

NME1

Reactivity:Human Rat

Catalog #:A0087

Tested applications:WB IHC

Antibody Type:

Recommended Dilution:WB 1:500 - 1:1000 IHC 1:50 - 1:100

Monoclonal Antibody

Calculated MW:17kDa

Species:Mouse

Observed MW:Refer to Figures

Gene ID:4830

Immunogen:

Isotype:IgG

A synthetic peptide of human NME1

Swiss Prot:P15531

Storage Buffer:

Purity:Affinity purification

Store at 4. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

For research use only.

Concentration:

bj

Synonym:

NME1;AWD;GAAD;NB;NBS;NDPK-A;NDPKA;NM23;NM23-H1

Background:

The NDK/NME/NM23 kinase family (encoded by the NME gene family) consists of at least eight distinct proteins that exhibit different cellular localization (1). Members of this group inhibit metastasis in a variety of tumor cell types (2). All NDK/NME/NM23 proteins possess nucleoside diphosphatase kinase (NDK) activity and catalyze the phosphorylation of nucleoside diphosphate to the corresponding nucleoside triphosphate to regulate a diverse array of cellular events (3). At least four classes of NDK biochemical activities have been described, including protein-protein interactions (4-6), regulation of GTP-binding protein function (7-9), DNA-associated activities (10,11), and histidine-dependent protein phosphotransferase activity (12). NDK/NME proteins participate in the regulation of a broad spectrum of cellular responses, including development, differentiation, proliferation, endocytosis, and apoptosis (13). Because of its role in metastasis suppression and oncogenesis, NDKA (NME1/NM23-H1) has been widely studied (14). NDKA (NM23-H1) and NDKB (NM23-H2) are encoded by adjacent NME1 and NME2 genes and share 90% sequence identity. Two serine residues (Ser122 and Ser144) on NDKA/NM23-H1 can be phosphorylated by AMPK1, but only phosphorylation at Ser122 determines whether NDKA channels ATP to AMPK1. This regulates AMPK1 activity towards ACC1, an important regulator of fatty acid metabolism (15). Mutation of NDKB/NM23-H2 at Ser122 (S122P) in melanoma cells results in altered phosphoryl transfer activity (16).

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