

**ChemWhat Technical Data Sheet (TDS)**

<b>Catalog Number:</b>	401-04
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 64.4 kDa, a single non-glycosylated polypeptide chain containing 573 amino acids with 6 × His at C-terminus.
<b>Quantity:</b>	5µg/25µg/1000µg
<b>AA Sequence:</b>	MLHIKEKGGK LMLNPRTNKG MAFTLQERQM LGLQGLLPPK IETQDIQALR FHRNLKKMTS PLEKYIYIMG IQERNEKLFY RILQDDIESL MPIVYTPTVG LACSQYGHIF RRPKGLFISI SDRGHVRSIV DNWPENHVKA VVVT DGERIL GLGDLGVYGM GIPVGKLCCLY TACAGIRPDR CLPVCIDVGT DNIALLKDPF YMGLYQKRDR TQQYDDLIDE FMKAITDRYG RNTLIQFEDF GNHNAFRFLR KYREKYCTFN DDIQGTAAVA LAGLLAAQKV ISKPISHEKI LFLGAGEAAL GIANLIVMSM VENGLSEQEA QKKIWMFDKY GLLVKGRKAK IDSYQEPFTH SAPESIPDTF EDAVNILKPS TIIGVAGAGR LFTPDVIRAM ASINERPVIF ALSNPTAQAE CTAEAYTLT EGRCLFASGS PFGPVKLT DG RVFTPGQGNN VYIFPGVALA VILCNTRHIS DSVFLEAACA LTSQLTDEEL AQGRLYPPLA NIQEVSNIA IKVTEYLYAN KMAFRYPEPE DKAKYVKERT WRSEYDSSLP DVYEWPEAS SPPVITEHHH HHH
<b>Purity:</b>	> 95 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Malic Enzyme activity was assayed spectrophotometrically at 340nm as described in Mandela and Sauer (1975). The standard reaction mixture contained 50 mM Tris-HCl, 3 mM MnCl <sub>2</sub> , 5 mM malate, 0.12 mM NADP <sup>+</sup> , 2.5 mM fumarate. Assay was performed in a Beckman spectrophotometer. The <i>K<sub>m</sub></i> value is 1.5 ± 0.6 mM.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 1 EU/µg of rHuME2, His as determined by LAL method.
<b>Reconstitution:</b>	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.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

***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<sup>+</sup>-dependent enzyme, an NADP<sup>+</sup>-dependent mitochondrial isoform, and a mitochondrial isoenzyme that is able to use both NAD<sup>+</sup> and NADP<sup>+</sup> but is more effective with NAD<sup>+</sup>. The mammalian isoforms size is about 62-64 kDa. A native size of 240,000 Da proposes a tetrameric structure for the active enzyme.

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