

Product datasheet

Anti-SDHA antibody [EPR9043(B)] αb137040

KO **VALIDATED** Recombinant RabMAb[®]

★★★★☆ **4 Abreviews** **14 References** **14 Images**

Overview

Product name	Anti-SDHA antibody [EPR9043(B)]
Description	Rabbit monoclonal [EPR9043(B)] to SDHA
Host species	Rabbit
Tested applications	Suitable for: WB, IP, IHC-P, ICC/IF, Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human SDHA aa 550-650. The exact sequence is proprietary.
Positive control	WB: Wild-type HEK-293 whole cell lysate. MCF7, HT1080, Jurkat and HepG2 whole cell lysate. Mouse brain and kidney tissue lysate. Rat brain tissue lysate. IHC-P: Human, mouse and rat brain tissue. ICC: HeLa cells. IP: Jurkat and HeLa cell lysate. Flow Cyt (intra): HeLa cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</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.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide

	Constituents: 40% Glycerol, 0.05% BSA, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR9043(B)
Isotype	IgG

Applications

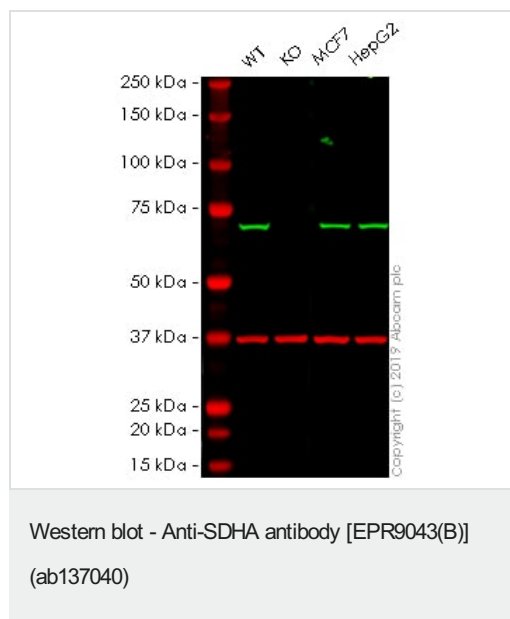
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab137040 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (2)	1/1000 - 1/5000. Predicted molecular weight: 72 kDa. Unpurified dilution 1/1000 - 1/10000.
IP		1/10 - 1/20. Unpurified dilution 1/10 - 1/100.
IHC-P	★★★★★ (1)	1/50 - 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		1/100 - 1/250.
Flow Cyt (Intra)		1/10 - 1/20. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. Unpurified dilution 1/10 - 1/100.

Target

Function	Flavoprotein (FP) 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 SDHA are a cause of mitochondrial complex II deficiency (MT-C2D) [MIM:252011]. A disorder of the mitochondrial respiratory chain with heterogeneous clinical manifestations. Clinical features include psychomotor regression in infants, poor growth with lack of speech development, severe spastic quadriplegia, dystonia, progressive leukoencephalopathy, muscle weakness, exercise intolerance, cardiomyopathy. Some patients manifest Leigh syndrome or Kearns-Sayre syndrome.</p> <p>Defects in SDHA are a cause of Leigh syndrome (LS) [MIM:256000]. LS is a severe disorder characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions.</p> <p>Defects in SDHA are the cause of cardiomyopathy dilated type 1GG (CMD1GG) [MIM:613642]. CMD1GG is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.</p>
Sequence similarities	Belongs to the FAD-dependent oxidoreductase 2 family. FRD/SDH subfamily.
Cellular localization	Mitochondrion inner membrane.

