

Recombinant Human MDH1

Catalog No: C276

Description	Recombinant Human Malate Dehydrogenase, Cytoplasmic is produced by our E.coli expression system and the target gene encoding Ser2-Ala334 is expressed with a 6His tag at the C-terminus.
Source	E.coli
Alternative name	Malate Dehydrogenase Cytoplasmic; Cytosolic Malate Dehydrogenase; Diiodophenylpyruvate Reductase; MDH1; MDHA
Accession No.	P40925
Formulation	Supplied as a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.
Quality Control	<p>Bioactivity* Measured by its dehydrogenation activity from (S)-malate to oxaloacetate in the presense of NAD⁺</p> <p>Purity: Specific Activity is greater than 500 pmol/min/ug</p> <p>Endotoxin: Greater than 95% as determined by reducing SDS-PAGE.</p> <p>Less than 0.1 ng/µg (1 IEU/µg).</p>
Shipping	The product is shipped on dry ice/polar packs. Upon receipt, store it immediately at the temperature listed below.
Storage	Store at < -20°C, stable for 6 months after receipt. Please minimize freeze-thaw cycles.
Amino Acid Sequence	<p>SEPIRVLVTGAAGQIAYSLLYSIGNGSVFGKDQPIILVLLDITPMMGVLDGVLMEQLDCALPLLKDVIAITD</p> <p>KEDVAFKDLDVAILV</p> <p>GSMPRREGMERKDLLKANVKIFKSQGAALDKYAKKSVKIVVGNPANTNCLTASKSAPSIPKENFSCLT</p> <p>RLDHNRAKAQIALKL</p> <p>GVTANDVKNVIIWGNHSSTQYPDVNHAKV/KLQGKEVGVYEALKDDSWLKGEFVTTVQQRGA AVIKAR</p> <p>KLSSAMSAAKAICD</p> <p>HVRDIWFGTPEGEFVSMGVISDGNSYGPDDLLYSFPVVIKNTWKFEGLPINDFSREKMDLTAKEL</p> <p>TEEKESAFEFLSSALEH HHHHH</p>
Background	<p>Malate Dehydrogenase, Cytoplasmic (MDH1) is an enzyme which belongs to the MDH Type 2 sub-family of LDH/MDH superfamily. MDH1 is involved in the Citric Acid Cycle that catalyzes the conversion of Malate into Oxaloacetate (using NAD⁺) and vice versa. MDH1 should not be confused with Malic Enzyme, which catalyzes the conversion of Malate to Pyruvate, producing NADPH. MDH1 also participates in Gluconeogenesis, the synthesis of Glucose from smaller molecules. Pyruvate in the mitochondria is acted upon by Pyruvate Carboxylase to form Pxoaloacetate, a Citric Acid Cycle intermediate. In order to transport the Oxaloacetate out of the Mitochondria, Malate Dehydrogenase reduces it to Malate, and it then traverses the inner Mitochondrial membrane. Once in the cytosol, the Malate is oxidized back to Oxaloacetate by MDH1. Finally, Phosphoenol-Pyruvate Carboxy Kinase (PEPCK) converts Oxaloacetate to Phosphoenol Pyruvate.</p>

SDS-Page

