Anti-TFAM Antibody (Clone#4D9)

Catalog Number: *M01119-1*

BOSTER
antibody and ELISA experts
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Basic Information

Product Name	Anti-TFAM Antibody (Clone#4D9)
Gene Name	TFAM
Source	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Species Reactivity	human
Tested Application	WB, IHC, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human mtTFA, different from the related mouse and rat sequences by five amino acids.
Concentration	200ug/ml
Purification	protein G purified.
Observed MW	24 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied. 6 months 2 to 8℃ after reconstitution. Avoid repeated freezing and thawing.

Background Information

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.

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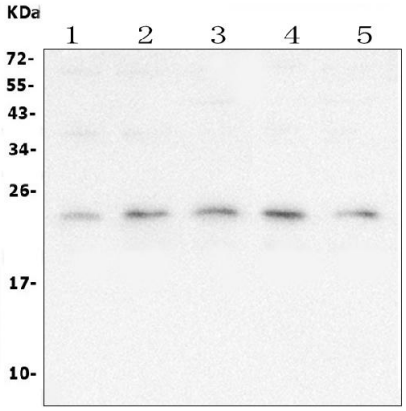
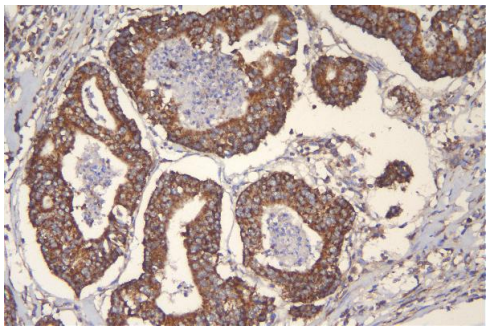
Mitochondrial transcription factor A is a key activator of mitochondrial transcription in mammals. It also has a role in mitochondrial DNA replication, since transcription generates an RNA primer necessary for initiation of mtDNA replication.

Selected Validation Data



Western blot analysis of TFAM using anti-TFAM antibody (M01119-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HEK293 tissue lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human Caco-2 whole cell lysates,
Lane 4: human Raji whole cell lysates,
Lane 5: human A549 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-TFAM antigen affinity purified monoclonal antibody (M01119-1) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for TFAM at approximately 24 kDa. The expected band size for TFAM is at 29 kDa.



IHC analysis of TFAM using anti-TFAM antibody (M01119-1). TFAM was detected in a paraffin-embedded section of human rectum cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-TFAM Antibody (M01119-1) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.

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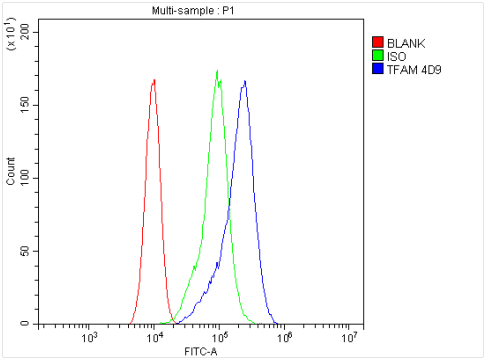

Flow cytometry analysis of CACO-2 cell HELA(1:100) DyLight488 conjugated goat anti-mouse IgG(blue) was used as secondary antibody. Isotype control antibody (Green line) was mouse IgG DyLight488. Unlabelled sample (Red line).