemistry/ Immunofluorescence - Anti-SDHB antibody [21A11AE7] (ab14714)

Mitochondrial localization of complex II visualized by immunocytochemistry using anti-complex II subunit 30 kDa Ip mAb 21A11 (ab14714). Cells were fixed, permeabilized and then labeled with ab14714 followed by an Alexa Fluor® 488-conjugated-goat-anti-mouse IgG2a isotype specific secondary antibody.



Flow Cytometry - Anti-SDHB antibody [21A11AE7] (ab14714)

Overlay histogram showing HEK-293 (human epithelial cell line from embryonic kidney) cells stained with ab14714 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab14714, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (**ab91361**, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-SDHB antibody [21A11AE7] (ab14714)

ICC/IF image of ab14714 stained HeLa (human epithelial cell line from cervix adenocarcinoma) 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 (ab14714, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse 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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