abcam

Product datasheet

Anti-SDHB antibody [EPR10880] - BSA and Azide free ab249876

KO VALIDATED Recombinant RabMAb

15 Images

Overview

Product name	Anti-SDHB antibody [EPR10880] - BSA and Azide free
Description	Rabbit monoclonal [EPR10880] to SDHB - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IP, IHC-P, Flow Cyt (Intra), WB **Unsuitable for:** ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	ab249876 is the carrier-free version of **ab175225**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR10880
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab249876 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
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. See **IHC antigen retrieval protocols**.
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 32 kDa.

Application notes Is unsuitable for ICC/IF.

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 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.

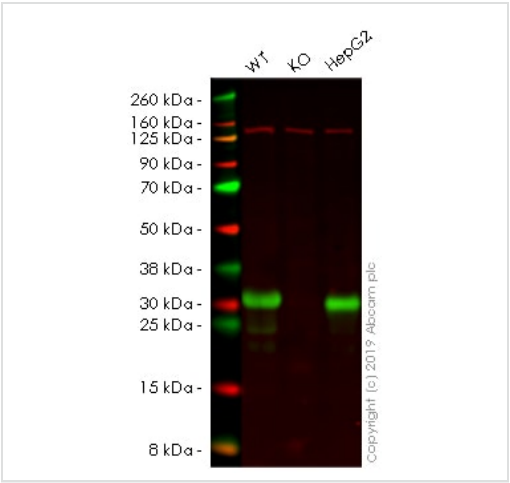
Sequence similarities

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.

Cellular localization

Mitochondrion inner membrane.

Images



Western blot - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

All lanes : Anti-SDHB antibody [EPR10880] (**ab175225**) at 1/50000 dilution

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

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

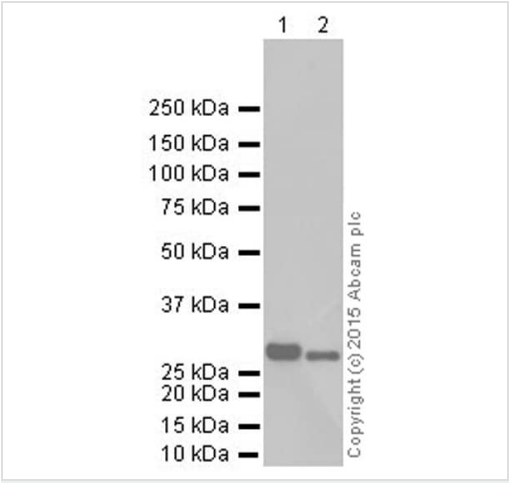
Predicted band size: 32 kDa

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

Lanes 1 - 3: Merged signal (red and green). Green - **ab175225** observed at 32 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab175225 was shown to recognize SDHB in wild-type HEK 293 cells as signal was lost at the expected MW in SDHB knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SDHB knockout samples

were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. **ab175225** and **ab130007** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/50000 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-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

All lanes : Anti-SDHB antibody [EPR10880] (**ab175225**) at 1/100000 dilution (purified)

Lane 1 : HepG2 whole cell lysate
Lane 2 : Jurkat whole cell lysate

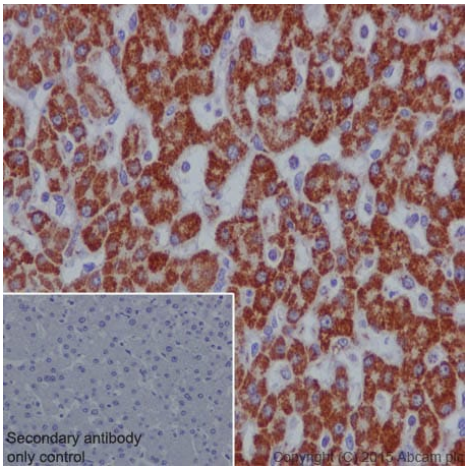
Lysates/proteins at 10 µg per lane.

