SANTA CRUZ BIOTECHNOLOGY, INC.

MTF-1 (C-19): sc-26844

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The metal-responsive element (MRE)-binding transcription factor (MTF-1) stimulates the expression of metallothioneins in response to the exposure of cells to heavy metals. MTF-1 contains six zinc fingers in the DNA binding domain. The phosphorylation of MTF-1 in response to metal exposure appears to play a significant role in the ability of MTF-1 to activate metallothionein transcription. In addition to its role in metallothionein activation, MTF-1 is involved in a post-transcription regulatory complex for ribosomal protein S25. MTF-1, La and p53 inhibit the nuclear export of S25 mRNA in response to nutrient depravation. Furthermore, MTF-1 acts as a chromatin insulator on integrated transgenes in cultured cells to insulate active loci against chromatin silencing.

CHROMOSOMAL LOCATION

Genetic locus: MTF1 (human) mapping to 1p34.3; Mtf1 (mouse) mapping to 4 D2.2.

SOURCE

MTF-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MTF-1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-26844 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-26844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MTF-1 (C-19) is recommended for detection of MTF-1 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).

MTF-1 (C-19) is also recommended for detection of MTF-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MTF-1 siRNA (h): sc-43949, MTF-1 siRNA (m): sc-44354, MTF-1 shRNA Plasmid (h): sc-43949-SH, MTF-1 shRNA Plasmid (m): sc-44354-SH, MTF-1 shRNA (h) Lentiviral Particles: sc-43949-V and MTF-1 shRNA (m) Lentiviral Particles: sc-44354-V.

MTF-1 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

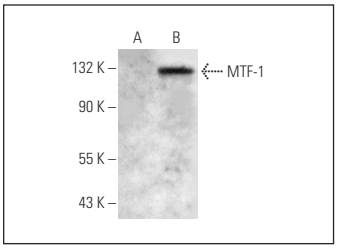
Molecular Weight of MTF-1: 70 kDa.

Positive Controls: KNRK nuclear extract: sc-2141 or HEK293 whole cell lysates: sc-45136.

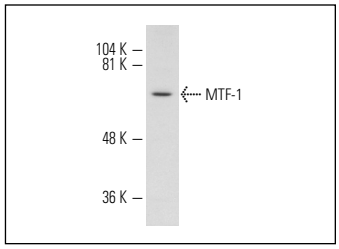
RECOMMENDED SECONDARY REAGENTS

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



MTF-1 (C-19): sc-26844. Western blot analysis of MTF-1 expression in non-transfected (**A**) and human MTF-1 transfected (**B**) HEK293 whole cell lysates.



MTF-1 (C-19): sc-26844. Western blot analysis of MTF-1 expression in KNRK nuclear extract.

SELECT PRODUCT CITATIONS

1. Lichten, L.A., et al. 2011. MTF-1-mediated repression of the zinc transporter Zip10 is alleviated by zinc restriction. PLoS ONE 6: e21526.

STORAGE

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

PROTOCOLS

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