

NME1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP16000c

Product Information

Application WB, E **Primary Accession** P15531

Other Accession <u>NP_937818.1</u>, <u>NP_000260.1</u>

Reactivity Human, Rat, Mouse

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 17149
Antigen Region 29-57

Additional Information

Gene ID 4830

Other Names 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, NME1, NDPKA, NM23

Target/Specificity This NME1 antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 29-57 amino acids from the Central

region of human NME1.

Dilution WB~~1:1000 E~~Use at an assay dependent concentration.

Format Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

This antibody is purified through a protein A column, followed by peptide

affinity purification.

Storage Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions NME1 Antibody (Center) is for research use only and not for use in diagnostic

or therapeutic procedures.

Protein Information

Name NME1

Synonyms NDPKA, NM23

Function Major role in the synthesis of nucleoside triphosphates other than ATP. The

ATP gamma phosphate is transferred to the NDP beta phosphate via a ping-pong mechanism, using a phosphorylated active-site intermediate. Possesses nucleoside-diphosphate kinase, serine/threonine-specific protein kinase, geranyl and farnesyl pyrophosphate kinase, histidine protein kinase and 3'-5' exonuclease activities. Involved in cell proliferation, differentiation and development, signal transduction, G protein-coupled receptor endocytosis, and gene expression. Required for neural development including neural patterning and cell fate determination. During GZMA- mediated cell death, works in concert with TREX1. NME1 nicks one strand of DNA and TREX1 removes bases from the free 3' end to enhance DNA damage and prevent DNA end reannealing and rapid repair.

Cellular Location

Cytoplasm. Nucleus. Note=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 Location

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.

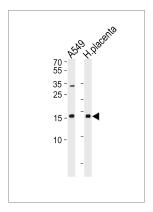
Background

This gene (NME1) was identified because of its reduced mRNA transcript levels in highly metastatic cells. Nucleoside diphosphate kinase (NDK) exists as a hexamer composed of 'A' (encoded by this gene) and 'B' (encoded by NME2) isoforms. Mutations in this gene have been identified in aggressive neuroblastomas. Two transcript variants encoding different isoforms have been found for this gene. Co-transcription of this gene and the neighboring downstream gene (NME2) generates naturally-occurring transcripts (NME1-NME2), which encodes a fusion protein comprised of sequence sharing identity with each individual gene product.

References

Boissan, M., et al. Cancer Res. 70(19):7710-7722(2010) Wang, P.H., et al. Gynecol. Oncol. 119(1):70-75(2010) Conery, A.R., et al. Proc. Natl. Acad. Sci. U.S.A. 107(35):15461-15466(2010) Wang, Z., et al. Med. Sci. Monit. 16 (8), CR357-CR364 (2010) : Li, Y., et al. Cancer Res. 70(14):5695-5705(2010)

Images



NME1 Antibody (Center) (Cat. #AP16000c) western blot analysis in A549 cell line and human placenta lysates (35ug/lane). This demonstrates the NME1 antibody detected the NME1 protein (arrow).

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