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NME3 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7156a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13232
Reactivity	Mouse, Human
Predicted	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5454
Calculated MW	19015
Antigen Region	51-81

Additional Information

Gene ID	4832
Other Names	Nucleoside diphosphate kinase 3, NDK 3, NDP kinase 3, DR-nm23, Nucleoside diphosphate kinase C, NDPKC, nm23-H3, NME3
Target/Specificity	This NME3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 51-81 amino acids from the Central region of human NME3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	NME3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NME3 (HGNC:7851)
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:11277919, PubMed:30587587, PubMed:39337255). In vitro, can also use other phosphate donors such as UTP and GTP (PubMed:30587587, PubMed:39337255). Independently of its nucleoside diphosphate kinase activity, involved in mitochondrial membrane tethering, a prerequisite for fusion through direct membrane-binding and hexamerization (PubMed:30587587, PubMed:37584589). Involved in DNA repair of both single- and double-stranded breaks by associating with the ribonucleotide reductase (RNR) complex via interaction with the histone acetyltransferase KAT5, facilitating recruitment to DNA damage sites independently of its kinase activity (PubMed:26945015). Inhibits granulocyte differentiation (PubMed:7638209). May be required for ciliary function during renal development (By similarity).

Cellular Location

Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasm Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q9WV85}

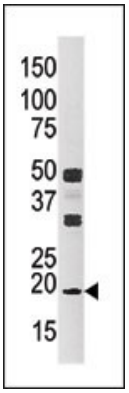
Background

NME3 mRNA is preferentially expressed at early stages of myeloid differentiation of highly purified CD34(+) cells. Its constitutive expression in a myeloid precursor line, which is growth-factor dependent for both proliferation and differentiation, results in inhibition of granulocytic differentiation induced by granulocyte colony-stimulating factor and causes apoptotic cell death. These results appear consistent with a role for the NME3 gene in normal hematopoiesis and raise the possibility that its overexpression contributes to differentiation arrest, a feature of blastic transformation in chronic myelogenous leukemia.

References

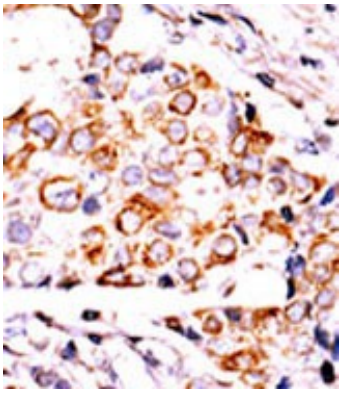
Negroni, A., et al., Cell Death Differ. 7(9):843-850 (2000).
Martinez, R., et al., Cancer Res. 57(6):1180-1187 (1997).
Venturelli, D., et al., Proc. Natl. Acad. Sci. U.S.A. 92(16):7435-7439 (1995).

Images



Western blot analysis of anti-NME3 Pab (Cat. #AP7156a) in CEM cell line tissue lysate (35ug/lane).NME3(arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



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