

## Recombinant Rat MDH1 Protein (His Tag)

Catalog Number: PKSR030299

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

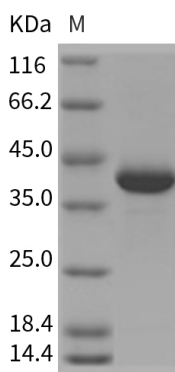
### Description

<b>Species</b>	Rat
<b>Source</b>	E.coli-derived Rat MDH1 protein Met 4-Ala 334, with an C-terminal His
<b>Calculated MW</b>	38 kDa
<b>Observed MW</b>	39 kDa
<b>Accession</b>	O88989
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 90 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 10% glycerol, pH 8.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 90 % as determined by reducing SDS-PAGE.

### Background

Malate dehydrogenases 1 (MDH1 / MDHA) is soluble form of malate dehydrogenases. Malate dehydrogenases (MDH) is a group of multimeric enzymes consisting of identical subunits usually organized as either dimer or tetramers with subunit molecular weights of 30-35 kDa. MDH has been isolated from different sources including archaea, eubacteria, fungi, plant and mammals. MDH catalyzes the NAD/NADH-dependent interconversion of the substrates malate and oxaloacetate. This reaction plays a key part in the malate / aspartate shuttle across the mitochondrial membrane, and in the tricarboxylic acid cycle within the mitochondrial matrix. The enzymes share a common catalytic mechanism and their kinetic properties are similar, which demonstrates a high degree of structural similarity. The three-dimensional structures and elements essential for catalysis are conserved between mitochondrial and cytoplasmic forms of MDH in eukaryotic cells even though these isoenzymes are only marginally related at the level of primary structure.

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