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32-2530: ME2 Recombinant Protein

Alternative Name :	Malic enzyme 2 NAD(+)-dependent mitochondrial,NAD-ME,ODS1,Malate Dehydrogenase,NAD-dependent malic enzyme mitochondrial,pyruvic-malic carboxylase,Malic enzyme 2,EC 1.1.1.38,EC 1.1.1.

Description

Source : Escherichia Coli. 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. 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 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. 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.

Product Info

Amount :	25 µg
Purification :	Greater than 95.0% as determined by(a) Analysis by HPLC.(b) Analysis by SDS-PAGE.
Content :	The protein was Lyophilized from a 0.2µm filtered concentrated solution in 20mM Tris, 150mM NaCl, 1mM b-mercaptoethanol, 1mM EDTA, pH8.0.
Storage condition :	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.
Amino Acid :	MLHIKEKGKPLMLNPRTNKGMAFTLQERQMLGLQGLLPPKIETQDIQALRFHRNLKKMTSPLEKYIYIMGIQERN EKLFYRILQDDIESLMPIVYTPTVGLACSQYGHIFRRPKGLFISISDRGHVRSIVDNWPENHVKAVVVTDGERILGL GDLGVYGMGIPVGKLCLYTACAGIRPDRCLPVCIDVGTDNIALLKDPFYMGLYQKRDRTQQYDDLIDEFMKAIT DRYGRNTLIQFEDFGNHNAFRFLRKYREKYCTFNDDIQGTAAVALAGLLAAQKVISKPISEHKILFLGAGEAALGI ANLIVMSMVENGLSEQEAQKKIWMFDKYGLLVKGRKAKIDSYQEPFTHSAPESIPDTFEDAVNILKPSTIIGVAGA GRLFTPDVIRAMASINERPVIFALSNPTAQAECTAEEAYTLTEGRCLFASGSPFGPVKLTDGRVFTPGQGNNVYIF PGVALAVILCNTRHISDSVFLEAAKALTSQLTDEELAQGRLYPPLANIQEVSINIAIKVTEYLYANKMAFRYPEPED KAKYVKERTWRSEYDSLLPDVYEWPESASSPPVITEHHHHHH.

Application Note

It is recommended to reconstitute the lyophilized ME2 in sterile 18M-cm H2O not less than 100ÃÂµg/ml, which can then be further diluted to other aqueous solutions.

For Research Use Only. Not for use in diagnostic/therapeutics procedures.