Images



All lanes : Anti-SDHA antibody [EPR9043(B)] (ab137040) at 1/1000 dilution

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

Lane 2 : SDHA knockout HEK-293 whole cell lysate

Lane 3 : MCF7 whole cell lysate

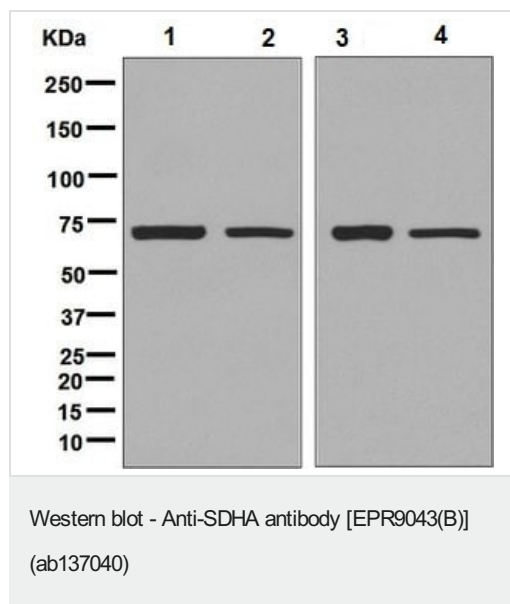
Lane 4 : HepG2 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 72 kDa

Lanes 1 -4: Merged signal (red and green). Green - ab137040 observed at 72 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab137040 was shown to specifically react with SDHA in wild-type HEK-293 cells as signal was lost in SDHA knockout cells. Wild-type and SDHA knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab137040 and [ab8245](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 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.



All lanes : Anti-SDHA antibody [EPR9043(B)] (ab137040) at 1/1000 dilution

Lane 1 : HeLa cell lysate

Lane 2 : HepG2 cell lysate

Lane 3 : HT1080 cell lysate

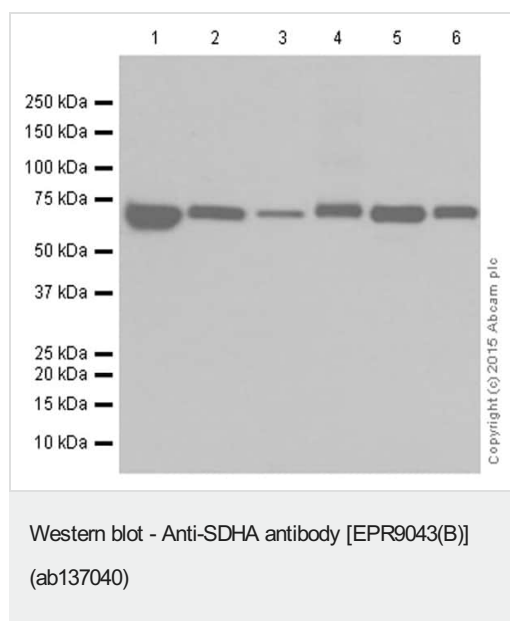
Lane 4 : Jurkat cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP conjugated Goat anti Rabbit IgG at 1/2000 dilution

Predicted band size: 72 kDa



All lanes : Anti-SDHA antibody [EPR9043(B)] (ab137040) at 1/5000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma) whole cell lysate

Lane 2 : HepG2 (human hepatocellular carcinoma) whole cell lysate

Lane 3 : Jurkat (human acute T cell leukemia) whole cell lysate

Lane 4 : Mouse brain tissue lysate

Lane 5 : Mouse kidney tissue lysate

Lane 6 : Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

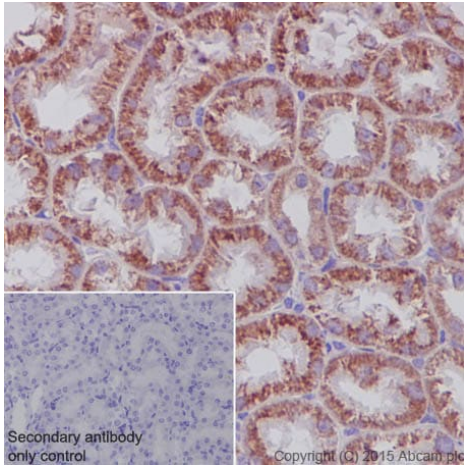
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 72 kDa

Additional bands at: 72 kDa. We are unsure as to the identity of these extra bands.

