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# NME4 Antibody (N-term) Blocking Peptide
**Synthetic peptide**
**Catalog # BP8153a**

## Specification

### NME4 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O00746

### NME4 Antibody (N-term) Blocking Peptide - 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**
The synthetic peptide sequence used to generate the antibody <a href=/product/products/AP8153a>AP8153a</a> was selected from the N-term region of human NME4 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### NME4 Antibody (N-term) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/10799505" target="_blank">10799505</a>). Binds to anionic phospholipids, predominantly to cardiolipin; the binding inhibits its phosphotransfer activity (PubMed:<a href="http://www.uniprot.org/citations/18635542" target="_blank">18635542</a>, PubMed:<a href="http://www.uniprot.org/citations/23150663" target="_blank">23150663</a>). 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:<a href="http://www.uniprot.org/citations/18635542" target="_blank">18635542</a>). Proposed to increase GTP-loading on dynamin-related GTPase OPA1 in mitochondria (PubMed:<a href="http://www.uniprot.org/citations/24970086" target="_blank">24970086</a>). 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:<a href="http://www.uniprot.org/citations/18635542" target="_blank">18635542</a>, PubMed:<a href="http://www.uniprot.org/citations/17028143" target="_blank">17028143</a>, PubMed:<a href="http://www.uniprot.org/citations/23150663" target="_blank">23150663</a>).

**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 (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

## NME4 Antibody (N-term) Blocking Peptide - Images

## NME4 Antibody (N-term) Blocking Peptide - 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 (N-term) Blocking Peptide - References

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