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Recombinant Anti-nm23-H1 Rabbit mAb

Catalog # AP95221

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	P15531
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	17149

Additional Information

Gene ID	4830
Other Names	NDPKA; NM23; Nucleoside diphosphate kinase A; NDK A; NDP kinase A; Granzyme A-activated DNase; GAAD; Metastasis inhibition factor nm23; NM23-H1; Tumor metastatic process-associated protein
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human nm23-H1 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	NME1 (HGNC:7849)
Function	Catalyzes the transfer of a gamma-phosphoryl group from a nucleoside triphosphate, mainly ATP, to a nucleoside diphosphate via a ping-pong mechanism involving a phosphohistidine intermediate, therefore contributing to the nucleoside triphosphate homeostasis (PubMed:10952986, PubMed:14960567, PubMed:16313181, PubMed:1851158, PubMed:23519676, PubMed:33903070, PubMed:8810265, PubMed:9038158). Also phosphorylates geranyl pyrophosphate (GPP) and farnesyl pyrophosphate (FPP), linking it to isoprenoid metabolism (PubMed:10952986). Additionally, functions as a non-specific serine/threonine kinase and histidine protein kinase, transferring phosphoryl groups from its active site to target proteins (PubMed:8529641, PubMed:9038158). May function as a Mg(2+)-dependent single-stranded DNA endonuclease as part of the SET complex, cooperating with the 3'-5' exonuclease TREX1 to mediate apoptotic DNA fragmentation in cytotoxic T lymphocytes (PubMed:12628186, PubMed:16818237). Reported to nick one DNA strand, enabling TREX1 to remove nucleotides from the free 3' end,

enhancing DNA damage and suppressing DNA end reannealing and repair (PubMed:16818237). Has been shown to cleave double strands DNA within the 3'-portions of both 5'-SHS silencer and NHE basal promoter element of the PDGFA gene, potentially repressing its transcription (PubMed:11694515). May also function as a Mg(2+)-dependent 3'-5' DNA exonuclease, excising nucleotides from 3' single-stranded DNA or DNA with 3' single strand overhangs, suggesting a role in DNA nucleolytic processing (PubMed:14960567, PubMed:16313181). Involved in the regulation of tumor metastasis and cellular differentiation (By similarity). Also required for cell motility (PubMed:8270257, PubMed:25582197). May control, with NME2, AcCoA usage between histone acetylation and fatty acid synthesis, possibly by binding and releasing AcCoA at transcriptionally active chromatin regions in proximity to histone acetyltransferase (HAT) (By similarity).

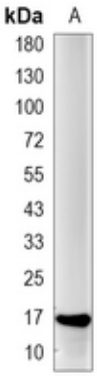
Cellular Location

Cytoplasm. Nucleus. Cell membrane {ECO:0000250|UniProtKB:P52175}. Note=Cell-cycle dependent nuclear localization which can be induced by degradation of the SET complex by GzmA (PubMed:12628186). In response to DNA damage, translocates to the nucleus where it might participate in DNA nucleolytic processing (PubMed:16313181).

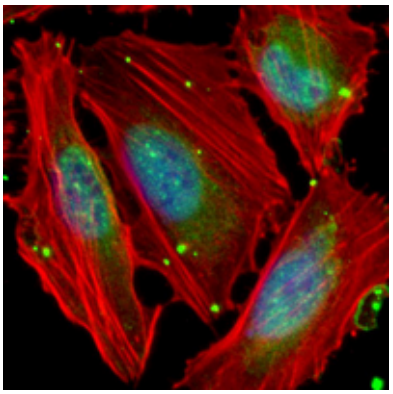
Tissue Location

Ubiquitously expressed (PubMed:12601555, PubMed:16442775). Expressed in tumor cell lines (PubMed:10512675, PubMed:16442775).

Images



Western blot analysis of nm23-H1 expression in Jurkat (A) whole cell lysates. (Predicted band size: 17 kD; Observed band size: 17 kD)



Immunofluorescent analysis of nm23-H1 staining in Jurkat 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 an 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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