

Product datasheet

Anti-Frataxin antibody [EPR21840] - BSA and Azide free ab236463

Recombinant RabMAb

10 Images

Overview

Product name	Anti-Frataxin antibody [EPR21840] - BSA and Azide free
Description	Rabbit monoclonal [EPR21840] to Frataxin - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt, ICC/IF, IP, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment corresponding to Human Frataxin aa 50 to the C-terminus. Database link: Q16595
Positive control	IHC-P: Human testis tissue.
General notes	<p>Ab236463 is the carrier-free version of ab219414. 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>ab236463 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm.</p> <p><i>Maxpar® is a trademark of Fluidigm Canada Inc.</i></p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p>

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

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	EPR21840
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab236463** 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
Flow Cyt		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
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.
WB		Use at an assay dependent concentration. Detects a band of approximately 14 kDa (predicted molecular weight: 23 kDa).

Target

Function	Promotes the biosynthesis of heme and assembly and repair of iron-sulfur clusters by delivering Fe(2+) to proteins involved in these pathways. May play a role in the protection against iron-catalyzed oxidative stress through its ability to catalyze the oxidation of Fe(2+) to Fe(3+); the
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oligomeric form but not the monomeric form has in vitro ferroxidase activity. May be able to store large amounts of iron in the form of a ferrihydrite mineral by oligomerization; however, the physiological relevance is unsure as reports are conflicting and the function has only been shown using heterologous overexpression systems. Modulates the RNA-binding activity of ACO1.

Tissue specificity

Expressed in the heart, peripheral blood lymphocytes and dermal fibroblasts.

Involvement in disease

Defects in FXN are the cause of Friedreich ataxia (FRDA) [MIM:229300]. FRDA is an autosomal recessive, progressive degenerative disease characterized by neurodegeneration and cardiomyopathy it is the most common inherited ataxia. The disorder is usually manifest before adolescence and is generally characterized by incoordination of limb movements, dysarthria, nystagmus, diminished or absent tendon reflexes, Babinski sign, impairment of position and vibratory senses, scoliosis, pes cavus, and hammer toe. In most patients, FRDA is due to GAA triplet repeat expansions in the first intron of the frataxin gene. But in some cases the disease is due to mutations in the coding region.

Sequence similarities

Belongs to the frataxin family.

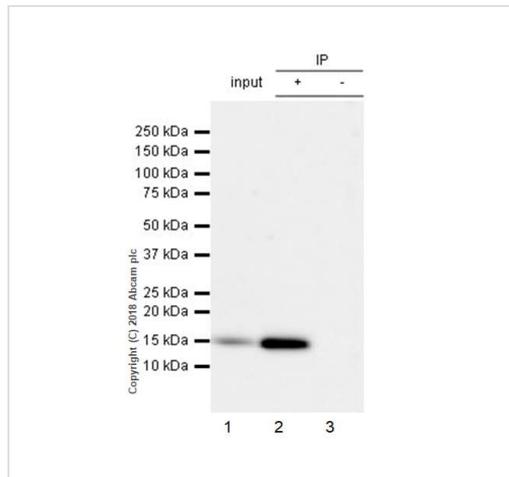
Post-translational modifications

Processed in two steps by mitochondrial processing peptidase (MPP). MPP first cleaves the precursor to intermediate form and subsequently converts the intermediate to yield frataxin mature form (frataxin(81-210)) which is the predominant form. The additional forms, frataxin(56-210) and frataxin(78-210), seem to be produced when the normal maturation process is impaired; their physiological relevance is unsure.

Cellular localization

Cytoplasm. Mitochondrion. PubMed:18725397 reports localization exclusively in mitochondria.

Images



Immunoprecipitation - Anti-Frataxin antibody
[EPR21840] - BSA and Azide free (ab236463)

Frataxin was immunoprecipitated from 0.35 mg Neuro-2a (mouse neuroblastoma cell line) whole cell lysate with [ab219414](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab219414](#) at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

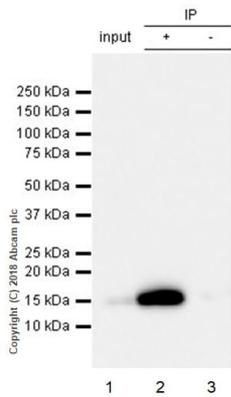
Lane 1: Neuro-2a whole cell lysate 10 µg (Input).

