Recombinant Human ME2

Cat. No. ME2-644H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ME2 produced in E. coli is approximately 63.5 kDa, a single non-glycosylated polypeptide chain containing 567 amino acids.
Species	Human
Source	E.coli
Description	NAD-dependent malic enzyme (ME2), mitochondrial is a protein that in humans is encoded by the ME2 gene. This gene encodes a mitochondrial NAD-dependent malic enzyme, a homotetrameric protein, which catalyzes the oxidative decarboxylation of malate to pyruvate. Three different isoforms of ME are known to be in mammalian tissues: a strictly cytosolic NADP+-dependent enzyme, an NADP+-dependent mitochondriail isoform, and a mitochondrial isoenzyme that is able to use both NAD+ and NADP+ but is more effective with NAD+. The mammalian isoforms size is about 62-64 kDa. A native size of 240,000 Da proposes a tetrameric structure for the active enzyme.
Form	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Molecular Mass	63.5 kDa
AA Sequence	MLHIKEKGKP LMLNPRTNKG MAFTLQERQM LGLQGLLPPK IETQDIQALR FHRNLKKMTS PLEKYIYIMG IQERNEKLFY RILQDDIESL MPIVYTPTVG LACSQYGHIF RRPKGLFISI SDRGHVRSIV DNWPENHVKA VVVTDGERIL GLGDLGVYGM GIPVGKLCLY TACAGIRPDR CLPVCIDVGT DNIALLKDPF

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	YMGLYQKRDR TQQYDDLIDE FMKAITDRYG
Endotoxin	Less than 1 EU/μg of rHuME2 as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analyses.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw cycles.
Reconstitution	We recommend that this vial be briefy centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	ME2 malic enzyme 2, NAD(+)-dependent, mitochondrial [Homo sapiens]
Official Symbol	ME2
Synonyms	ME2; malic enzyme 2, NAD(+)-dependent, mitochondrial; NAD-dependent malic enzyme, mitochondrial; NAD-ME; malate dehydrogenase; pyruvic-malic carboxylase; ODS1;

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Gene ID	4200
mRNA Refseq	NM_001168335
Protein Refseq	NP_001161807
MIM	154270
UniProt ID	P23368
Chromosome Location	18q21
Pathway	Pyruvate metabolism, organism-specific biosystem; Pyruvate metabolism, conserved biosystem; gluconeogenesis I, organism-specific biosystem;
Function	NAD binding; electron carrier activity; malate dehydrogenase (decarboxylating) activity; malate dehydrogenase (oxaloacetate-decarboxylating) activity; metal ion binding; oxidoreductase activity;

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