

MTERFD1 (A-13): sc-87317

BACKGROUND

Members of the mTERF family, including MTERF, MTERFD1, MTERFD2 and MTERFD3, are mitochondrial proteins that are believed to be transcription termination factors. MTERF (mitochondrial transcription termination factor 1) is composed of three leucine zippers that form a three-stranded coiled-coil that binds to DNA. It has been suggested that only the phosphorylated form of MTERF has transcription termination activity. MTERFD1 is also thought to act as a mitochondrial transcription regulator and is expressed as two isoforms produced by alternative splicing. MTERFD3 is believed to be involved in cell cycle regulation and cell growth by modulating mitochondrial transcription. MTERFD3 is expressed in heart, skeletal muscle, pancreas and liver.

REFERENCES

1. Fernandez-Silva, P., et al. 1997. The human mitochondrial transcription termination factor (mTERF) is a multizipper protein but binds to DNA as a monomer, with evidence pointing to intramolecular leucine zipper interactions. *EMBO J.* 16: 1066-1079.
2. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. *Genome Res.* 10: 703-713.
3. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
4. Prieto-Martín, A., et al. 2004. Phosphorylation of rat mitochondrial transcription termination factor (mTERF) is required for transcription termination but not for binding to DNA. *Nucleic Acids Res.* 32: 2059-2068.
5. Chen, Y., et al. 2005. Cloning and functional analysis of human mTERFL encoding a novel mitochondrial transcription termination factor-like protein. *Biochem. Biophys. Res. Commun.* 337: 1112-1118.

CHROMOSOMAL LOCATION

Genetic locus: MTERFD1 (human) mapping to 8q22.1; Mterfd1 (mouse) mapping to 13 B3.

SOURCE

MTERFD1 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MTERFD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MTERFD1 (A-13) is recommended for detection of MTERFD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MTERFD1 (A-13) is also recommended for detection of MTERFD1 in additional species, including bovine.

Suitable for use as control antibody for MTERFD1 siRNA (h): sc-77871, MTERFD1 siRNA (m): sc-149673, MTERFD1 shRNA Plasmid (h): sc-77871-SH, MTERFD1 shRNA Plasmid (m): sc-149673-SH, MTERFD1 shRNA (h) Lentiviral Particles: sc-77871-V and MTERFD1 shRNA (m) Lentiviral Particles: sc-149673-V.

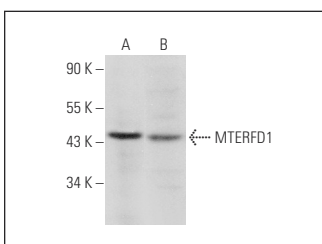
Molecular Weight of MTERFD1: 48 kDa.

Positive Controls: mouse liver extract: sc-2256 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MTERFD1 (A-13): sc-87317. Western blot analysis of MTERFD1 expression in mouse liver tissue extract (A) and HeLa whole cell lysate (B).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.