Lane 2: [ab219414](#) IP in Neuro-2a whole cell lysate (+).

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab219414](#) in Neuro-2a whole cell lysate (-).

Blocking/Dilution buffer and concentration: 5% NFD/MBST.
Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219414](#)).



Immunoprecipitation - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Frataxin was immunoprecipitated from 0.35 mg HCT 116 (human colorectal carcinoma epithelial cell) whole cell lysate with [ab219414](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab219414](#) at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

Lane 1: HCT 116 whole cell lysate 10 µg (Input).

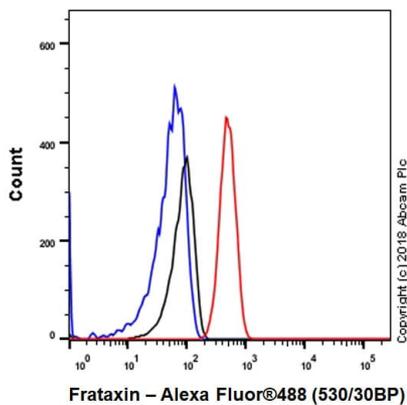
Lane 2: [ab219414](#) IP in HCT 116 whole cell lysate (+).

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab219414](#) in HCT 116 whole cell lysate (-).

Blocking/Dilution buffer and concentration: 5% NFD/MTBST.

Exposure time: 5 seconds.

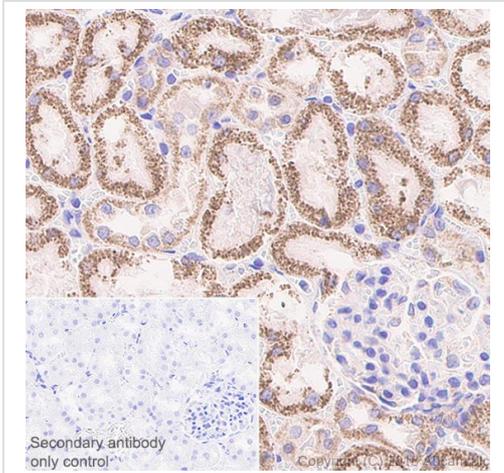
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219414](#)).



Flow Cytometry - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HCT 116 (human colorectal carcinoma epithelial cell) cell line labeling Frataxin with [ab219414](#) at 1/60 (red) compared with a rabbit monoclonal IgG ([ab172730](#)) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (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 ([ab219414](#)).

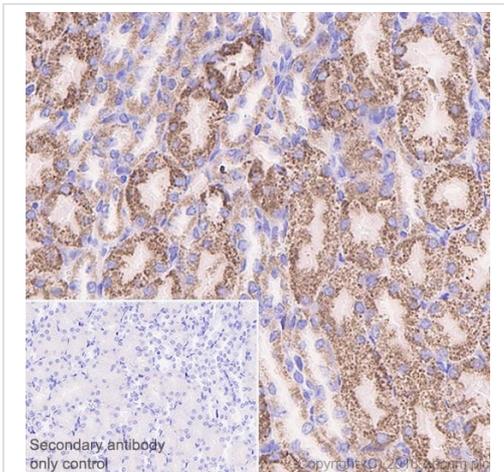


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling Frataxin with [ab219414](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Granular cytoplasmic staining in rat kidney (PMID: 18725397; PMID: 26035392) is observed. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

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 ([ab219414](#)).

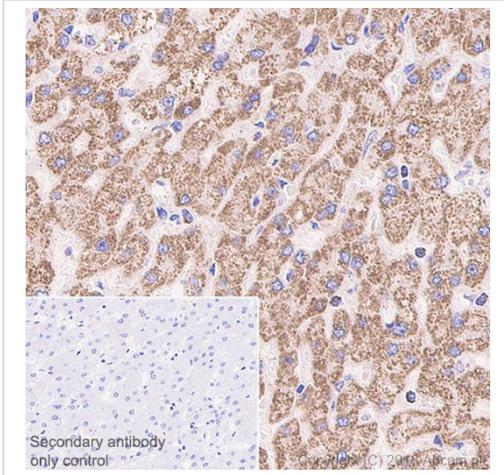


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling Frataxin with [ab219414](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Granular cytoplasmic staining in mouse kidney (PMID: 18725397; PMID: 26035392) is observed. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

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 ([ab219414](#)).

