
Product Data Sheet

Product Name: ME2 Human
 Cat. No.: GP21911
 Batch No.: 1

Product Data

Purity >98%

Source

Physical Appearance solid

Shipping Condition

Synonyms Malic enzyme 2 NAD(+)-dependent mitochondrial; NAD-ME; ODS1; Malate Dehydrogenase; NAD-dependent malic enzyme mitochondri

Amino Acid Sequence MLHIKEKGKPLMLNPRTNKGMAFTLQERQMLGLQGLLPPKIETQDIQALRFHRNLKMTSPLKYYIYIMGIQERNEKLFYRILQDDIESLMPIVYPTVGLAC

Solubility It is recommended to reconstitute the lyophilized ME2 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further dil

FormulationThe protein was Lyophilized from a 0.2µm filtered concentrated solution in 20mM Tris, 150mM NaCl, 1mM b-mercaptoethanol, 1mM

Introduction

ME2 catalyzes the oxidative decarboxylation of malate to pyruvate, malat + NAD(P)+? pyruvate + CO2 + NAD(P)H+, and is found both in eukaryotic and prokaryotic cells. Three different isoforms of ME are known to be in mammalian tissues: a strictly cytosolic NADP+-dependent enzyme, an NADP+-dependent mitochondrial 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. Mitochondrial NAD+-dependent ME 2 activity is seen in tissues that experience many cell divisions, like spleen, thymus, and the basal cells of the small intestinal mucosa. ME2 is also expressed all through the rapid cleavage stages of early Xenopus development. Activity for this isoform is low or nonexistent in brain, muscle, and normal and regenerating liver tissue from rat but was observed in rat adrenal cortex, pigeon and human skeletal muscle, and in heart muscle of some species. In addition, it is expressed in mitochondria of all tumor cells inspected to detain ascites tumors, hepatoma cells, and a variety of other tumors and transformed cell lines.

Stability

Lyophilized ME2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution ME2 should be stored at 4°C between 2-7 days and for future use below -18°C .Please prevent freeze-thaw cycles.

Background

ME2 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 573 amino acids and having a total molecular mass of 64.4kDa.ME2 is purified by proprietary chromatographic techniques.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA