

#7495 Store at -20C

TFAM Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 24	Source: Rabbit	UniProt ID: #Q00059	Entrez-Gene Id: 7019
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Product Usage
Information

Application

Western Blotting

Dilution

1:1000

Immunoprecipitation

1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

TFAM Antibody recognizes endogenous levels of total TFAM protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human TFAM protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

TFAM (Transcription Factor A, Mitochondrial; aka TCF6) is a member of the high-mobility group (HMG) proteins because it contains two HMG boxes. TFAM is a transcription factor for mitochondrial DNA (mtDNA), and enhances mtDNA transcription in a promoter-specific fashion in the presence of mitochondrial RNA polymerase and transcription factor B (1). Because the majority of ATP production depends on the mitochondrial respiratory chain, maintenance of the mitochondrial genome is critical for normal health. TFAM plays an essential role in the maintenance of mtDNA and thus, ATP production (2). TFAM binds to mtDNA both nonspecifically and in a sequence-specific manner. It is known to have a dual effect on mtDNA: protection of mtDNA and initiation of transcription from mtDNA (3). TFAM attenuates age-dependent impairment of the brain by preventing oxidative stress and mitochondrial dysfunctions in microglia (4).

Background References

1. Kanki, T. et al. (2004) *Mol Cell Biol* 24, 9823-34.
2. Kang, D. et al. *Mitochondrion* 7, 39-44.
3. Watanabe, A. et al. (2011) *Cardiovasc Res*, Epub ahead of print.
4. Hayashi, Y. et al. (2008) *J Neurosci* 28, 8624-34.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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