

**Goat Anti-MTA1 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1688a

**Specification**

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**Goat Anti-MTA1 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O13330</a>
Other Accession	<a href="#">NP_004680</a> , <a href="#">9112</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	80786

**Goat Anti-MTA1 Antibody - Additional Information**

**Gene ID** 9112

**Other Names**

Metastasis-associated protein MTA1, MTA1

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

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

**Goat Anti-MTA1 Antibody - Protein Information**

**Name** MTA1

**Function**

Transcriptional coregulator which can act as both a transcriptional corepressor and coactivator (PubMed: [16617102](http://www.uniprot.org/citations/16617102), PubMed: [17671180](http://www.uniprot.org/citations/17671180), PubMed: [17922032](http://www.uniprot.org/citations/17922032), PubMed: [21965678](http://www.uniprot.org/citations/21965678), PubMed: [24413532](http://www.uniprot.org/citations/24413532)). Acts as a component of the histone deacetylase NuRD complex which participates in the

remodeling of chromatin (PubMed: [16428440](http://www.uniprot.org/citations/16428440), PubMed: [28977666](http://www.uniprot.org/citations/28977666)). 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: [17671180](http://www.uniprot.org/citations/17671180)). In conjunction with other components of NuRD, acts as a transcriptional corepressor of BRCA1, ESR1, TFF1 and CDKN1A (PubMed: [17922032](http://www.uniprot.org/citations/17922032), PubMed: [24413532](http://www.uniprot.org/citations/24413532)). Acts as a transcriptional coactivator of BCAS3, and SUMO2, independent of the NuRD complex (PubMed: [16617102](http://www.uniprot.org/citations/16617102), PubMed: [17671180](http://www.uniprot.org/citations/17671180), PubMed: [21965678](http://www.uniprot.org/citations/21965678)). 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: [19837670](http://www.uniprot.org/citations/19837670)). Regulates the stability and function of p53/TP53 by inhibiting its ubiquitination by COP1 and MDM2 thereby regulating the p53-dependent DNA repair (PubMed: [19837670](http://www.uniprot.org/citations/19837670)). 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 TFCP2L1, 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

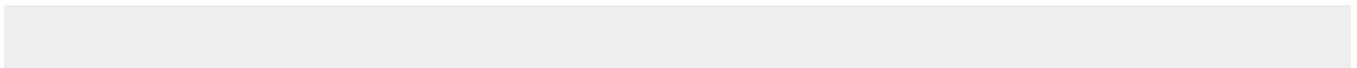
Widely expressed. High expression in brain, liver, kidney, and cardiac muscle, ovaries, adrenal glands and virgin mammary glands. Higher in tumors than in adjacent normal tissue from the same individual. Up-regulated in a wide variety of cancers including breast, liver, ovarian, and colorectal cancer and its expression levels are closely correlated with tumor aggressiveness and metastasis

#### Goat Anti-MTA1 Antibody - Protocols

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

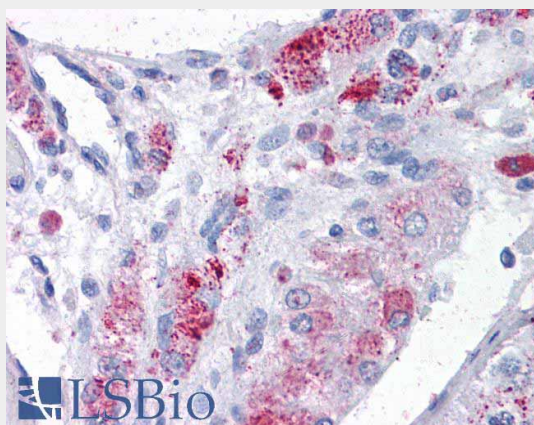
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Goat Anti-MTA1 Antibody - Images

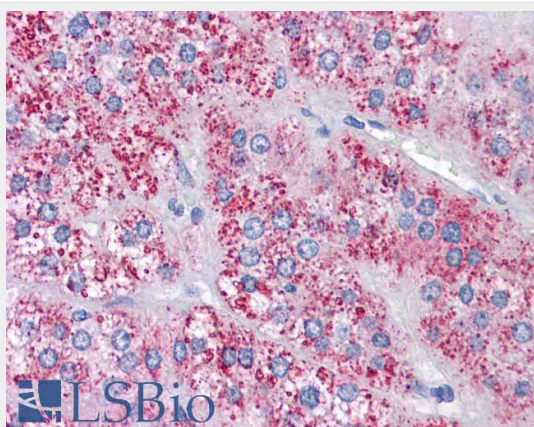




AF1688a staining (0.03  $\mu\text{g/ml}$ ) of Human Placenta lysate (RIPA buffer, 35  $\mu\text{g}$  total protein per lane). Primary incubated for 1 hour. Detected by chemiluminescence.



AF1688a (3.75  $\mu\text{g/ml}$ ) staining of paraffin embedded Human Testis. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



AF1688a (3.75  $\mu\text{g/ml}$ ) staining of paraffin embedded Human Adrenal Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

**Goat Anti-MTA1 Antibody - Background**

This gene encodes a protein that was identified in a screen for genes expressed in metastatic cells, specifically, mammary adenocarcinoma cell lines. Expression of this gene has been correlated with the metastatic potential of at least two types of carcinomas although it is also expressed in many normal tissues. The role it plays in metastasis is unclear. It was initially thought to be the 70kD

component of a nucleosome remodeling deacetylase complex, NuRD, but it is more likely that this component is a different but very similar protein. These two proteins are so closely related, though, that they share the same types of domains. These domains include two DNA binding domains, a dimerization domain, and a domain commonly found in proteins that methylate DNA. The profile and activity of this gene product suggest that it is involved in regulating transcription and that this may be accomplished by chromatin remodeling.

### **Goat Anti-MTA1 Antibody - References**

Differential regulation of HIC1 target genes by CtBP and NuRD, via an acetylation/SUMOylation switch, in quiescent versus proliferating cells. Van Rechem C, et al. *Mol Cell Biol*, 2010 Aug. PMID 20547755.

Requirement of MTA1 in ATR-mediated DNA damage checkpoint function. Li DQ, et al. *J Biol Chem*, 2010 Jun 25. PMID 20427275.

Foxp1/2/4-NuRD interactions regulate gene expression and epithelial injury response in the lung via regulation of interleukin-6. Chokas AL, et al. *J Biol Chem*, 2010 Apr 23. PMID 20185820.

Revelation of p53-independent function of MTA1 in DNA damage response via modulation of the p21 WAF1-proliferating cell nuclear antigen pathway. Li DQ, et al. *J Biol Chem*, 2010 Mar 26. PMID 20071335.

Stimulation of inducible nitric oxide by hepatitis B virus transactivator protein HBx requires MTA1 coregulator. Bui-Nguyen TM, et al. *J Biol Chem*, 2010 Mar 5. PMID 20022949.