

MTA3 (H-100): sc-48799

BACKGROUND

Metastasis-associated protein 3 (MTA3) is a subunit of the Mi-2/NuRD transcriptional corepressor complex. MTA3 and the Mi-2/NuRD complex mediate repression of Snail in breast cancer cells where MTA3 works to maintain a differentiated, epithelial status. The protein is involved in gene expression regulation by covalent modifications of histone proteins. There are two known isoforms of MTA3, a short and a long form. The short isoform binds to ER and sequesters it to the cytoplasm and better non-genomic responses, whereas the long form is found in the nucleus. MTA3 is widely expressed with highest expression in brain, adrenal glands, ovaries and virgin mammary glands. It has been found to be expressed in higher levels in tumors than in adjacent normal tissue in the same individual.

REFERENCES

1. Fujita, N., et al. 2003. MTA3, a Mi-2/NuRD complex subunit, regulates an invasive growth pathway in breast cancer. *Cell* 113: 207-219.
2. Yao, Y.L., et al. 2003. The metastasis-associated proteins 1 and 2 form distinct protein complexes with histone deacetylase activity. *J. Biol. Chem.* 278: 42560-42568.
3. Fujita N., et al. 2004. Hormonal regulation of metastasis-associated protein 3 transcription in breast cancer cells. *Mol. Endoc.* 18: 2937-2949.
4. Fujita, N., et al. 2004. MTA3 and the Mi-2/NuRD complex regulate cell fate during B lymphocyte differentiation. *Cell* 119: 75-86.
5. Mishra, S.K., et al. 2004. Upstream determinants of estrogen receptor- α regulation of metastatic tumor antigen 3 pathway. *J. Biol. Chem.* 279: 32709-32715.
6. SWISS-PROT/TrEMBL (Q9BTC8). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: MTA3 (human) mapping to 2p21; Mta3 (mouse) mapping to 17 E4.

SOURCE

MTA3 (H-100) is a rabbit polyclonal antibody raised against amino acids 471-570 mapping near the C-terminus of MTA3 of human origin.

PRODUCT

Each vial contains 200 μ g 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-48799 X, 200 μ g/0.1 ml.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

MTA3 (H-100) is recommended for detection of MTA3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

MTA3 (H-100) is also recommended for detection of MTA3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for MTA3 siRNA (h): sc-43948, MTA3 siRNA (m): sc-60011, MTA3 shRNA Plasmid (h): sc-43948-SH, MTA3 shRNA Plasmid (m): sc-60011-SH, MTA3 shRNA (h) Lentiviral Particles: sc-43948-V and MTA3 shRNA (m) Lentiviral Particles: sc-60011-V.

MTA3 (H-100) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MTA3: 60 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149.

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.

SELECT PRODUCT CITATIONS

1. Ma, P., et al. 2010. Metastasis tumor antigen 2 (MTA2) is involved in proper imprinted expression of H19 and Peg3 during mouse preimplantation development. *Biol. Reprod.* 83: 1027-1035.
2. Aguilera, C., et al. 2011. c-Jun N-terminal phosphorylation antagonises recruitment of the Mbd3/NuRD repressor complex. *Nature* 469: 231-235.

PROTOCOLS

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



Try **MTA3 (428C2a): sc-81325**, our highly recommended monoclonal alternative to MTA3 (H-100).