


Product datasheet

HRP Anti-SDHB antibody [21A11AE7] ab197903

KO VALIDATED

[1 References](#) [3 Images](#)

Overview

Product name	HRP Anti-SDHB antibody [21A11AE7]
Description	HRP Mouse monoclonal [21A11AE7] to SDHB
Host species	Mouse
Conjugation	HRP
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Cow, Zebrafish 
Immunogen	Tissue, cells or virus corresponding to Cow SDHB. Purified Bovine mitochondrial Complex II, with traces of Complex III.
Positive control	WB: Human heart mitochondria lysate. IHC-P: FFPE normal human colon tissue sections.
General notes	<p>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.</p> <p>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</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. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
Purity	Affinity purified
Clonality	Monoclonal
Clone number	21A11AE7

Isotype	IgG2a
Light chain type	kappa

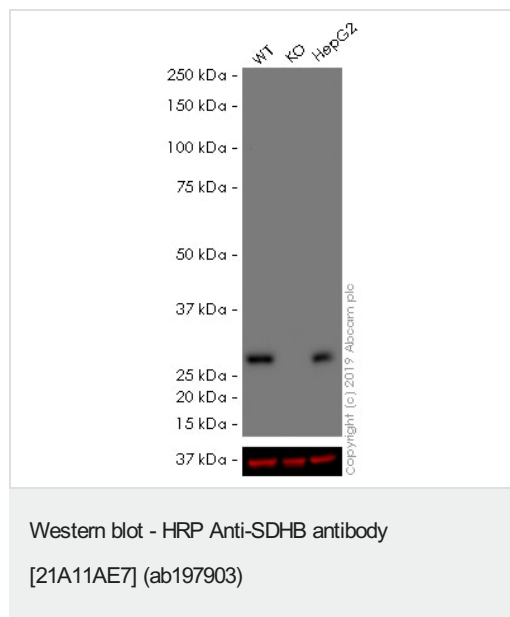
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab197903 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		1/5000. Detects a band of approximately 32 kDa (predicted molecular weight: 32 kDa).
IHC-P		1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	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).
Pathway	Carbohydrate metabolism; tricarboxylic acid cycle; fumarate from succinate (eukaryal route): step 1/1.
Involvement in disease	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Sequence similarities	<p>Belongs to the succinate dehydrogenase/fumarate reductase iron-sulfur protein family.</p> <p>Contains 1 2Fe-2S ferredoxin-type domain.</p> <p>Contains 1 4Fe-4S ferredoxin-type domain.</p>
Cellular localization	Mitochondrion inner membrane.



All lanes : HRP Anti-SDHB antibody [21A11AE7] (ab197903) at 1/5000 dilution

Lane 1 : Wild-type HEK-293 whole cell lysate

Lane 2 : SDHB knockout HEK-293 whole cell lysate

Lane 3 : Hep G2 whole cell lysate

Lysates/proteins at 20 µg per lane.

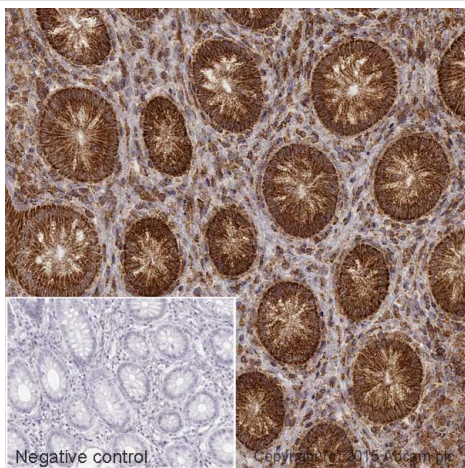
Performed under reducing conditions.

Predicted band size: 32 kDa

Observed band size: 32 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab197903 observed at 32 kDa. Red - loading control, [ab130007](#), observed at 130 kDa.

ab197903 was shown to specifically react with SDHB in wild-type HEK-293 cells as signal was lost in SDHB knockout cells. Wild-type and SDHB knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab197903 and [ab130007](#) (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

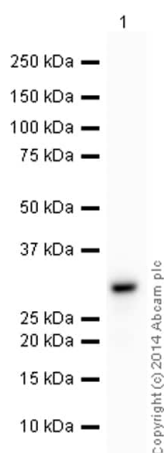


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-SDHB antibody [21A11AE7] (ab197903)

IHC image of SDHB staining in a section of formalin-fixed paraffin-embedded human normal colon*. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins, and incubated overnight at +4°C with ab197903 at 1/100 dilution. DAB was used as the chromogen ([ab103723](#)), diluted 1/100 and incubated for 10min at room temperature. The section was counterstained with haematoxylin and mounted with DPX. The inset negative 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.

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



Western blot - HRP Anti-SDHB antibody [21A11AE7] (ab197903)

HRP Anti-SDHB antibody [21A11AE7] (ab197903) at 1/5000 dilution + Human heart tissue lysate - mitochondrial extract ([ab110337](#)) at 5 µg

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 32 kDa

Observed band size: 32 kDa

Exposure time: 6 seconds

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab197903 overnight at 4°C. Antibody binding was visualised using ECL development solution [ab133406](#).

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