

Anti-NM23A Antibody

Catalog # ABO11137

Product Information

Application	WB, IHC-P, ICC
Primary Accession	P15531
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Nucleoside diphosphate kinase A(NME1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4830
Other Names	Nucleoside diphosphate kinase A, NDK A, NDP kinase A, 2.7.4.6, Granzyme A-activated DNase, GAAD, Metastasis inhibition factor nm23, NM23-H1, Tumor metastatic process-associated protein, NME1, NDPKA, NM23
Calculated MW	17149
Application Details	Immunocytochemistry , 0.5-1 μ g/ml, Human, - Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 μ g/ml, Human, Rat, Mouse
Subcellular Localization	Cytoplasm . Nucleus . Cell-cycle dependent nuclear localization which can be induced by interaction with Epstein-barr viral proteins or by degradation of the SET complex by Gzma.
Tissue Specificity	Isoform 1 is expressed in heart, brain, placenta, lung, liver, skeletal muscle, pancreas, spleen and thymus. Expressed in lung carcinoma cell lines but not in normal lung tissues. Isoform 2 is ubiquitously expressed and its expression is also related to tumor differentiation. Isoform 3 is ubiquitously expressed. .
Source	Eukaryota
Protein Name	Nucleoside diphosphate kinase A(NDK A)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human

NM23A(137-152aa EELVDYTSCAQNWIYE), different from the related mouse sequence by two amino acids and from rat sequence by one amino acid.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the NDK family.

Protein Information

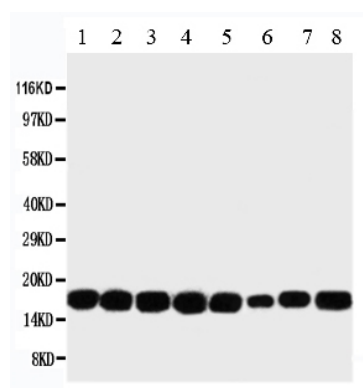
Name	NME1 (HGNC:7849)
Function	Catalyzes the transfer of a gamma-phosphoryl group from a nucleoside triphosphate, mainly ATP, to a nucleoside diphosphate via a ping-pong mechanism involving a phosphohistidine intermediate, therefore contributing to the nucleoside triphosphate homeostasis (PubMed:10952986, 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).

Background

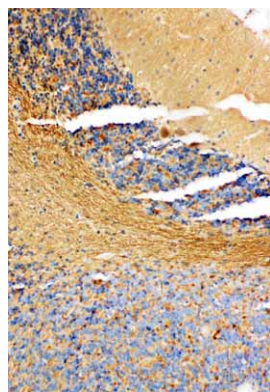
NME1(NME/NM23 nucleoside diphosphate kinase 1) also called non-metastatic cells 1, protein(NM23A)

expressed in, NM23, NM23-H1, NDPKA, GAAD or AWD, is an "enzyme" that in humans is encoded by the "NME1" gene. The promoters of the mouse and human "NME1" genes, like those of other NME genes, contain several binding sites for AP2, NF1, Sp1, LEF1, and response elements to glucocorticoid receptors. The NME1 gene is mapped on 17q21.33. Immunofluorescence microscopy demonstrated colocalization of "NME1" in nuclei of B cells expressing EBNA3C. Expression of EBNA3C reversed the ability of "NME1" to inhibit migration of BL and breast carcinoma cells. NM23H1 bound SET and was released from inhibition by GZMA cleavage of SET. After GZMA loading or cytotoxic T lymphocyte attack, SET and NM23H1 translocated to the nucleus and SET was degraded, allowing NM23H1 to nick chromosomal DNA. "Using a Drosophila model system, "Dammai et al.(2003)" showed that the Drosophila "NME1" homolog, awd, regulates trachea cell motility by modulating FGFR levels through a dynamin -mediated pathway.

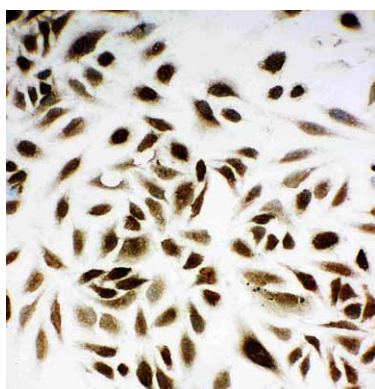
Images



Anti-NM23A antibody, ABO11137, Western blotting
 Lane 1: Rat Heart Tissue Lysate
 Lane 2: Rat Brain Tissue Lysate
 Lane 3: Rat Liver Tissue Lysate
 Lane 4: Rat Skeletal Muscle Tissue Lysate
 Lane 5: PANC Cell Lysate
 Lane 6: HELA Cell Lysate
 Lane 7: SKOV Cell Lysate
 Lane 8: COLO320 Cell Lysate



Anti-NM23A antibody, ABO11137, IHC(P)
 IHC(P): Rat Cerebellum Tissue



Anti-NM23A antibody, ABO11137, ICC
 ICC: HELA Cell

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.