SANTA CRUZ BIOTECHNOLOGY, INC.

MTA2 (C-20): sc-9447

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Elevation of MTA1 levels in these tumors appears to enhance the metastases to lymph nodes, increase mammary cell motility and potentiate growth, and therefore may be an indicator for assessing the potential malignancies of various tumors. A similar protein, MTA2 (also designated MTA1-L1 [MTA1-like protein 1]), shares more than 55% sequence homology with MTA1 and is ubiquitously expressed.

CHROMOSOMAL LOCATION

Genetic locus: MTA2 (human) mapping to 11q12.3; Mta2 (mouse) mapping to 19 A.

SOURCE

MTA2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MTA2 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-9447 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MTA2 (C-20) is recommended for detection of MTA2 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).

MTA2 (C-20) is also recommended for detection of MTA2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for MTA2 siRNA (h): sc-35983, MTA2 siRNA (m): sc-35984, MTA2 shRNA Plasmid (h): sc-35983-SH, MTA2 shRNA Plasmid (m): sc-35984-SH, MTA2 shRNA (h) Lentiviral Particles: sc-35983-V and MTA2 shRNA (m) Lentiviral Particles: sc-35984-V.

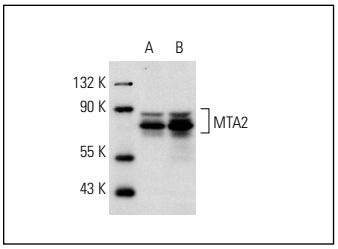
Molecular Weight of MTA2: 75 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, ZR-75-1 cell lysate: sc-2241 or SW480 cell lysate: sc-2219.

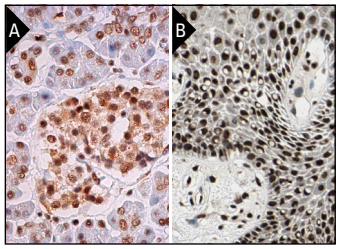
STORAGE

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

DATA



MTA2 (C-20): sc-9447. Western blot analysis of MTA2 expression in ZR-75-1 (**A**) and SW480 (**B**) whole cell lysates.



MTA2 (C-20): sc-9447. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of glandular cells and nuclear and cytoplasmic staining of Islets of Langerhans (**A**). Immunoperoxidase staining of formalin fixed, par-affin-embedded human oral mucosa tissue showing nuclear staining of surface epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Zegerman, P., et al. 2002. Histone H3 Lysine 4 methylation disrupts binding of nucleosome remodeling and deacetylase (NURD) repressor complex. J. Biol. Chem. 277: 11621-11624.
2. Chou, S.T., et al. 2009. Graded repression of PU.1/Sfpi1 gene transcription by GATA factors regulates hematopoietic cell fate. Blood 114: 983-994.
3. Snow, J.W. and Orkin, S.H. 2009. Translational isoforms of FOG1 regulate GATA1-interacting complexes. J. Biol. Chem. 284: 29310-29319.
4. Miccio, A., et al. 2010. NuRD mediates activating and repressive functions of GATA-1 and FOG-1 during blood development. EMBO J. 29: 442-456.
5. Snow, J.W., et al. 2010. Sumoylation regulates interaction of FOG1 with C-terminal-binding protein (CTBP). J. Biol. Chem. 285: 28064-28075.
6. Cui, S., et al. 2011. Nuclear receptors TR2 and TR4 recruit multiple epigenetic transcriptional corepressors that associate specifically with the embryonic β-type globin promoters in differentiated adult erythroid cells. Mol. Cell. Biol. 31: 3298-3311.
7. Aravindan, S., et al. 2013. Radiation-induced TNFα cross signaling-dependent nuclear import of NFκB favors metastasis in neuroblastoma. Clin. Exp. Metastasis 30: 807-817.

RESEARCH USE

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