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NME1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16000c

Product Information

Application	WB, E
Primary Accession	P15531
Other Accession	NP_937818.1, NP_000260.1
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.

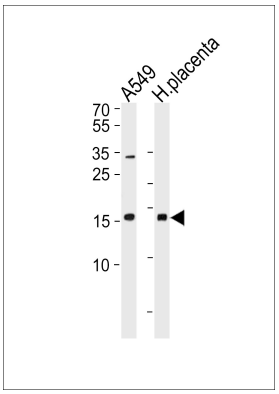
Background

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).