Data Sheet (Cat.No.TMPY-04467)

TargetMol

NME1 Protein, Human, Recombinant (His)

General Information

Synonyms:	NME/NM23 nucleoside diphosphate kinase 1;NB;NDPK-A;NM23-H1;NBS;NDPKA;GAAD;NDKA;AWD;NM23
Protein Construction:	A DNA sequence encoding the human NME1 isoform b (NP_000260.1) (Ala 2-Glu 152) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P15531-1
Molecular Weight:	18 kDa (predicted); 21 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile PBS, pH 7.4.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

NME1, also known as Nucleoside Diphosphate Kinase A (NDK-A), or NM23-H1, belongs to the NDK family. NM23-H1 is known to have a metastasis suppressive activity in many tumor cells. Recent studies have shown that the interacting proteins with NM23-H1 which mediate cell proliferation, may act as modulators of the metastasis suppressor activity. The interacting proteins with NM23-H1 can be classified into 3 groups. The first group of proteins can be classified as upstream kinases of NM23-H1 such as CKI and Aurora-A/STK15. The second group of proteins acts as downstream effectors for the regulation of specific gene transcriptions, GTP-binding protein functions, and signal transduction in the Erk signal cascade. The third group of proteins can be classified as bi-directionally influencing binding partners of NM23-H1. As a result, the interactions with NM23-H1 and binding

partners have implications in the biochemical characterization involved in metastasis and tumorigenesis. NDKA is increased in human postmortem cerebrospinal fluid (CSF), a model of global brain insult, suggesting that measurement in CSF and, more importantly, in plasma may be useful as a biomarker of stroke. Additionally, NM23-H1 significantly reduces metastasis without effects on primary tumor size and was the first discovered metastasis suppressor gene.

Reference

Allard L, et al. (2005) PARK7 and nucleoside diphosphate kinase A as plasma markers for the early diagnosis of stroke. Clin Chem. 51(11): 2043-51.

Steeg PS, et al. (2008) Clinical-translational approaches to the Nm23-H1 metastasis suppressor. Clin Cancer Res. 14(16): 5006-12.

Kim HD, et al. (2009) Regulators affecting the metastasis suppressor activity of Nm23-HMol Cell Biochem. 329(1-2): 167-73.

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