Blocking buffer: 5% NFDM /TBST

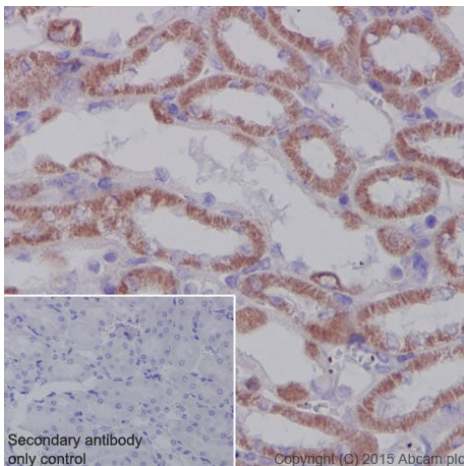
Diluting buffer: 5% NFDM /TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9043(B)] (ab137040)

ab137040 staining SDHA in rat kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

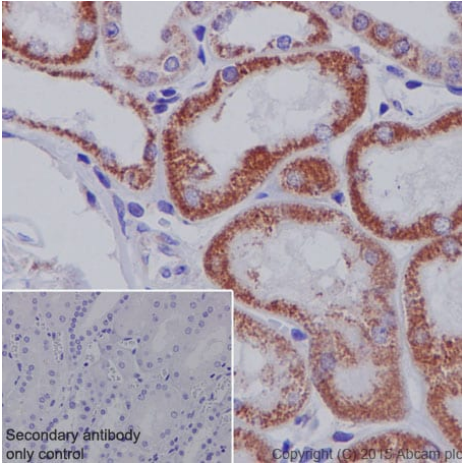
Negative control 1: PBS in place of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9043(B)] (ab137040)

ab137040 staining SDHA in mouse kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

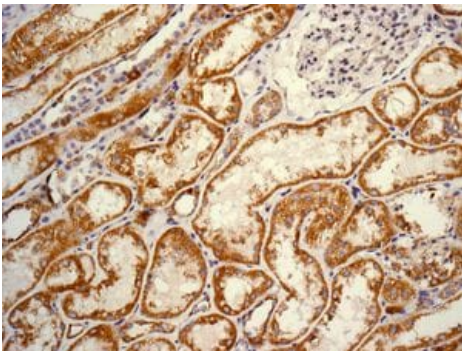
Negative control 1: PBS in place of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9043(B)] (ab137040)

ab137040 staining SDHA in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

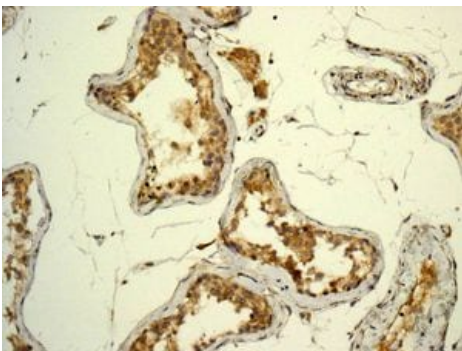
Negative control 1: PBS in place of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9043(B)] (ab137040)

Immunohistochemical analysis of paraffin embedded human kidney tissue labelling SDHA with ab137040 at 1/50 dilution.

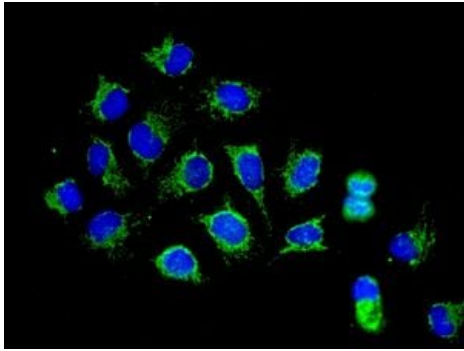
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9043(B)] (ab137040)

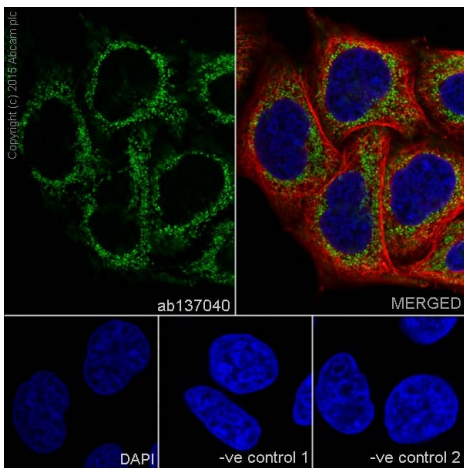
Immunohistochemical analysis of paraffin embedded human testis tissue labelling SDHA with ab137040 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-SDHA antibody [EPR9043(B)] (ab137040)

Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labelling SDHA with ab137040 at 1/100 dilution.

