

Product datasheet

Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free ab234907

Recombinant RabMAb

7 Images

Overview

Product name	Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free
Description	Rabbit monoclonal [EPR21105] to FH/Fumarase - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF, Flow Cyt, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment within Human FH/Fumarase aa 400 to the C-terminus. The exact sequence is proprietary. Database link: P07954
Positive control	IHC-P: Human kidney and clear cell renal cancer tissue.
General notes	<p>ab234907 is the carrier-free version of ab233393 This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.</p> <p>Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.</p> <p>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.</p> <p>Ab234907 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. <i>Maxpar® is a trademark of Fluidigm Canada Inc.</i></p> <p>This product was previously labelled as FH</p> <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>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21105
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab234907** in the following tested applications.

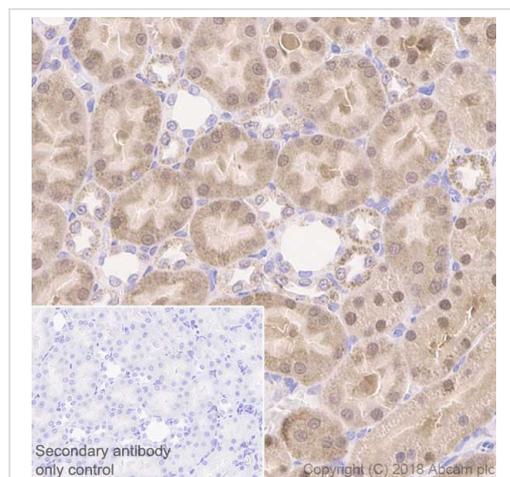
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 48 kDa (predicted molecular weight: 54 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

Target

Function	Also acts as a tumor suppressor.
Pathway	Carbohydrate metabolism; tricarboxylic acid cycle; (S)-malate from fumarate: step 1/1.
Involvement in disease	<p>Defects in FH are the cause of fumarase deficiency (FHD) [MIM:606812]; also known as fumaricaciduria. FHD is characterized by progressive encephalopathy, developmental delay, hypotonia, cerebral atrophy and lactic and pyruvic acidemia.</p> <p>Defects in FH are the cause of multiple cutaneous and uterine leiomyomata (MCUL1) [MIM:150800]. MCUL1 is an autosomal dominant condition in which affected individuals develop benign smooth muscle tumors (leiomyomata) of the skin. Affected females also usually develop leiomyomata of the uterus (fibroids).</p> <p>Defects in FH are the cause of hereditary leiomyomatosis and renal cell cancer (HLRCC) [MIM:605839].</p>
Sequence similarities	Belongs to the class-II fumarase/aspartase family. Fumarase subfamily.

Images



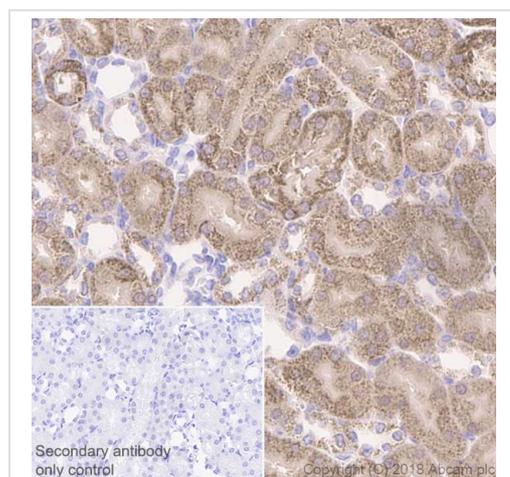
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling FH/Fumarase with [ab233393](#) at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Granular, cytoplasmic and nuclear staining on rat kidney (PMID: 17111171) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).



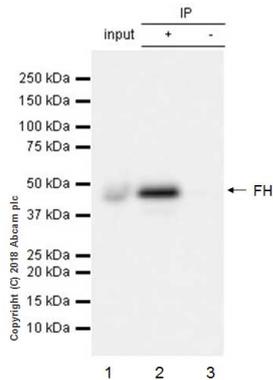
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling FH/Fumarase with [ab233393](#) at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Intensive granular and weak nuclear staining in mouse kidney is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).



