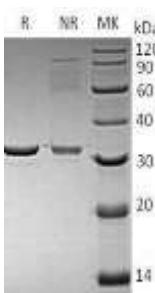


**Recombinant Human MDH1**

Catalog No: C276

<b>Description</b>	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.
<b>Source</b>	E.coli
<b>Alternative name</b>	Malate Dehydrogenase Cytoplasmic; Cytosolic Malate Dehydrogenase; Diiodophenylpyruvate Reductase; MDH1; MDHA
<b>Accession No.</b>	P40925
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.
<b>Quality Control</b>	<p>Bioactivity*      Measured by its dehydrogenation activity from (S)-malate to oxaloacetate in the presence of NAD<sup>+</sup></p> <p>Purity:      Greater than 95% as determined by reducing SDS-PAGE.</p> <p>Endotoxin:      Less than 0.1 ng/µg (1 IEU/µg).</p>
<b>Shipping</b>	The product is shipped on dry ice/polar packs. Upon receipt, store it immediately at the temperature listed below.
<b>Storage</b>	Store at < -20°C, stable for 6 months after receipt. Please minimize freeze-thaw cycles.
<b>Amino Acid Sequence</b>	SEPIRVLVTGAAGQIAYSLLYSIGNGSVFGKDQPIILVLLDITPMMGVLDGVLMEQLQDCALPLLKDVIATD KEDVAFKDLLDVAIIL GSMPMRREGMERKDLLKANVKIFKSQGAALDKYAKKSVKVIVVGNPANTNCLTASKSAPSIPKENFSCLT RLDHNRRAKAQIALK GVTANDVKNVIWGNHSSTQYPDVNHAKVKLQGKEVGVYEALKDDSWLKGEFVTTVQQRGAAVIKAR KLSSAMSAAKAICD HVRDIWFGTPEGEFVSMGVISDGNSYGVPPDDLLYSFPVVIKNKTWKFVEGLPINDFSREKMDLTAKEL TEEKESAFEFLSSALEH HHHHH
<b>Background</b>	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 <sup>+</sup> ) 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 Poxaloacetate, 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.
<b>SDS-Page</b>	 <p>R: Sample in reducing conditions NR: Sample in non-reducing conditions MK: Marker</p>