


Alexa Fluor® 594 Anti-SDHA antibody [2E3GC12FB2AE2] ab170172

3 Images

Overview

Product name	Alexa Fluor® 594 Anti-SDHA antibody [2E3GC12FB2AE2]
Description	Alexa Fluor® 594 Mouse monoclonal [2E3GC12FB2AE2] to SDHA
Host species	Mouse
Conjugation	Alexa Fluor® 594. Ex: 590nm, Em: 617nm
Tested applications	Suitable for: ICC/IF
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Cow, Dog 
Immunogen	Tissue, cells or virus corresponding to Cow SDHA. Purified mitochondrial complex II (Cow). Database link: P31039
Positive control	ICC/IF: HeLa and HDFn cells.
General notes	<p>ab170172 was previously used as a component in the MitoBiogenesis™ ICC Kit. The protocol for this kit is available here.</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: 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> <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</p>

contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Product was previously marketed under the MitoSciences sub-brand.

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: 0.02% Sodium azide Constituents: 1% BSA, 30% Glycerol (glycerin, glycerine), PBS
Purity	IgG fraction
Clonality	Monoclonal
Clone number	2E3GC12FB2AE2
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab170172 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		1/1000. ab178000 - Mouse monoclonal IgG1 (Alexa Fluor® 594), 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.

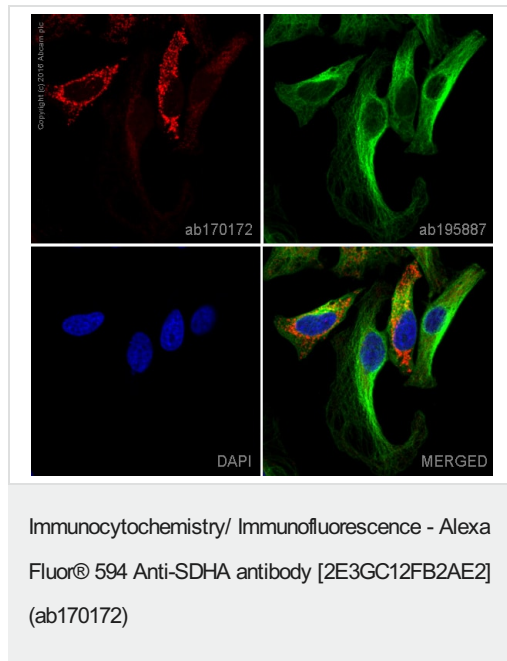
Sequence similarities

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

Cellular localization

Mitochondrion inner membrane.

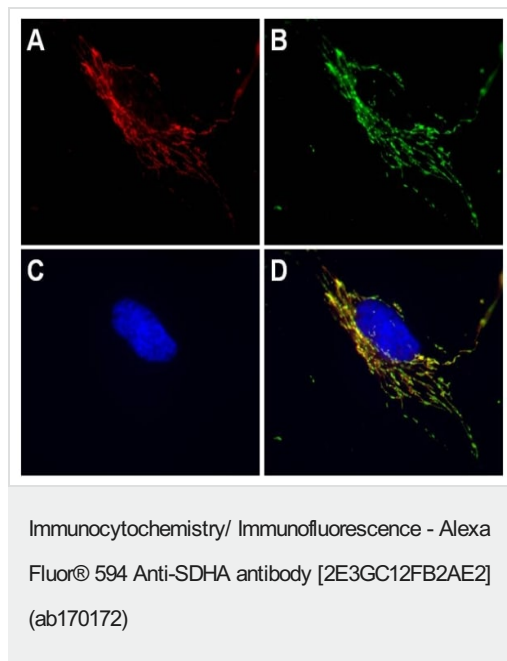
Images



ab170172 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 ab170172 at a 1/1000 dilution (shown in pseudo color red) and **ab195887**, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at a 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

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

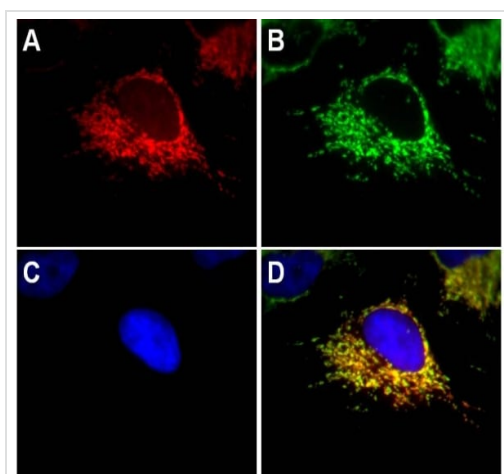
This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 100% methanol (5 min).



Immunocytochemistry with HDFn (100x) cells.

A) HDFn stained with anti-SDHA Alexa-594 antibody (1.0 µg/mL).

B) HDFn stained with Anti-mitochondrial chaperone HSP60 (1/1000, **ab46798**), Secondary antibody used was goat anti-rabbit Alexa® 488 (1/1000, **ab150077**). C) DAPI as nuclear stain (1/10000). D) Merge of color channels to show specificity of signal to mitochondria.



Immunocytochemistry/ Immunofluorescence - Alexa
Fluor® 594 Anti-SDHA antibody [2E3GC12FB2AE2]
(ab170172)

Immunocytochemistry with HeLa cells (100x).

A) HeLa stained with anti-SDHA Alexa-594 antibody (1.0 µg/mL).

B) HeLa stained with Anti-HSP60 (1/1000, [ab46798](#)), Secondary antibody used was goat anti-rabbit Alexa® 488 (1/1000, [ab150077](#)). C) DAPI as nuclear stain (1/10000). D) Merge of color channels to show specificity of signal to mitochondria.

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