Technical Data Sheet

Recombinant Human Malic Enzyme 2 (rHu ME2)

Human Malic Enzyme 2

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.

Catalog Number:	RC512-15
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 63.5 kDa, a single non-glycosylated polypeptide chain containing 567 amino acids.
Quantity:	2μg/10μg/1000μg
AA Sequence:	MLHIKEKGKP LMLNPRTNKG MAFTLQERQM LGLQGLLPPK IETQDIQALR FHRNLKKMTS PLEKYIYIMG IQERNEKLFY RILQDDIESL MPIVYTPTVG LACSQYGHIF RRPKGLFISI SDRGHVRSIV DNWPENHVKA VVVTDGERIL GLGDLGVYGM GIPVGKLCLY TACAGIRPDR CLPVCIDVGT DNIALLKDPF YMGLYQKRDR TQQYDDLIDE FMKAITDRYG RNTLIQFEDF GNHNAFRFLR KYREKYCTFN DDIQGTAAVA LAGLLAAQKV ISKPISEHKI LFLGAGEAAL GIANLIVMSM VENGLSEQEA QKKIWMFDKY GLLVKGRKAK IDSYQEPFTH SAPESIPDTF EDAVNILKPS TIIGVAGAGR LFTPDVIRAM ASINERPVIF ALSNPTAQAE CTAEEAYTLT EGRCLFASGS PFGPVKLTDG RVFTPGQGNN VYIFPGVALA VILCNTRHIS DSVFLEAAKA LTSQLTDEEL AQGRLYPPLA NIQEVSINIA IKVTEYLYAN KMAFRYPEPE DKAKYVKERT WRSEYDSLLP DVYEWPESAS SPPVITE
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	Data Not Available.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin:	Less than 1EU/μg of rHuME2 as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly 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°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
Usage:	This material is offered by Bio Basic Canada Inc. for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.