

Product datasheet

Anti-mtTFA antibody [EPR12285] ab176558

Recombinant RabMAb

★★★★★ 1 Abreviews 8 References 10 Images

Overview

Product name	Anti-mtTFA antibody [EPR12285]
Description	Rabbit monoclonal [EPR12285] to mtTFA
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, ICC/IF, IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human mtTFA aa 50-150 (Cysteine residue). The exact sequence is proprietary. Database link: Q00059
Positive control	HeLa, A431, MCF7 and 293T cell lysates; Human kidney and prostate tissues; MCF7 cells.
General notes	Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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](#).

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

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.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

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 short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), 49% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR12285
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab176558** 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
IHC-P	★★★★★	1/300. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. For unpurified, use 1/50 - 1/100.
WB		1/10000 - 1/50000. Predicted molecular weight: 29 kDa.
ICC/IF		1/100 - 1/250.
IP		1/10 - 1/100.

Target

Function

Binds to the mitochondrial light strand promoter and functions in mitochondrial transcription regulation. Required for accurate and efficient promoter recognition by the mitochondrial RNA polymerase. Promotes transcription initiation from the HSP1 and the light strand promoter by binding immediately upstream of transcriptional start sites. Is able to unwind and bend DNA. Required for maintenance of normal levels of mitochondrial DNA. May play a role in organizing and compacting mitochondrial DNA. target DNA. Interacts with TFB1M and TFB2M.

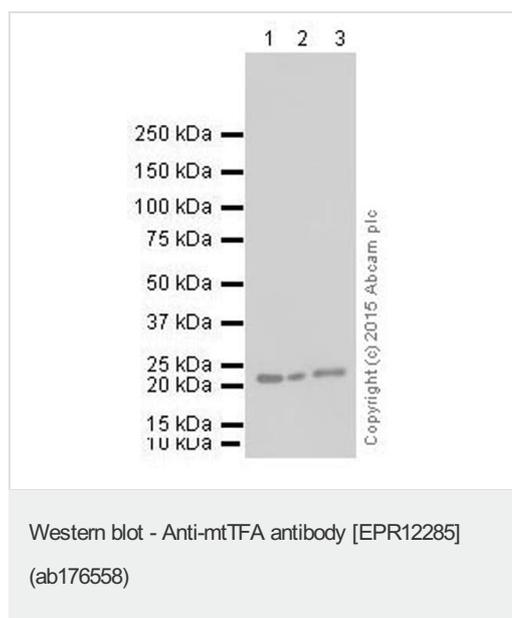
Sequence similarities

Contains 2 HMG box DNA-binding domains.

Cellular localization

Mitochondrion.

Images



All lanes : Anti-mtTFA antibody [EPR12285] (ab176558) at 1/10000 dilution (purified)

Lane 1 : HeLa cell lysate

Lane 2 : MCF7 cell lysate

Lane 3 : HEK293 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

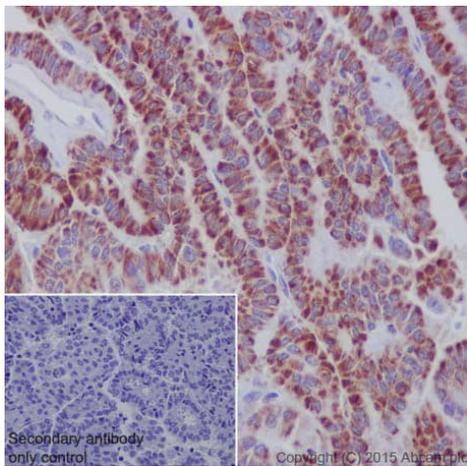
Predicted band size: 29 kDa

Observed band size: 24 kDa

[why is the actual band size different from the predicted?](#)

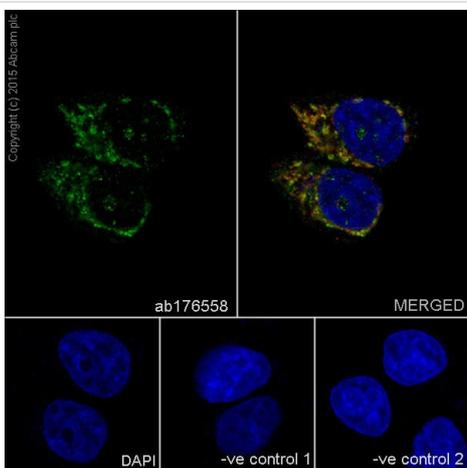
Blocking buffer: 5% NFDm/TBST

Dilution buffer: 5% NFDm/TBST



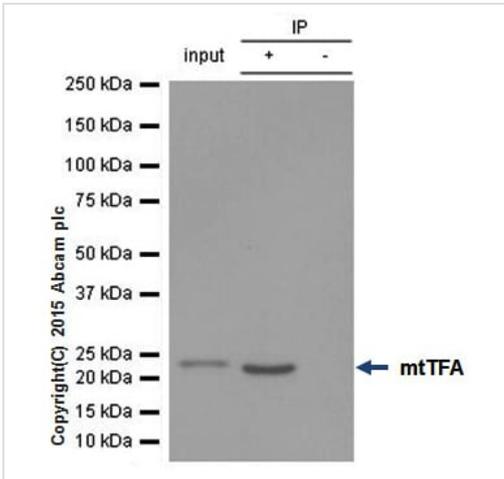
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-mtTFA antibody [EPR12285] (ab176558)

Immunohistochemical staining of paraffin embedded human thyroid carcinoma with purified ab176558 at a working dilution of 1/300. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



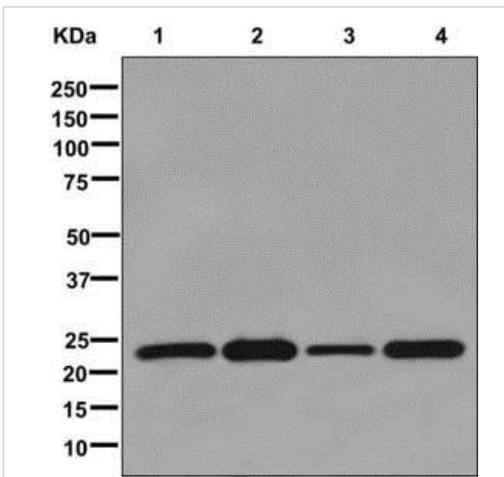
Immunocytochemistry/ Immunofluorescence - Anti-mtTFA antibody [EPR12285] (ab176558)

Immunofluorescence staining of MCF7 cells with purified ab176558 at a working dilution of 1/250, counter-stained with DAPI. The secondary antibody was Alexa Fluor[®] 488 goat anti-rabbit (ab150077), used at a dilution of 1/1000. ab7291, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with ab150120 (Alexa Fluor[®] 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab176558 was used at a dilution of 1/500 followed by an Alexa Fluor[®] 594 goat anti-mouse antibody (ab150120) at a dilution of 1/500. For negative control 2, ab7291 (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor[®] 488 goat anti-rabbit antibody (ab150077) at a dilution of 1/400.



Immunoprecipitation - Anti-mtTFA antibody
[EPR12285] (ab176558)

ab176558 (purified) at 1/40 immunoprecipitating mtTFA in 10 µg HEK293 (Lanes 1 and 2, observed at 24 kDa). Lane 3 - PBS. For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution. Blocking buffer and concentration: 5% NFDm/TBST Dilution buffer and concentration: 5% NFDm/TBST



Western blot - Anti-mtTFA antibody [EPR12285]
(ab176558)

All lanes : Anti-mtTFA antibody [EPR12285] (ab176558) at 1/10000 dilution (unpurified)

Lane 1 : HeLa cell lysate

Lane 2 : A431 cell lysate

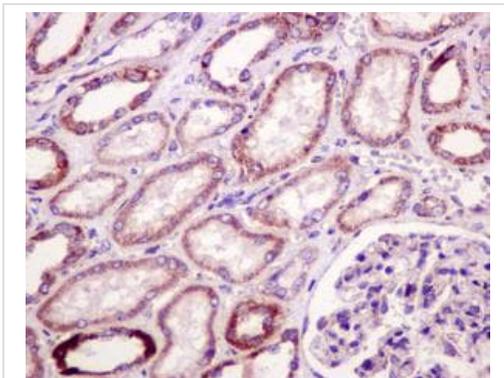
Lane 3 : MCF7 cell lysate

Lane 4 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Developed using the ECL technique.

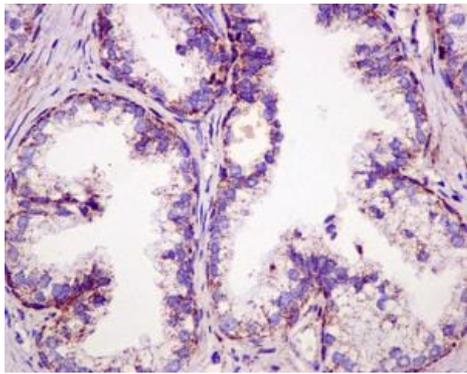
Predicted band size: 29 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-mtTFA antibody
[EPR12285] (ab176558)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human kidney tissue, labeling mtTFA using unpurified ab176558 at a 1/50 dilution.

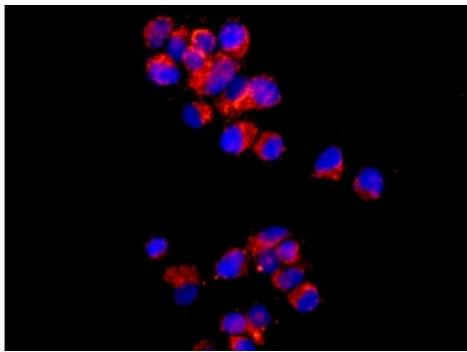
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-mtTFA antibody [EPR12285] (ab176558)

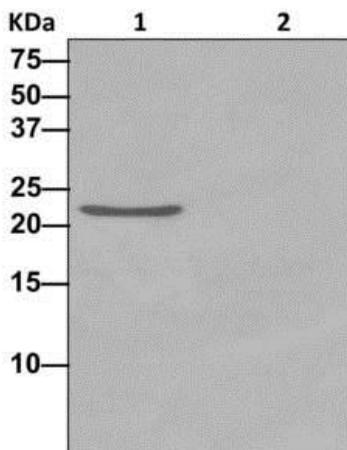
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human prostate tissue, labeling mtTFA using unpurified ab176558 at a 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-mtTFA antibody [EPR12285] (ab176558)

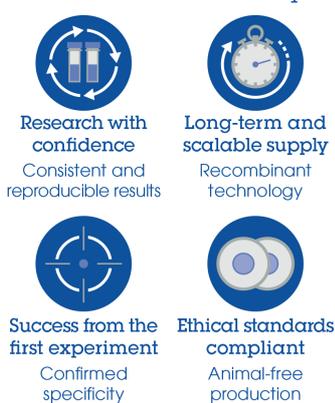
Immunofluorescence analysis of MCF7 cells, labeling mtTFA using unpurified ab176558 at a 1/100 dilution.



Immunoprecipitation - Anti-mtTFA antibody [EPR12285] (ab176558)

Western blot analysis on Immunoprecipitation pellet from either 1) 293T cell lysate, or 2) 1xPBS (negative control), showing mtTFA, using unpurified ab176558 at 1/10 dilution and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

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-mtTFA antibody [EPR12285] (ab176558)

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

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