

# MTF-1 (H-300): sc-48775

## 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 deprivation. 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 (H-300) is a rabbit polyclonal antibody raised against amino acids 454-753 mapping at 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.

## STORAGE

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

## APPLICATIONS

MTF-1 (H-300) 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), immunohistochemistry (including paraffin-embedded sections) (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 (H-300) 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 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

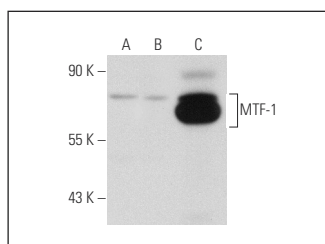
Molecular Weight of MTF-1: 70 kDa.

Positive Controls: MTF-1 (m): 293T Lysate: sc-125651, KNRK nuclear extract: sc-2141 or mouse heart extract: sc-2254.

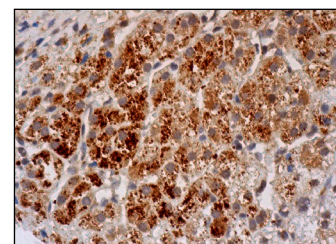
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



MTF-1 (H-300): sc-48775. Western blot analysis of MTF-1 expression in non-transfected: sc-117752 (A) and mouse MTF-1 transfected: sc-125651 (B) 293T whole cell lysates and mouse heart tissue extract (C).



MTF-1 (H-300): sc-48775. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Oh, H.J., et al. 2012. Zinc balance is critical for NFI-C mediated regulation of odontoblast differentiation. *J. Cell. Biochem.* 113: 877-887.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **MTF-1 (H-6): sc-365090**, our highly recommended monoclonal alternative to MTF-1 (H-300).