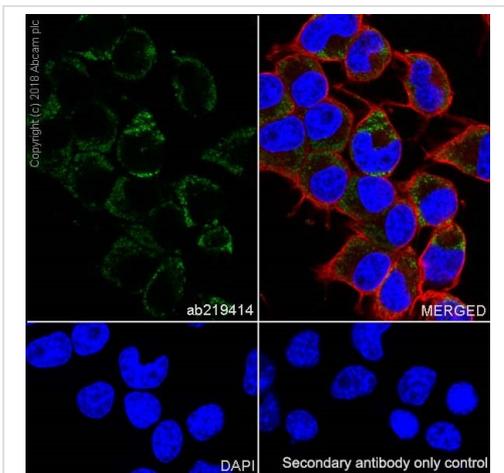


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling Frataxin with [ab219414](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Granular cytoplasmic staining in human liver (PMID: 18725397; PMID: 26035392) is observed. Counter stained with Hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

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 ([ab219414](#)).



Immunocytochemistry/ Immunofluorescence - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

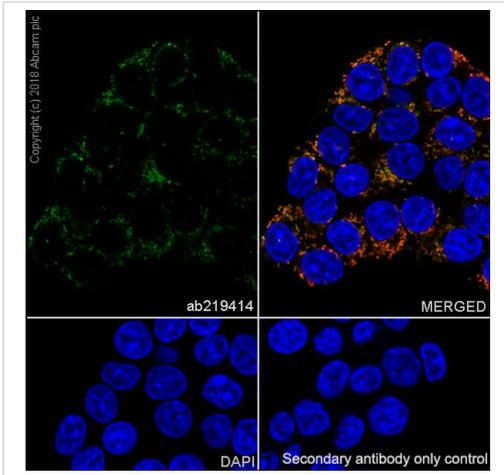
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Neuro-2a (mouse neuroblastoma cell line) cells labeling Frataxin with [ab219414](#) at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining in the Neuro-2a cell line.

Counterstained with [ab195889](#) Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor[®] 594) at a 1/200 dilution (red). The nuclear counter stain is DAPI (blue).

The negative control is the secondary antibody only.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219414](#)).



Immunocytochemistry/ Immunofluorescence - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

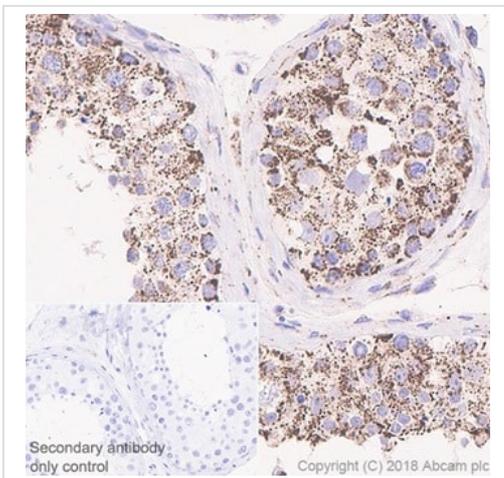
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HCT 116 (human colorectal carcinoma epithelial cell) cells labeling Frataxin with [ab219414](#) at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

Confocal image showing mitochondrial staining in HCT 116 cell line.

Counterstained with [ab33985](#) Anti-COX IV antibody - Mitochondrial Marker at a 1/1000 dilution followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) ([ab150120](#)) (orange). The nuclear counter stain is DAPI (blue).

The negative control is the secondary antibody only.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219414](#)).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Immunohistochemical analysis of paraffin-embedded human testis tissue labeling Frataxin with [ab219414](#) at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Granular cytoplasmic staining in human testis (PMID: 18725397; PMID: 26035392) is observed. Counter stained with Hematoxylin.

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

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 ([ab219414](#)).

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Frataxin antibody [EPR21840] - BSA and Azide free (ab236463)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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