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NME4 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8153b

Specification

NME4 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O00746
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**20659**
Antigen Region	**158-187**

NME4 Antibody (C-term) - Additional Information

Gene ID 4833

Other Names
Nucleoside diphosphate kinase, mitochondrial, NDK, NDP kinase, mitochondrial, Nucleoside diphosphate kinase D, NDPKD, nm23-H4, NME4, NM23D

Target/Specificity
This NME4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 158-187 amino acids from the C-terminal region of human NME4.

Dilution
WB~~1:1000
IHC-P~~1:50~100

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
NME4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NME4 Antibody (C-term) - Protein Information

Name NME4 (HGNC:7852)

Synonyms NM23D

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. Through the catalyzed exchange of gamma-phosphate between di- and triphosphonucleosides participates in regulation of intracellular nucleotide homeostasis (PubMed:10799505). Binds to anionic phospholipids, predominantly to cardiolipin; the binding inhibits its phosphotransfer activity (PubMed:18635542, PubMed:23150663). Acts as a mitochondria-specific NDK; its association with cardiolipin-containing mitochondrial inner membrane is coupled to respiration suggesting that ADP locally regenerated in the mitochondrion innermembrane space by its activity is directly taken up via ANT ADP/ATP translocase into the matrix space to stimulate respiratory ATP regeneration (PubMed:18635542). Proposed to increase GTP-loading on dynamin-related GTPase OPA1 in mitochondria (PubMed:24970086). In vitro can induce liposome cross-linking suggesting that it can cross-link inner and outer membranes to form contact sites, and promotes intermembrane migration of anionic phosphoplipids. Promotes the redistribution of cardiolipin between the mitochondrial inner membrane and outer membrane which is implicated in pro-apoptotic signaling (PubMed:18635542, PubMed:17028143, PubMed:23150663).

Cellular Location
Mitochondrion intermembrane space; Peripheral membrane protein Mitochondrion matrix. Note=Predominantly localized in the mitochondrion intermembrane space (PubMed:18635542) Colocalizes with OPA1 in mitochondria (PubMed:24970086)

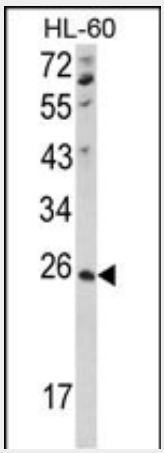
Tissue Location
Widely distributed. Found at very high levels in prostate, heart, liver, small intestine, and skeletal muscle tissues, and in low amounts in the brain and in blood leukocytes

NME4 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NME4 Antibody (C-term) - Images



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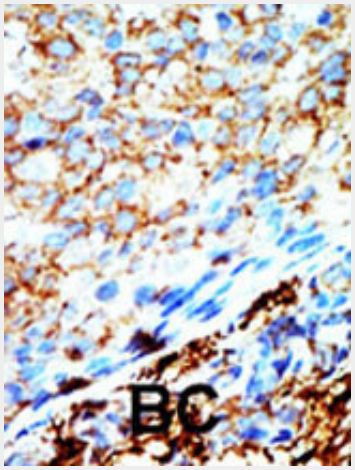
Western blot analysis of hNME4-V173 (Cat. #AP8153b) in HL-60 cell line lysates (35ug/lane). NME4 (arrow) was detected using the purified Pab.



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

NME4 Antibody (C-term) - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK).

NME4 Antibody (C-term) - References

Milon, L., et al., Hum. Genet. 99(4):550-557 (1997).