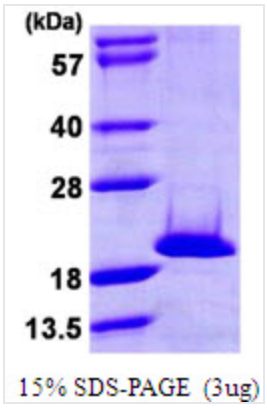
NME4 Recombinant Protein

PRODUCT OVERVIEW

Product Name	NME4, Recombinant Protein
Full Product Name	NME4, 33-187aa, Human, His tag, E Coli
Product Gene Name	NME4 recombinant protein
Product Synonym Names	Nucleoside diphosphate kinase mitochondrial; Nucleoside diphosphate kinase; mitochondrial; NDK; NDPKD; nm23-H4; NM23D
Sequence	MGSSHHHHHH SSGLVPRGSH MPSWTRERTL VAVKPDGVQR RLVGDVIQRF ERRGFTLVGM KMLQAPESVL AEHYQDLRRK PFYPALIRYM SSGPVVAMVW EGYNVVRASR AMIGHTDSAE AAPGTIRGDF SVHISRNVIH ASDSVEGAQR EIQLWFQSSE LVSWADGGQH SSIHPA
Host	E Coli
Form/Format	Liquid. 20mM Tris-HCl Buffer (pH 8.0) containing 40% glycerol, 0.2M NaCl
Purity/Purification	> 90% by SDS-PAGE
Concentration	0.5 mg/ml (determined by Bradford assay) (lot specific)
Preparation and Storage	Can be stored at 2°C to 8°C for one week. For long term storage, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.
Molecular Weight	19.6 kDa (176aa) confirmed by MALDI-TOF
OMIM	Y07604 mRNA
3D Structure	ModBase 3D Structure for O00746
Tag	His-tag
Product Categories/Family for NME4 recombinant protein	Metabolism
Applications Tested/Suitable for NME4 recombinant protein	SDS-PAGE
Related Product Information for NME4 recombinant protein	NME4, also known as nucleoside diphosphate kinase, mitochondrial, belongs to the NDK family. NME4 are ubiquitous enzymes that catalyze transfer of gamma-phosphates, via a phosphohistidine intermediate, between nucleoside and dioxynucleoside tri- and diphosphates. The enzymes are products of the nm23 gene family, which includes NME4. NME4 plays a major role in the synthesis of nucleoside triphosphates other than ATP. Recombinant human NME4 protein, fused to His-tag at N-terminus, was expressed in E Coli and purified by using conventional chromatography.
Product References and Citations for NME4 recombinant protein	Milon L., et al. (1997) Hum. Genet. 99:550-557; Milon L., et al. (2000) Biol. Chem. 275:14264-14272
Other Notes	Small volumes of NME4 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NME4 purchase	MBS204031 is a recombinant protein targeting NME4. Also known as NME4, 33-187aa, Human, His tag, E Coli. Host: E Coli.



SDS-Page of NME4 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NME4. It may not necessarily be applicable to this product.

NCBI GI #	4826862
NCBI GeneID	4833
NCBI Accession #	NP_005000
UniProt Primary Accession #	O00746
UniProt Secondary Accession #	Q5U0M9; A2IDD0
UniProt Related Accession #	O00746
GenBank Nucleotide #	NM_005009.2
NCBI Official Full Name	nucleoside diphosphate kinase, mitochondrial isoform a
NCBI Official Synonym Full Names	NME/NM23 nucleoside diphosphate kinase 4
NCBI Official Symbol	NME4
NCBI Official Synonym Symbols	NDPK-D; NM23H4; nm23-H4
UniProt Protein Name	Nucleoside diphosphate kinase, mitochondrial
UniProt Synonym Protein Names	Nucleoside diphosphate kinase D; NDPKD; nm23-H4
UniProt Gene Name	NME4
UniProt Synonym Gene Names	NM23D; NDK; NDP kinase, mitochondrial; NDPKD
NCBI Protein Information	nucleoside diphosphate kinase, mitochondrial
NCBI Summary for NME4	The nucleoside diphosphate (NDP) kinases (EC 2.7.4.6) are ubiquitous enzymes that catalyze transfer of gamma-phosphates, via a phosphohistidine intermediate, between nucleoside and dioxynucleoside tri- and diphosphates. The enzymes are products of the nm23 gene family, which includes NME4 (Milon et al., 1997 [PubMed 9099850]).[supplied by OMIM, May 2008]

UniProt Comments for NME4	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:10799505). Binds to anionic phospholipids, predominantly to cardiolipin; the binding inhibits its phosphotransfer activity (PubMed:18635542, PubMed:23150663). 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 (PubMed:18635542). Proposed to increase GTP-loading on dynamin-related GTPase OPA1 in mitochondria (PubMed:24970086). 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:18635542, PubMed:17028143, PubMed:23150663).
Research Articles on NME4	**1.** NDPK-D has an important role in the early stages of mitophagy as induced by carbonyl cyanide m-chlorophenylhydrazone as well as by PINK1-Parkin-independent stimuli such as rotenone and 6-hydroxydopamine.
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