

NME4 Protein, Human, Recombinant (GST)

General Information

Synonyms:	NDP kinase, mitochondrial;Nucleoside diphosphate kinase D (NDPKD);NM23D;Nucleoside diphosphate kinase, mitochondrial;NDK;NME4;nm23-H4;mitochondrial
Protein Construction:	1-187 aa
Species:	Human
Expression Host:	E. coli
Accession:	O00746
Molecular Weight:	44.3 kDa (predicted)
AA Sequence:	SWTRERTLVAVKPDGVQRRLVGDVIQRFERRGFTLVGMKMLQAPESVLAEHYQDLRRKPFYPALIRYMSSGP VVAMVWEGYNVVRASRAMIGHTDSAEAAPGTIRGDFSVHISRNVIIHASDSVEGAQREIQLWVFQSSSELVSWA DGGQHSSIHPA

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

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:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein 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. Through the catalyzed exchange of gamma-phosphate between di- and triphosphonucleosides participates in regulation of intracellular nucleotide homeostasis. Binds to anionic phospholipids, predominantly to cardiolipin; the binding

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inhibits its phosphotransfer activity. Acts as 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. Proposed to increase GTP-loading on dynamin-related GTPase OPA1 in mitochondria. 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 phospholipids. Promotes the redistribution of cardiolipin between the mitochondrial inner membrane and outer membrane which is implicated in pro-apoptotic signaling.

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