Immunoprecipitation - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

FH/Fumarase was immunoprecipitated from 0.35 mg of HEK-293 (human epithelial cell line from embryonic kidney) whole cell lysate with [ab233393](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab233393](#) at 1/2000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10,000 dilution.

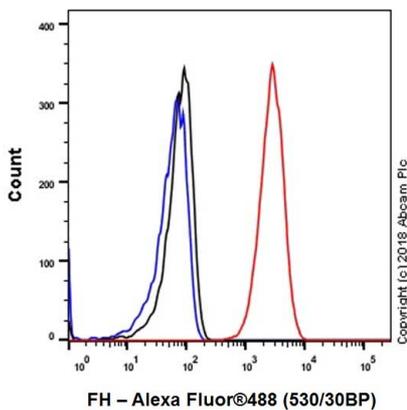
Lane 1: HEK-293 whole cell lysate 10 µg (Input).

Lane 2: [ab233393](#) IP in HEK-293 whole cell lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab233393](#) in HEK-293 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDm/TBST. Exposure time: 10 seconds.

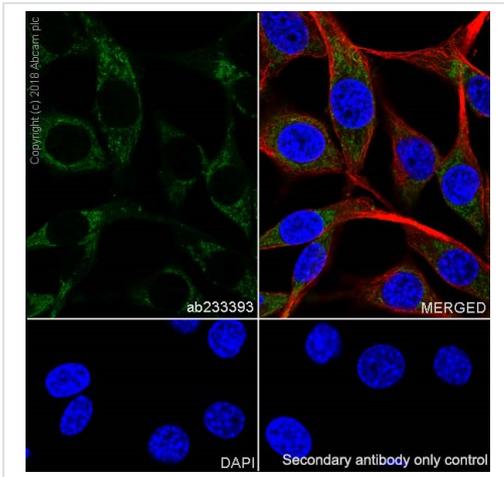
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).



Flow Cytometry - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling FH/Fumarase with [ab233393](#) at 1/500 dilution (red) compared with an isotype control details ([ab172730](#)) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)), at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).



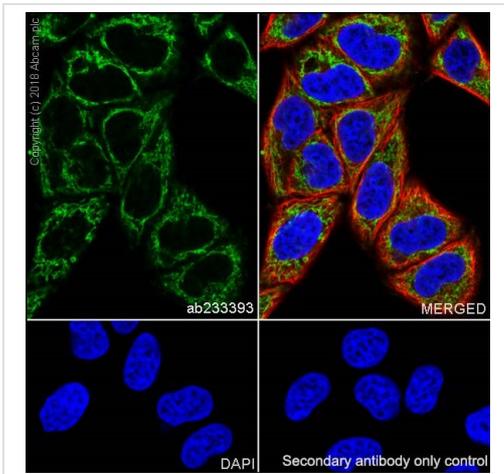
Immunocytochemistry/ Immunofluorescence - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryo fibroblast cell line) cells labeling FH/Fumarase with [ab233393](#) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining in NIH/3T3 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor[®] 594) ([ab195889](#)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).

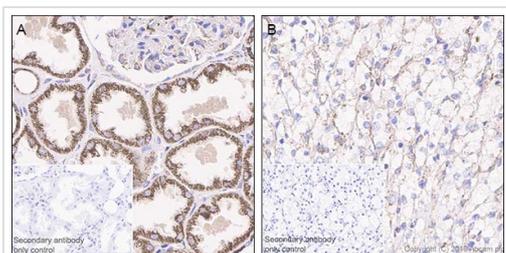


Immunocytochemistry/ Immunofluorescence - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling FH/Fumarase with [ab233393](#) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in HeLa cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor[®] 594) ([ab195889](#)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FH/Fumarase antibody [EPR21105] - BSA and Azide free (ab234907)

Immunohistochemical analysis of paraffin-embedded human kidney tissue (left) and human clear cell renal cancer tissue (right) tissue labeling FH/Fumarase with [ab233393](#) at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Intense granular staining on human kidney whereas weaker staining in clear cell renal cancer tissue (PMID: 21695080) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab233393](#)).

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