

Anti-mtTFA/Tfam Antibody Picoband™

Catalog Number: A01119-1

About Tfam

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.

Overview

Product Name	Anti-mtTFA/Tfam Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-mtTFA/Tfam Antibody Picoband™ catalog # A01119-1. Tested in ELISA, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P40630

Technical Details

Immunogen	E.coli-derived mouse mtTFA/Tfam recombinant protein (Position: M1-D211).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used Western blot, 0.25-0.5μg/ml, Mouse, Rat Direct ELISA, 0.1-0.5μg/ml, Mouse</p> <p>For protocols, please visit https://www.bosterbio.com/protocol-and-troubleshooting/</p>

Anti-mtTFA/Tfam Antibody Picoband™ (A01119-1) Images

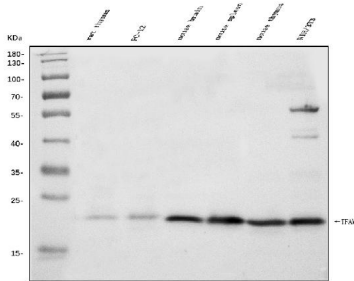


Figure 1. Western blot analysis of mtTFA/Tfam using anti-mtTFA/Tfam antibody (A01119-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.

Lane 1: rat thymus tissue lysates,
Lane 2: rat PC-12 whole cell lysates,
Lane 3: mouse brain tissue lysates,
Lane 4: mouse spleen tissue lysates,
Lane 5: mouse thymus tissue lysates,
Lane 6: mouse NIH/3T3 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/Tfam antigen affinity purified polyclonal antibody (Catalog # A01119-1) at 0.5 ug/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 1:5000 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/Tfam at approximately 23KD. The expected band size for mtTFA/Tfam is at 23KD.

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