

## NAD-ME Protein, Human (N-His)

<b>Cat. No.:</b>	HY-P71918A
<b>Synonyms:</b>	Malate dehydrogenase; Malic enzyme 2; Malic enzyme 2 mitochondrial; Malic enzyme 2 NAD+; dependent mitochondrial; Malic enzyme mitochondrial; Malic enzyme NAD+; dependent mitochondrial; MAOM_HUMAN; ME 2; ME2; mitochondrial; NAD dependent malic enzyme mitochondrial; NAD ME; NAD-dependent malic enzyme; NAD-ME; ODS1; Pyruvic malic carboxylase
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P23368 (L19-E584)
<b>Gene ID:</b>	4200
<b>Molecular Weight:</b>	approximately 65 kD

### PROPERTIES

#### AA Sequence

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L H I K E K G K P L   M L N P R T N K G M   A F T L Q E R Q M L   G L Q G L L P P K I
E T Q D I Q A L R F   H R N L K K M T S P   L E K Y I Y I M G I   Q E R N E K L F Y R
I L Q D D I E S L M   P I V Y T P T V G L   A C S Q Y G H I F R   R P K G L F I S I S
D R G H V R S I V D   N W P E N H V K A V   V V T D G E R I L G   L G D L G V Y G M G
I P V G K L C L Y T   A C A G I R P D R C   L P V C I D V G T D   N I A L L K D P F Y
M G L Y Q K R D R T   Q Q Y D D L I D E F   M K A I T D R Y G R   N T L I Q F E D F G
N H N A F R F L R K   Y R E K Y C T F N D   D I Q G T A A V A L   A G L L A A Q K V I
S K P I S E H K I L   F L G A G E A A L G   I A N L I V M S M V   E N G L S E Q E A Q
K K I W M F D K Y G   L L V K G R K A K I   D S Y Q E P F T H S   A P E S I P D T F E
D A V N I L K P S T   I I G V A G A G R L   F T P D V I R A M A   S I N E R P V I F A
L S N P T A Q A E C   T A E E A Y T L T E   G R C L F A S G S P   F G P V K L T D G R
V F T P G Q G N N V   Y I F P G V A L A V   I L C N T R H I S D   S V F L E A A K A L
T S Q L T D E E L A   Q G R L Y P P L A N   I Q E V S I N I A I   K V T E Y L Y A N K
M A F R Y P E P E D   K A K Y V K E R T W   R S E Y D S L L P D   V Y E W P E S A S S
P P V I T E

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**Biological Activity** Measured by its ability to catalyzed the reduction of NAD<sup>+</sup> to NADH, and the rate of NADH increase was measured at 340 nm. The enzyme activity is 5.54×10<sup>3</sup> U/mg prot.

**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.

**Endotoxin Level** <1 EU/μg, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

**Storage & Stability** Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

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recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping**

Room temperature in continental US; may vary elsewhere.

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**DESCRIPTION**

**Background**

NAD-ME is a mitochondrial malic enzyme characterized by its dependence on NAD and its role in catalyzing the oxidative decarboxylation of malate to pyruvate. This enzymatic activity takes place within the mitochondria, contributing to cellular energy metabolism and the tricarboxylic acid (TCA) cycle. By facilitating the conversion of malate to pyruvate, NAD-ME plays a crucial role in linking various metabolic pathways, impacting both energy production and the generation of precursor molecules. This enzymatic function is integral to maintaining the balance of cellular redox reactions and supporting the metabolic demands of the cell.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA