

**MTA1 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10616****Specification**

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**MTA1 Antibody - Product Information**

Application	WB, IP
Primary Accession	<a href="#">Q13330</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	80786

**MTA1 Antibody - Additional Information****Gene ID** 9112

Application & Usage	Western blotting (1:500 - 1:2000) and immunoprecipitation. However, the optimal concentrations should be determined individually. HeLa cell lysate can be used as positive control. The antibody recognizes the MTA1 of human, mouse, and rat origins. Reactivity to other species has not been tested.
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**Other Names**

MTA1, MTA-1, Metastasis Associated Protein 1

**Target/Specificity**

MTA1

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µl affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA and 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

## Background Descriptions

### Precautions

MTA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## MTA1 Antibody - Protein Information

### Name MTA1

### Function

Transcriptional coregulator which can act as both a transcriptional corepressor and coactivator (PubMed:<a href="http://www.uniprot.org/citations/16617102" target="\_blank">16617102</a>, PubMed:<a href="http://www.uniprot.org/citations/17671180" target="\_blank">17671180</a>, PubMed:<a href="http://www.uniprot.org/citations/17922032" target="\_blank">17922032</a>, PubMed:<a href="http://www.uniprot.org/citations/21965678" target="\_blank">21965678</a>, PubMed:<a href="http://www.uniprot.org/citations/24413532" target="\_blank">24413532</a>). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:<a href="http://www.uniprot.org/citations/16428440" target="\_blank">16428440</a>, PubMed:<a href="http://www.uniprot.org/citations/28977666" target="\_blank">28977666</a>). In the NuRD complex, regulates transcription of its targets by modifying the acetylation status of the target chromatin and cofactor accessibility to the target DNA (PubMed:<a href="http://www.uniprot.org/citations/17671180" target="\_blank">17671180</a>). In conjunction with other components of NuRD, acts as a transcriptional corepressor of BRCA1, ESR1, TFF1 and CDKN1A (PubMed:<a href="http://www.uniprot.org/citations/17922032" target="\_blank">17922032</a>, PubMed:<a href="http://www.uniprot.org/citations/24413532" target="\_blank">24413532</a>). Acts as a transcriptional coactivator of BCAS3, and SUMO2, independent of the NuRD complex (PubMed:<a href="http://www.uniprot.org/citations/16617102" target="\_blank">16617102</a>, PubMed:<a href="http://www.uniprot.org/citations/17671180" target="\_blank">17671180</a>, PubMed:<a href="http://www.uniprot.org/citations/21965678" target="\_blank">21965678</a>). Stimulates the expression of WNT1 by inhibiting the expression of its transcriptional corepressor SIX3 (By similarity). Regulates p53-dependent and -independent DNA repair processes following genotoxic stress (PubMed:<a href="http://www.uniprot.org/citations/19837670" target="\_blank">19837670</a>). Regulates the stability and function of p53/TP53 by inhibiting its ubiquitination by COP1 and MDM2 thereby regulating the p53-dependent DNA repair (PubMed:<a href="http://www.uniprot.org/citations/19837670" target="\_blank">19837670</a>). Plays a role in the regulation of the circadian clock and is essential for the generation and maintenance of circadian rhythms under constant light and for normal entrainment of behavior to light-dark (LD) cycles (By similarity). Positively regulates the CLOCK- BMAL1 heterodimer mediated transcriptional activation of its own transcription and the transcription of CRY1 (By similarity). Regulates deacetylation of BMAL1 by regulating SIRT1 expression, resulting in derepressing CRY1-mediated transcription repression (By similarity). With TFCEP2L1, promotes establishment and maintenance of pluripotency in embryonic stem cells (ESCs) and inhibits endoderm differentiation (By similarity).

### Cellular Location

Nucleus [Isoform Long]: Nucleus. Nucleus envelope. Cytoplasm. Cytoplasm, cytoskeleton. Note=Associated with microtubules (PubMed:24970816). Localization at the nuclear envelope is TPR- dependent (PubMed:24970816).

### Tissue Location

Widely expressed. High expression in brain, liver, kidney, and cardiac muscle, ovaries, adrenal glands and virgin mammary glands. Higher in tumors than in adjacent normal tissue from the same individual. Up-regulated in a wide variety of cancers including breast, liver, ovarian, and

colorectal cancer and its expression levels are closely correlated with tumor aggressiveness and metastasis

### **MTA1 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **MTA1 Antibody - Images**

### **MTA1 Antibody - Background**

MTA1 (metastasis-associated protein 1) is a component of the NURD (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.