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

Predicted band size: 32 kDa
Observed band size: 32 kDa

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

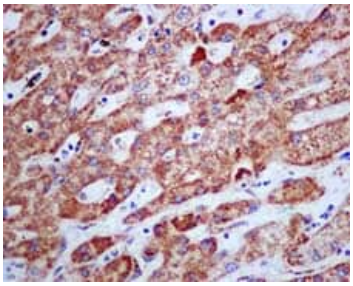
Blocking and dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

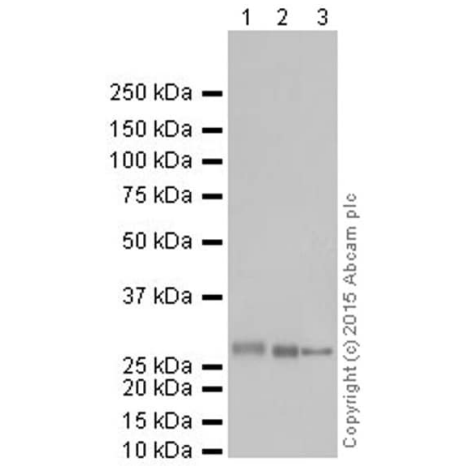
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labelling SDHB with purified **ab175225** at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labeling SDHB with unpurified **ab175225** at a dilution of 1/100.



Western blot - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

All lanes : Anti-SDHB antibody [EPR10880] (**ab175225**) at 1/100000 dilution (purified)

Lane 1 : Mouse brain tissue lysate
Lane 2 : Rat brain tissue lysate
Lane 3 : Mouse spleen tissue lysate

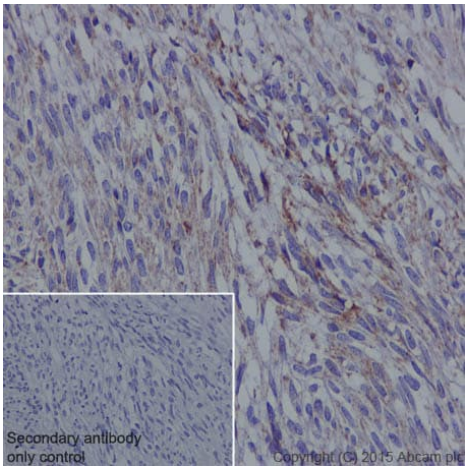
Lysates/proteins at 10 µg per lane.

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

Predicted band size: 32 kDa
Observed band size: 32 kDa

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

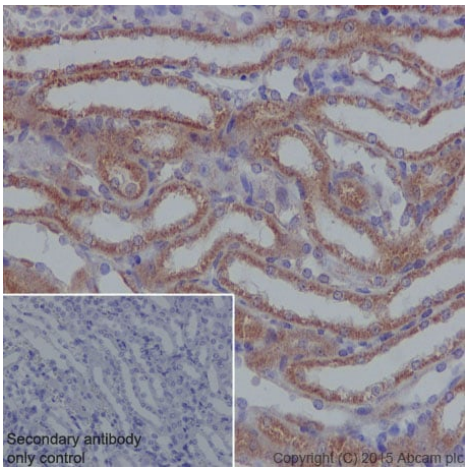
Blocking and dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

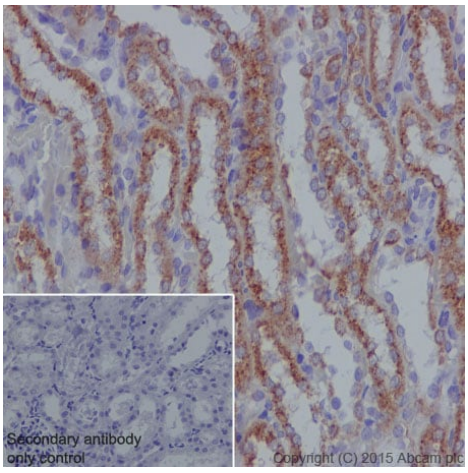
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human mesenchymoma tissue labelling SDHB with purified **ab175225** at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

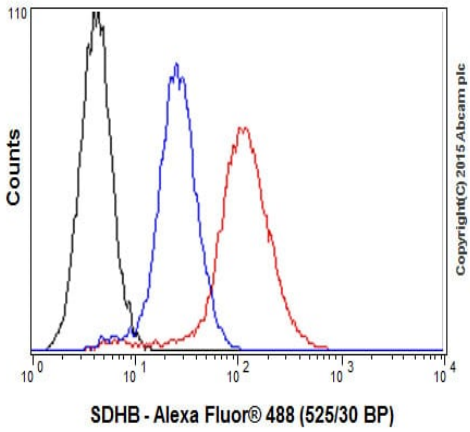
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue labelling SDHB with purified **ab175225** at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

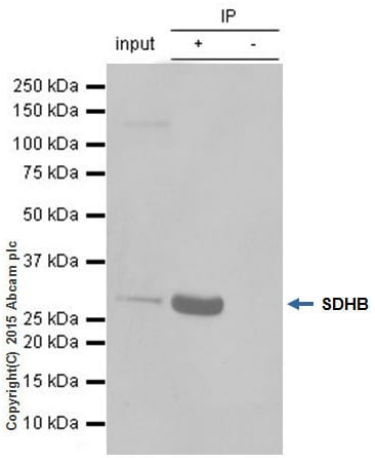
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labelling SDHB with purified **ab175225** at a dilution of 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

Intracellular Flow Cytometry analysis of A431 cells labelling SDHB with purified **ab175225** at a dilution of 1/200 (red). Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunoprecipitation - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

ab175225 (purified) at a dilution of 1/60 immunoprecipitating SDHB in Jurkat whole cell lysate.

