abcam

Product datasheet

Anti-SDHA antibody [EPR9042(B)] ab139181

KO VALIDATED Recombinant RabMAb

4 References 7 Images

Overview

Product name	Anti-SDHA antibody [EPR9042(B)]
Description	Rabbit monoclonal [EPR9042(B)] to SDHA
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide within Human SDHA aa 100-200. The exact sequence is proprietary.
Positive control	Human fetal heart, fetal kidney, HepG2 and HeLa lysate; Human kidney and testis tissues.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR9042(B)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab139181 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		1/1000 - 1/10000. Predicted molecular weight: 72 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for ICC/IF.

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).

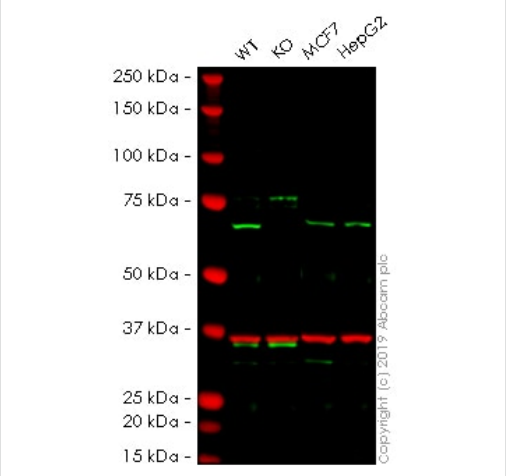
Pathway Carbohydrate metabolism; tricarboxylic acid cycle; fumarate from succinate (eukaryal route): step 1/1.

Involvement in disease 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.
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.
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.

Sequence similarities Belongs to the FAD-dependent oxidoreductase 2 family. FRD/SDH subfamily.

Cellular localization Mitochondrion inner membrane.

Images



Western blot - Anti-SDHA antibody [EPR9042(B)] (ab139181)

All lanes : Anti-SDHA antibody [EPR9042(B)] (ab139181) at 1/1000 dilution

Lane 1 : Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 2 : SDHA knockout HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 3 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate
Lane 4 : Hep G2 (Human liver hepatocellular carcinoma cell line) whole cell lysate

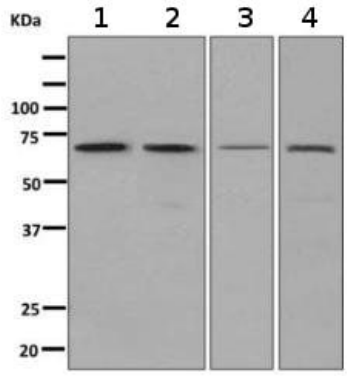
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 72 kDa
Observed band size: 72 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab139181 observed at 72 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab139181 was shown to recognize SDHA in wild-type HEK-293 cells as signal was lost at the expected MW in SDHA knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SDHA knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab139181 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.



Western blot - Anti-SDHA antibody [EPR9042(B)] (ab139181)

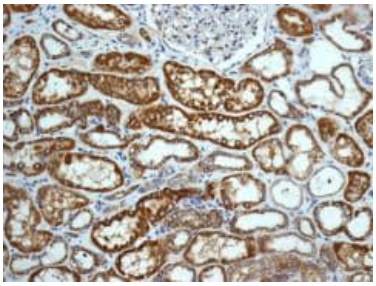
All lanes : Anti-SDHA antibody [EPR9042(B)] (ab139181) at 1/1000 dilution

Lane 1 : Human fetal heart tissue lysate
Lane 2 : Human fetal kidney tissue lysate
Lane 3 : HepG2 cell lysate
Lane 4 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

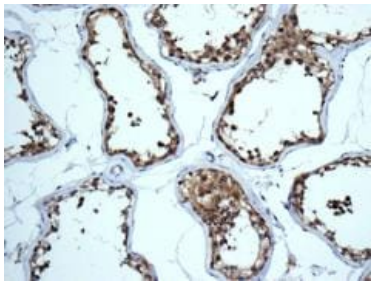
Predicted band size: 72 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9042(B)] (ab139181)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labelling SDHA with ab139181 at 1/100 dilution.

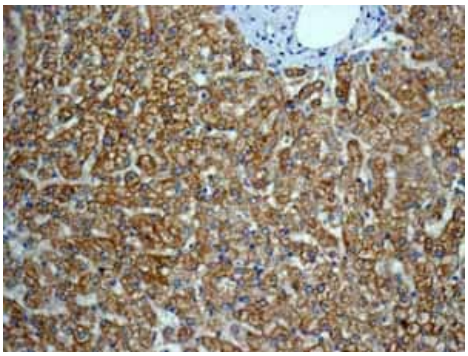
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9042(B)] (ab139181)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling SDHA with ab139181 at 1/100 dilution.

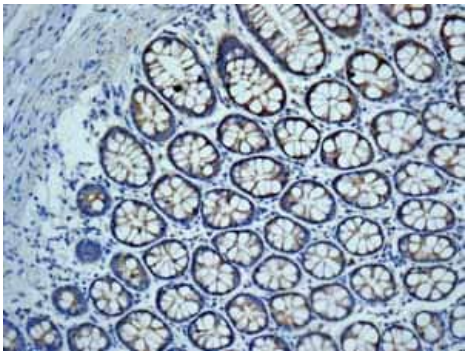
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9042(B)] (ab139181)

Immunohistochemical analysis of paraffin embedded Normal Human Liver tissue using ab139181 showing +ve staining.

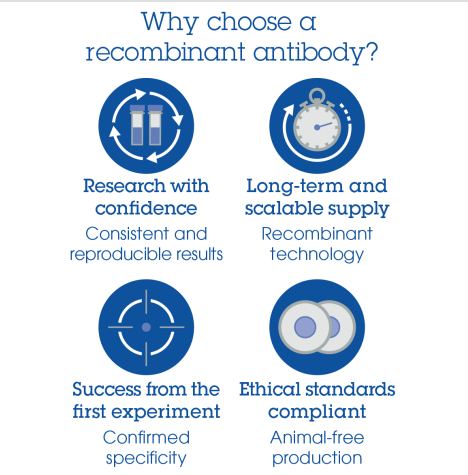
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHA antibody [EPR9042(B)] (ab139181)

Immunohistochemical analysis of paraffin embedded Normal Human Colon tissue using ab139181 showing +ve staining.

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



Anti-SDHA antibody [EPR9042(B)] (ab139181)

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