SANTA CRUZ BIOTECHNOLOGY, INC.

MTA1 (A-11): sc-17773

BACKGROUND

MTA1 (metastasis-associated protein 1) is a component of the NURD (for nucleosome remodeling and histone deacetylation) complex, which is associated with ATP-dependent chromatin-remodeling and histone deacetylase activity. MTA1 functions in conjunction with other components of NURD to mediate transcriptional repression as it facilitates the association of repressor molecules with the chromatin. Structurally, MTA1 contains a single SH3-binding motif and a zinc finger domain, along with a region similar to the co-repressor protein N-Cor. MTA1 is normally expressed at low levels in various tissues and is more highly expressed in testis. Overexpression of MTA1 correlates with tumor invasion and metastasis in various carcinomas including colorectal, gastrointestinal and breast carcinomas. Elevated MTA1 levels in these tumors appears to enhance the metastases to lymph nodes, increase mammary cell motility and potentiate growth, and it may, therefore, be an indicator for assessing the potential malignancies of various tumors. A similar protein, MTA1-L1 (MTA1-like protein 1), shares more than 55% sequence homology with MTA1 and is ubiquitously expressed.

REFERENCES

1. Toh, Y., et al. 1994. A novel candidate metastasis-associated gene, MTA1, differentially expressed in highly metastatic mammary adenocarcinoma cell lines. cDNA cloning, expression and protein analyses. J. Biol. Chem. 269: 22958-22963.
2. Toh, Y., et al. 1995. Analysis of the complete sequence of the novel metastasis-associated candidate gene, MTA1, differentially expressed in mammary adenocarcinoma and breast cancer cell lines. Gene 159: 97-104.

CHROMOSOMAL LOCATION

Genetic locus: MTA1 (human) mapping to 14q32.33.

SOURCE

MTA1 (A-11) is a mouse monoclonal antibody raised against amino acids 513-678 of MTA1 (metastasis-associated protein 1) of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-17773 X, 200 µg/0.1 ml.

MTA1 (A-11) is available conjugated to agarose (sc-17773 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17773 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17773 PE), fluorescein (sc-17773 FITC), Alexa Fluor® 488 (sc-17773 AF488), Alexa Fluor® 546 (sc-17773 AF546), Alexa Fluor® 594 (sc-17773 AF594) or Alexa Fluor® 647 (sc-17773 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17773 AF680) or Alexa Fluor® 790 (sc-17773 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

MTA1 (A-11) is recommended for detection of MTA1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).

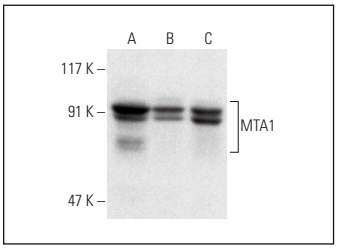
Suitable for use as control antibody for MTA1 siRNA (h): sc-35981, MTA1 shRNA Plasmid (h): sc-35981-SH and MTA1 shRNA (h) Lentiviral Particles: sc-35981-V.

MTA1 (A-11) X TransCruz antibody is recommended for ChIP assays.

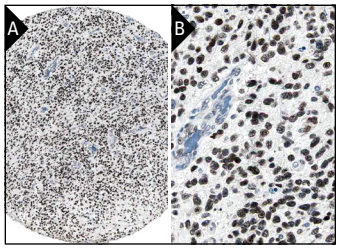
Molecular Weight of MTA1: 80 kDa.

Positive Controls: T-47D cell lysate: sc-2293, MCF7 whole cell lysate: sc-2206 or SW480 cell lysate: sc-2219.

DATA



MTA1 (A-11): sc-17773. Western blot analysis of MTA1 expression in T47D (**A**), MCF7 (**B**) and SW480 (**C**) whole cell lysates.



MTA1 (A-11): sc-17773. Immunoperoxidase staining of formalin fixed, paraffin-embedded human malignant glioma tissue showing nuclear staining of tumor cells at low (**A**) and high (**B**) magnifications. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Metivier, R., et al. 2003. Estrogen receptor-α directs ordered, cyclical, and combinatorial recruitment of cofactors on a natural target promoter. Cell 115: 751-763.
2. Kai, L., et al. 2011. Targeting prostate cancer angiogenesis through metastasis-associated protein 1 (MTA1). Prostate 71: 268-280.
3. Mao, X.Y., et al. 2012. MTA1 expression correlates significantly with ER-α methylation in breast cancer. Tumour Biol. 33: 1565-1572.
4. Sankaran, D., et al. 2013. Mechanism of MTA1 protein overexpression-linked invasion. MTA1 regulation of hyaluronan-mediated motility receptor (HMMR) expression and function. J. Biol. Chem. 288: 26177.
5. Wang, G., et al. 2017. MiR-183 overexpression inhibits tumorigenesis and enhances DDP-induced cytotoxicity by targeting MTA1 in nasopharyngeal carcinoma. Tumour Biol. 39: 1010428317703825.

RESEARCH USE

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