abcam

Product datasheet

Anti-Frataxin antibody [EPR6107] - BSA and Azide free ab244232

Recombinant RabMAb

5 Images

Overview

Product name	Anti-Frataxin antibody [EPR6107] - BSA and Azide free
Description	Rabbit monoclonal [EPR6107] to Frataxin - BSA and Azide free
Host species	Rabbit
Specificity	We suggest optimizing experimental protocols (increasing lysate amount, using lower dilution or higher sensitivity ECL substrate) to improve results.
Tested applications	**Suitable for:** WB **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal heart tissue, human skin, His tagged Human FXN recombinant protein (aa 82-210), Human liver and hippocampus tissues, HCT116, Huh7 and SH-SY5Y whole cell lysates.
General notes	ab244232 is the carrier-free version of **ab124680**. 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

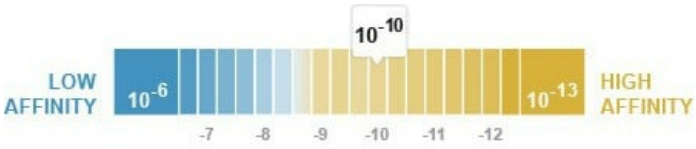
For more information **see here**.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Dissociation constant (K_D)	$K_D = 3.19 \times 10^{-10}$ M



Learn more about K_D

Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR6107
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab244232 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 17, 30 kDa (predicted molecular weight: 19, 23 kDa).

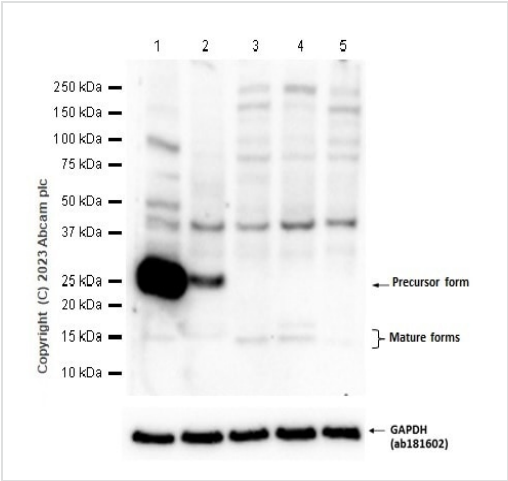
Application notes Is unsuitable for IHC-P.

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 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



Western blot - Anti-Frataxin antibody [EPR6107] - BSA and Azide free (ab244232)

All lanes : Anti-Frataxin antibody [EPR6107] (**ab124680**) at 1/1000 dilution

Lane 1 : Human liver tissue lysate
Lane 2 : Human hippocampus tissue lysate
Lane 3 : HCT116 (human colorectal carcinoma epithelial cell) whole cell lysate
Lane 4 : Huh7 (human hepatocellular carcinoma epithelial cell) whole cell lysate
Lane 5 : SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

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

Predicted band size: 19, 23 kDa
Observed band size: 14,17 kDa

Exposure time: 60 seconds

Blocking buffer and concentration: 5% NFDM/TBST.

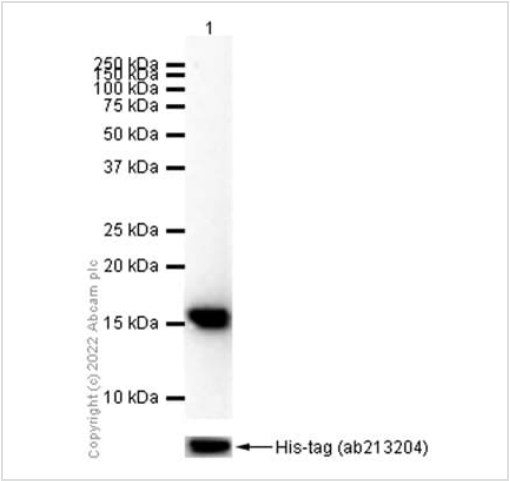
Diluting buffer and concentration: 5% NFDM/TBST.

This blot was developed using a high sensitivity ECL substrate.

For different forms of frataxin, you can refer to PMID: 17468497, PMID: 31279523, PMID: 17468497 etc.

ab181602 was used as a loading control.

This data was developed using **ab124680**, the same antibody clone in a different buffer formulation.



Western blot - Anti-Frataxin antibody [EPR6107] - BSA and Azide free (ab244232)

Anti-Frataxin antibody [EPR6107] (**ab124680**) at 1/1000 dilution + His tagged Human FXN recombinant protein (aa 82-210), 10ng

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

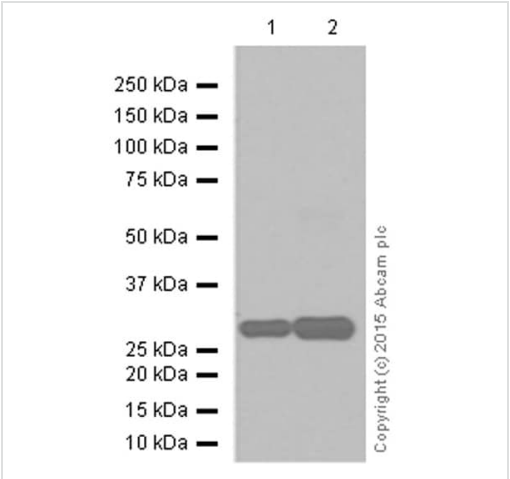
Predicted band size: 19, 23 kDa
Observed band size: 16 kDa

Exposure time: 60 seconds

This data was developed using **ab124680**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

ab213204 was used as a loading control.



Western blot - Anti-Frataxin antibody [EPR6107] - BSA and Azide free (ab244232)

All lanes : Anti-Frataxin antibody [EPR6107] (**ab124680**) at 1/5000 dilution (purified)

Lane 1 : Human fetal heart tissue lysate
Lane 2 : Human skin lysate

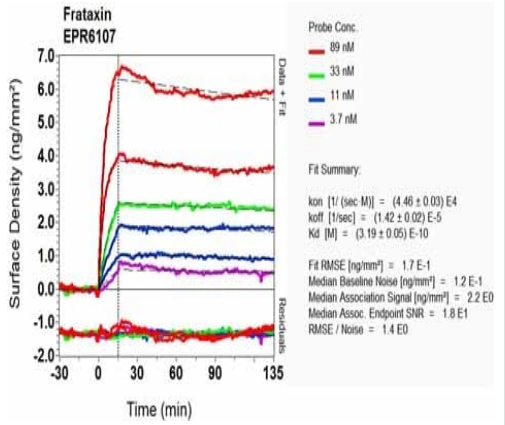
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 19, 23 kDa
Observed band size: 30 kDa

This data was developed using **ab124680**, the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST.



OI-RD Scanning - Anti-Frataxin antibody [EPR6107] - BSA and Azide free (ab244232)

This data was developed using **ab124680**, the same antibody clone in a different buffer formulation.Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

Anti-Frataxin antibody [EPR6107] - BSA and Azide free (ab244232)

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