

Product datasheet

Anti-SDHA antibody [2E3GC12FB2AE2] (Alexa Fluor® 488) ab154473

KO VALIDATED

5 Images

Overview

Product name	Anti-SDHA antibody [2E3GC12FB2AE2] (Alexa Fluor® 488)
Description	Mouse monoclonal [2E3GC12FB2AE2] to SDHA (Alexa Fluor® 488)
Host species	Mouse
Conjugation	Alexa Fluor® 488. Ex: 495nm, Em: 519nm
Tested applications	Suitable for: ICC/IF, Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Cow, Dog, Human
Immunogen	Full length native protein (purified) corresponding to Cow SDHA.
Positive control	HeLa and HDFn cells.
General notes	<p>Product was previously marketed under the MitoSciences sub-brand.</p> <p>Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.</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. Stable for 12 months at -20°C. Store In the Dark.

Storage buffer	Preservative: 0.02% Sodium azide Constituents: 1% BSA, PBS, 30% Glycerol
Purity	IgG fraction
Purification notes	Purity is near homogeneity as judged by SDS-PAGE. ab154473 was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.
Clonality	Monoclonal
Clone number	2E3GC12FB2AE2
Isotype	IgG1

Applications

Our [Abpromise guarantee](#) covers the use of **ab154473** in the following tested applications.

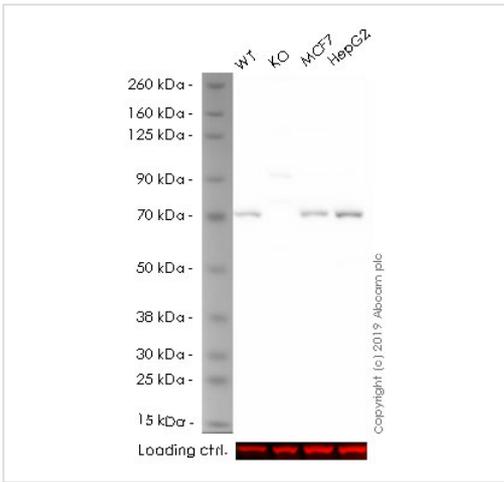
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml.
Flow Cyt		Use a concentration of 0.2 µg/ml. ab171463 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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
[2E3GC12FB2AE2] (Alexa Fluor® 488) (ab154473)

All lanes : Anti-SDHA antibody [2E3GC12FB2AE2] (HRP)
([ab198493](#)) at 1/5000 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

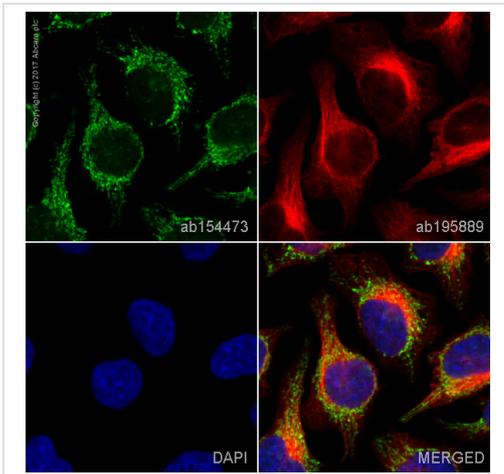
Lane 4 : HepG2 whole cell lysate

Lysates/proteins at 20 µg per lane.

This data was developed using the same antibody clone in a different format (HRP conjugated) ([ab198493](#)).

Lanes 1 - 4: Merged signal (red and green). Green - [ab198493](#) observed at 72 kDa. Red - loading control, [ab181602](#), observed at 37 kDa.

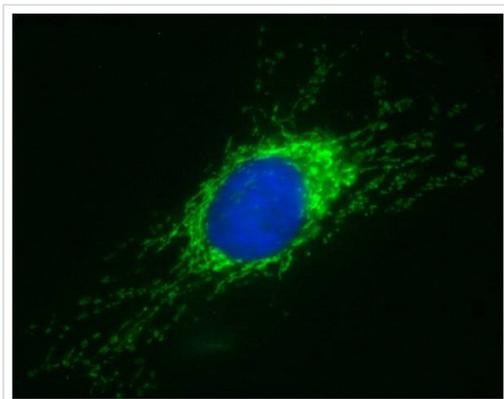
[ab198493](#) was shown to recognize in wild-type HEK-293 cells as signal was lost at the expected MW in SDHA knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SDHA knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab198493 and [ab181602](#) (Rabbit anti-GAPDH 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-Rabbit IgG H&L (IRDye® 680RD) preabsorbed [ab216777](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-SDHA antibody [2E3GC12FB2AE2] (Alexa Fluor® 488) (ab154473)

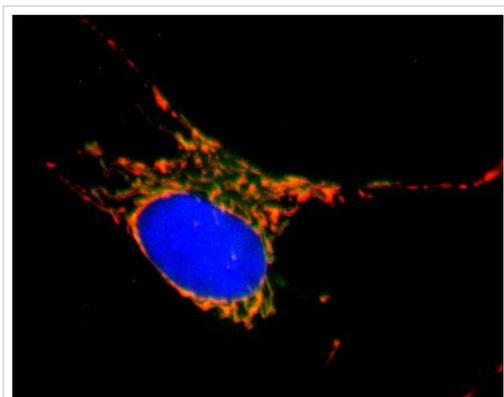
ab154473 staining SDHA in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab154473 at 1/1000 dilution (shown in green) and [ab195889](#), Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

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



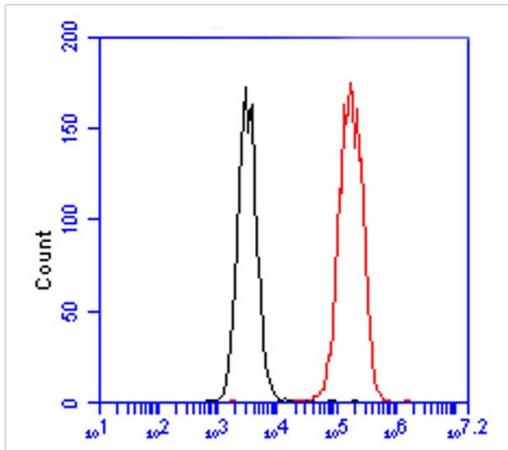
Immunocytochemistry/ Immunofluorescence - Anti-SDHA antibody [2E3GC12FB2AE2] (Alexa Fluor® 488) (ab154473)

Immunocytochemistry with HeLa cells (100x) were stained with anti-SDHA Alexa-488 antibody (1.0 µg/mL, ab154473) in green and DAPI in blue, as a nuclear stain.



Immunocytochemistry/ Immunofluorescence - Anti-SDHA antibody [2E3GC12FB2AE2] (Alexa Fluor® 488) (ab154473)

Immunocytochemistry with HDFn (100x) cells were stained with Anti-SDHA Alexa-488 antibody (1.0 µg/mL, ab154473) in green, Anti-HSP60 (1/1000, [ab46798](#)) as red, and DAPI in blue, as a nuclear stain. Secondary antibody used was goat anti-rabbit dyelight-594 (1/1000, [ab96897](#)).



Flow Cytometry - Anti-SDHA antibody
 [2E3GC12FB2AE2] (Alexa Fluor® 488) (ab154473)

Flow Cytometry for Anti-SDHA Alexa-488 antibody (ab154473) stained HeLa cells. Flow cytometry results of unstained cells (black) and 0.2 µg/mL anti-SDHA Alexa-488 (red) stained cells.

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