

## 32-7254: Recombinant Human Malate Dehydrogenase, Cytoplasmic/MDH1 (C-6His)(Discontinued)

**Gene :** MDH1  
**Gene ID :** 4190  
**Uniprot ID :** P40925

### Description

Source: E.coli.

MW :37.5kD.

Recombinant Human Malate Dehydrogenase 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. 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 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.

### Product Info

**Amount :** 10 µg / 50 µg  
**Content :** Supplied as a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.  
**Storage condition :** Store at -20°C, stable for 6 months after receipt. Please minimize freeze-thaw cycles.  
**Amino Acid :** SEPIRVLVTGAAGQIAYSLLYSIGNGSVFGKDQPIILVLLDITPMMGVLDGVLMELOQDCALPLLKDVIATDKEDVA  
FKDLDVAILVGSMPRREGMERKDLLKANVKIFKSQGAALDKYAKKSVKVIVVGNPANTNCLTASKSAPSIPKENF  
SCLTRLDHNRKAQIALKLGVTANDVKNVWGNHSSTQYPDVNHAKVKLQKQEVGVYEALKDDSWLKGFEVTV  
TVQQRGA AVIKARKLSSAMSAKAICDHVRDIWFGTPEGEFVSMGVISDGNSYGVPPDLLYSFPVVIKNTWK  
VEGLPINDFSREKMDLTAKELTEEKESAFEFLSSALEHHHHHH

### Application Note

**Endotoxin :** Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.

**Biological Activity :** Specific Activity is greater than 1700pmol/min/ug