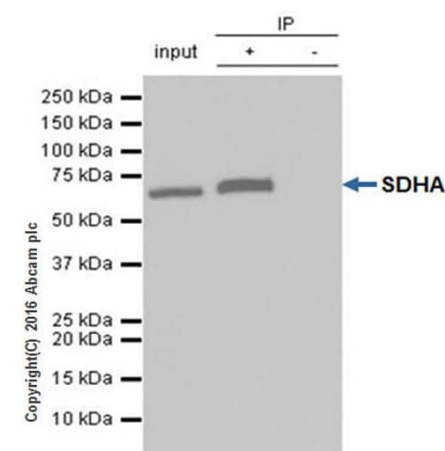


Immunocytochemistry/ Immunofluorescence - Anti-SDHA antibody [EPR9043(B)] (ab137040)

ab137040 staining SDHA in HeLa (human cervix adenocarcinoma) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/250. A goat anti rabbit IgG (Alexa Fluor® 488) ([ab150077](#)) was used as the secondary antibody. [ab7291](#) and [ab150120](#) were used as counterstains for primary antibody ab137040 and secondary antibody [ab150077](#) respectively and DAPI was used as a nuclear counterstain.

Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody ([ab150120](#))

Negative control 2: Mouse primary antibody ([ab7291](#)) and anti-rabbit secondary antibody ([ab150077](#))



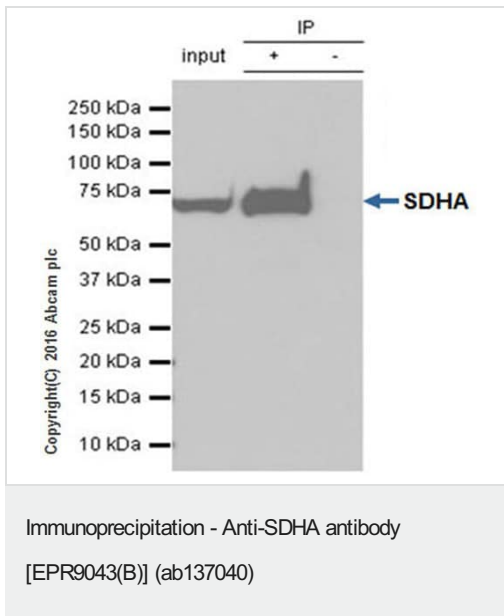
Immunoprecipitation - Anti-SDHA antibody [EPR9043(B)] (ab137040)

ab137040 immunoprecipitating SDHA. 10µg of Jurkat (Human T cell leukemia cell line from peripheral blood) cell lysate was incubated with primary antibody at a dilution of 1/20 and VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at a dilution of 1/10000.

Lane 1: Jurkat whole cell lysate 10ug

Lane 2: ab137040 IP in Jurkat whole cell lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab137040 in Jurkat whole cell lysate

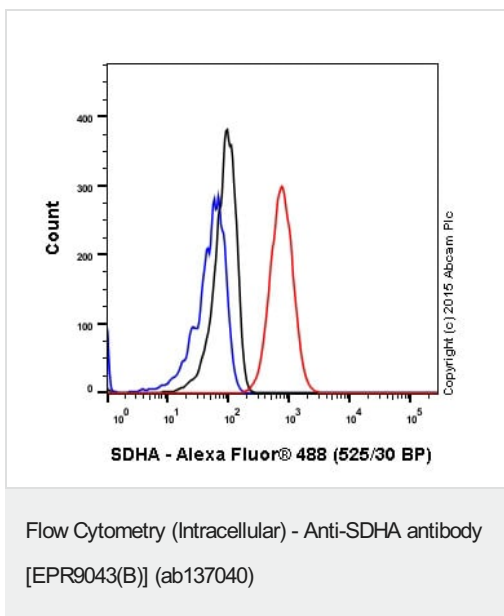


ab137040 immunoprecipitating SDHA. 10µg of HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate was incubated with primary antibody at a dilution of 1/20 and VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at a dilution of 1/10000.

Lane 1: HeLa whole cell lysate (10ug)

Lane 2: ab137040 IP in HeLa whole cell lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab137040 in HeLa whole cell lysate



ab137040 staining SDHA in the human cell line HeLa (human cervix adenocarcinoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/500. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/500 was used as the secondary antibody.

Isotype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-SDHA antibody [EPR9043(B)] (ab137040)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors