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Datasheet for ABIN3043945

## anti-TFAM antibody (N-Term)

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### Overview

Quantity:	100 µg
Target:	TFAM
Binding Specificity:	AA 214-241, N-Term
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

### Product Details

Purpose:	Rabbit IgG polyclonal antibody for Transcription factor A, mitochondrial(TFAM) detection. Tested with WB, IHC-P in Human,Mouse,Rat.
Immunogen:	A synthetic peptide corresponding to a sequence at the N-terminus of human mtTFA (214-241aa EMKSWEEQMIEVGRKDLLRRTIKKQRKY), different from the related mouse and rat sequences by five amino acids.
Sequence:	EMKSWEEQMI EVGRKDLLRR TIKKQRKY
Isotype:	IgG
Cross-Reactivity (Details):	No cross reactivity with other proteins.
Characteristics:	Rabbit IgG polyclonal antibody for Transcription factor A, mitochondrial(TFAM) detection. Tested with WB, IHC-P in Human,Mouse,Rat. Gene Name: transcription factor A, mitochondrial Protein Name: Transcription factor A, mitochondrial

## Product Details

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Purification: Immunogen affinity purified.

## Target Details

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Target: TFAM

Alternative Name: TFAM ([TFAM Products](#))

Background: TFAM (Transcription factor A, mitochondrial), also known as TCF6 or TCF6L2, is a 162-amino acid protein that activates transcription of each mitochondrial DNA (mtDNA) strand by binding to an element of approximately 30 nucleotides present in both the light-strand and the heavy-strand promoters. By Southern blot analysis of restriction enzyme digests of human/Chinese hamster somatic cell hybrid lines, Milatovich et al. (1992) mapped TFAM sequences, which they called MTTF1, to 3 different chromosomes: chromosomes 10, 7p, and 11q. By PCR-based screening of a somatic cell hybrid panel and by fluorescence in situ hybridization, Scott (2007) stated that the sequences mapped to chromosomes 7p (TCF6L1) and 11q (MTTF1, or TCF6L3) are pseudogenes. Larsson et al. (1997) mapped the mouse mitochondrial transcription factor A gene (Tfam) to the central part of mouse chromosome 10. This region exhibits syntenic homology with human 10q21. Mitochondrial transcription factor A is a key activator of mitochondrial transcription in mammals. It also has a role in mitochondrial DNA replication, since transcription generates an RNA primer necessary for initiation of mtDNA replication.

Synonyms: anscription factor 6-like 1 antibody|Mitochondrial transcription factor 1 antibody|mitochondrial transcription factor A antibody|MtTF1 antibody|mtTFA antibody|TCF 6 antibody|TCF-6 antibody|TCF6 antibody|TCF6L1 antibody|TCF6L2 antibody|TCF6L3 antibody|TFAM antibody| TFAM\_HUMAN antibody|Transcription factor 6 antibody|Transcription factor 6 like 2 (mitochondrial transcription factor) antibody|Transcription factor 6 like 2 antibody|Transcription factor 6-like 2 antibody|transcription factor 6-like 3 antibody|Transcription factor A, mitochondrial antibody|Transcription factor A, mitochondrial precursor antibody

Gene ID: 7019

UniProt: [Q00059](#)

Pathways: [Chromatin Binding](#)

## Application Details

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Application Notes: WB: Concentration: 0.1-0.5 µg/mL, Tested Species: Human, Mouse, Rat, The detection limit for mtTFA is approximately 0.1 ng/lane under reducing conditions.

## Application Details

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IHC-P: Concentration: 0.5-1 µg/mL, Tested Species: Human, Epitope Retrieval by Heat: Boiling the paraffin sections in 10 mM citrate buffer, pH 6.0, for 20 mins is required for the staining of formalin/paraffin sections.

Notes: Tested Species: Species with positive results. Other applications have not been tested. Optimal dilutions should be determined by end users.

Comment: Antibody can be supported by chemiluminescence kit ABIN921124 in WB, supported by ABIN921231 in IHC(P).

Restrictions: For Research Use only

## Handling

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Format: Lyophilized

Reconstitution: Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.

Concentration: 500 µg/mL

Buffer: Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05 mg Sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling Advice: Avoid repeated freezing and thawing.

Storage: 4 °C/-20 °C

Storage Comment: At -20°C for one year. After reconstitution, at 4°C for one month.  
It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

## Publications

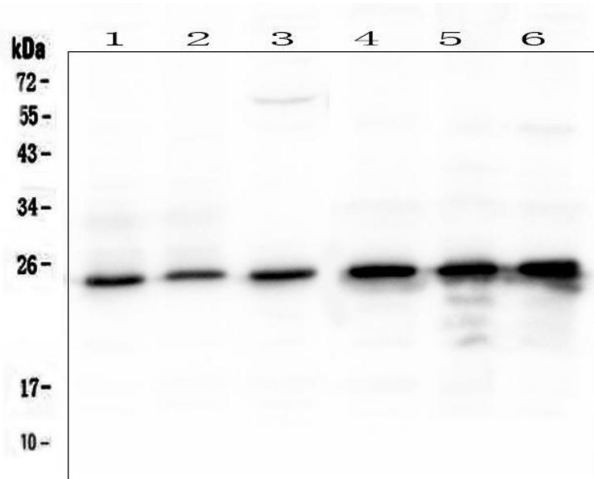
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Product cited in: Lang, Schulte, Goddard, Hedrick, Schulte, Wei, Schmiedt: "Transplantation of mouse embryonic stem cells into the cochlea of an auditory-neuropathy animal model: effects of timing after injury." in: **Journal of the Association for Research in Otolaryngology : JARO**, Vol. 9, Issue 2, pp. 225-40, (2008) ([PubMed](#)).

Lang, Ebihara, Schmiedt, Minamiguchi, Zhou, Smythe, Liu, Ogawa, Schulte: "Contribution of bone marrow hematopoietic stem cells to adult mouse inner ear: mesenchymal cells and

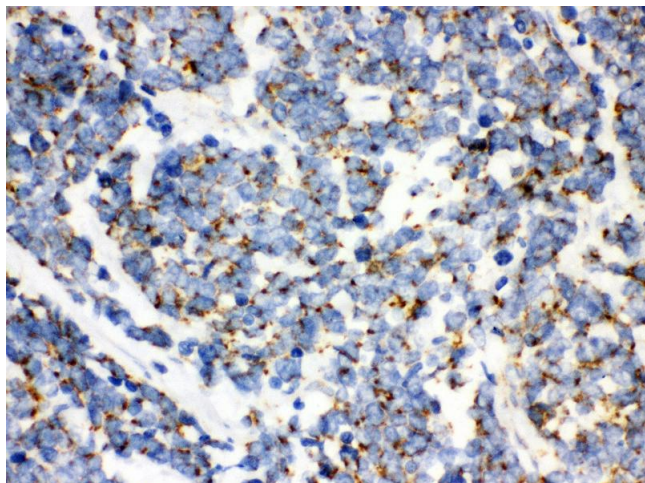
fibrocytes." in: **The Journal of comparative neurology**, Vol. 496, Issue 2, pp. 187-201, (2006) ([PubMed](#)).

## Validation report #300029 for Immunohistochemistry (IHC)



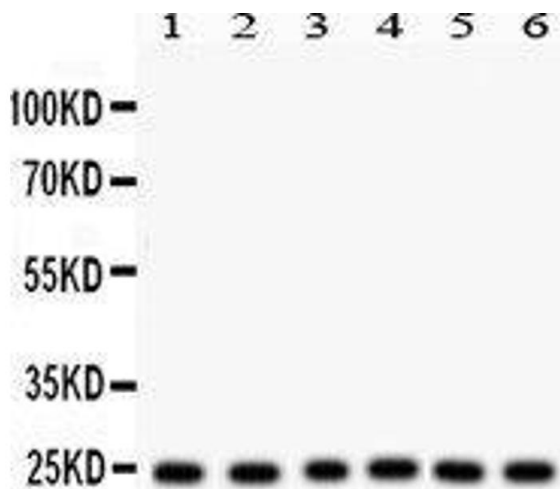
### Western Blotting

**Image 1.** Western blot analysis of mtTFA using anti- mtTFA antibody (pb9447). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each Lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates, Lane 2: human A431 whole cell lysates, Lane 3: human HL-60 whole cell lysates, Lane 4: human CCRF-CEM whole cell lysates, Lane 5: human 293T whole cell lysates, Lane 6: human SW620 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-mtTFA antigen affinity purified polyclonal antibody (Catalog # pb9447) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for mtTFA at approximately 24KD. The expected band size for mtTFA is at 29KD.



### Immunohistochemistry

**Image 2.** Anti- mtTFA Picoband antibody,IHC(P) IHC(P):  
Human Lung Cancer Tissue



### Western Blotting

**Image 3.**