10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-MTA1 Antibody

Catalog # AP60489

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q13330
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80786

Additional Information

Gene ID	9112
Other Names	Metastasis-associated protein MTA1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human MTA1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	MTA1
Function	Transcriptional coregulator which can act as both a transcriptional corepressor and coactivator (PubMed:16617102, PubMed:17671180, PubMed:17922032, PubMed:21965678, PubMed:24413532). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed: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). In conjunction with other components of NuRD, acts as a transcriptional corepressor of BRCA1, ESR1, TFF1 and CDKN1A (PubMed:17922032, PubMed:24413532). Acts as a transcriptional coactivator of BCAS3, and SUMO2, independent of the NuRD complex (PubMed:16617102, PubMed:17671180, PubMed: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).

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). 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).

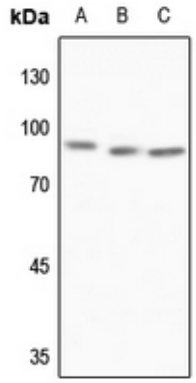
Cellular Location

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).

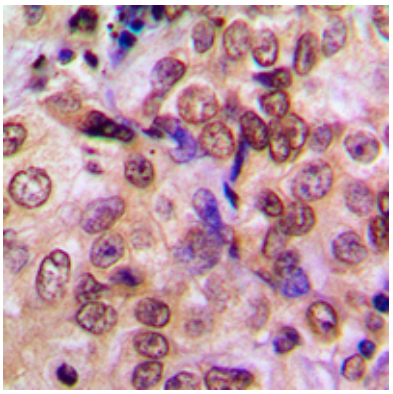
Tissue Location

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

Images

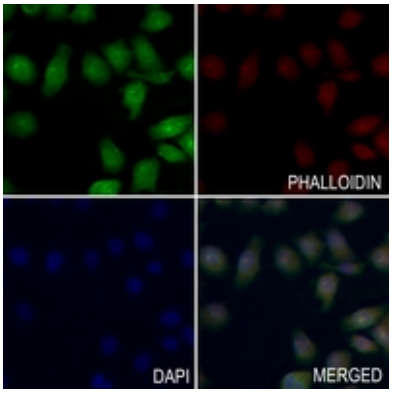


Western blot analysis of MTA1 expression in HEK293T (A), Hela (B), HGC27 (C) whole cell lysates. (Predicted band size: 80 kD; Observed band size: 90 kD)

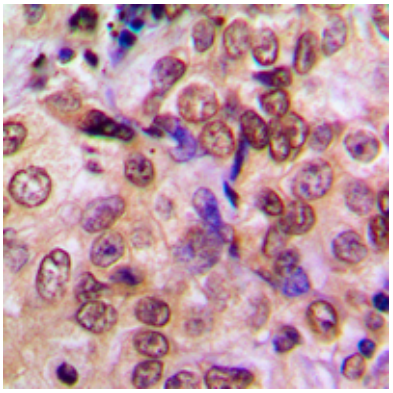


Immunohistochemical analysis of MTA1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of MTA1 staining in LO2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells



were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).



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