



Recombinant Protein Technical Manual

Recombinant Human MDH1 Protein (His Tag)

RPES4111

Product Data:

Product SKU: RPES4111

Size: 10µg

Species: Human

Expression host: E. coli

Uniprot: P40925

Protein Information:

Molecular Mass: 37.5 kDa

AP Molecular Mass: 36 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

Formulation: Supplied as a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Malate Dehydrogenase Cytoplasmic; Cytosolic Malate Dehydrogenase; Diiodophenylpyruvate Reductase; MDH1; MDHA

Immunogen Information:

Sequence: Ser2-Ala334

Background:

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 Oxaloacetate, 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.