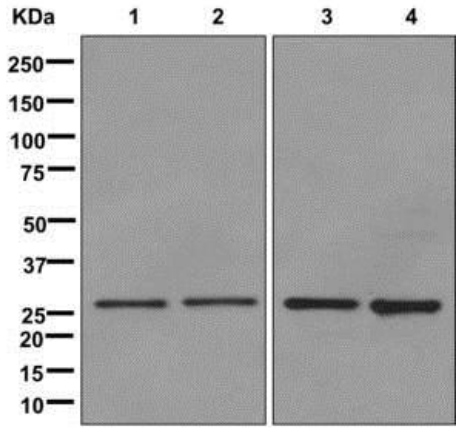
Lane 1 (input): Jurkat whole cell lysate (10µg)

Lane 2 (+): **ab175225** + Jurkat whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab175225** in Jurkat whole cell lysate.

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution.

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

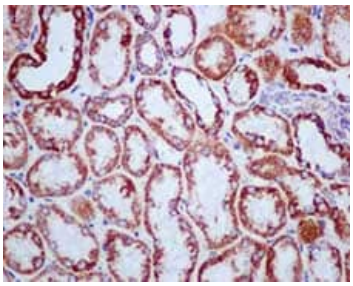
All lanes : Anti-SDHB antibody [EPR10880] (**ab175225**) at 1/50000 dilution (unpurified)

Lane 1 : HepG2 cell lysate
Lane 2 : A431 cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : Fetal heart tissue lysate

Lysates/proteins at 10 µg per lane.

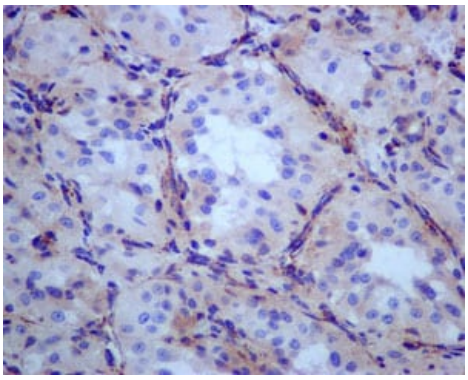
Predicted band size: 32 kDa

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.



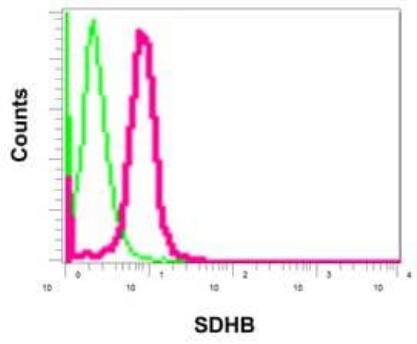
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labeling SDHB with unpurified **ab175225** at a dilution of 1/100.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

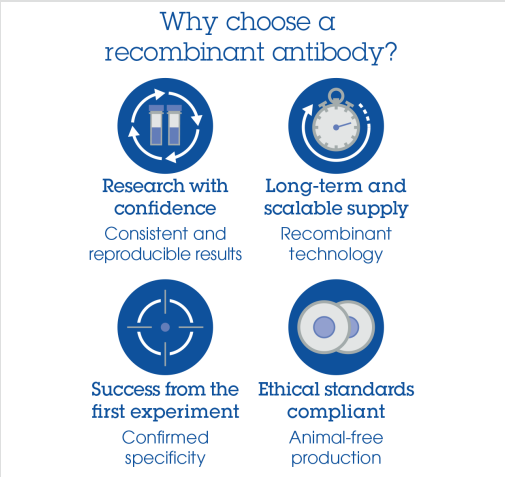
This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human carotid paraganglioma tissue labeling SDHB with unpurified **ab175225** at a dilution of 1/100.



Flow Cytometry (Intracellular) - Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

This data was developed using **ab175225**, the same antibody clone in a different buffer formulation.

Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling SDHB with unpurified **ab175225** at a dilution of 1/10 (red) compared to a rabbit IgG negative control (green).



Anti-SDHB antibody [EPR10880] - BSA and Azide free (ab249876)

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