

#### NME1 Antibody (clone 1D7)

Mouse Monoclonal Antibody Catalog # ALS14391

#### **Specification**

#### NME1 Antibody (clone 1D7) - Product Information

Application WB, IF, IHC
Primary Accession P15531
Reactivity Human
Host Mouse
Clonality Monoclonal
Calculated MW 17kDa KDa

# NME1 Antibody (clone 1D7) - Additional Information

**Gene ID 4830** 

#### **Other Names**

Nucleoside diphosphate kinase A, NDK A, NDP kinase A, 2.7.4.6, Granzyme A-activated DNase, GAAD, Metastasis inhibition factor nm23, NM23-H1, Tumor metastatic process-associated protein, NME1, NDPKA, NM23

# **Target/Specificity**

Human NME1

## **Reconstitution & Storage**

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

#### **Precautions**

NME1 Antibody (clone 1D7) is for research use only and not for use in diagnostic or therapeutic procedures.

#### NME1 Antibody (clone 1D7) - 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**

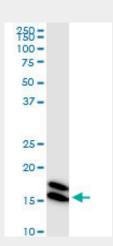
Isoform 1 is expressed in heart, brain, placenta, lung, liver, skeletal muscle, pancreas, spleen and thymus. Expressed in lung carcinoma cell lines but not in normal lung tissues. Isoform 2 is ubiquitously expressed and its expression is also related to tumor differentiation.

## NME1 Antibody (clone 1D7) - Protocols

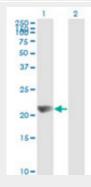
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

### NME1 Antibody (clone 1D7) - Images

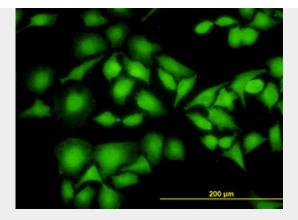


NME1 monoclonal antibody ALS14391. Western blot of NME1 expression in HeLa.

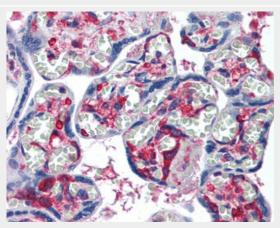


Western blot of NME1 expression in transfected 293T cell line by NME1 monoclonal antibody ALS14391





Immunofluorescence of monoclonal antibody to NME1 on HeLa cell. [antibody concentration 10 ug/ml]



Anti-NME1 antibody IHC of human placenta.

# NME1 Antibody (clone 1D7) - Background

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.

## NME1 Antibody (clone 1D7) - References

Rosengard A.M., et al. Nature 342:177-180(1989). Gilles A.-M., et al. J. Biol. Chem. 266:8784-8789(1991). Wang L., et al. Cancer Res. 53:717-720(1993). Dooley S., et al. Hum. Genet. 93:63-66(1994). Ni X., et al. J. Hum. Genet. 48:96-100(2003).