Creative Enzymes®

Native Porcine NAD(P)H Dehydrogenase (quinone)

Cat. No. NATE-0983

Lot. No. (See product label)

Introduction

Description	DT Diaphorase is a flavoenzyme that catalyzes the oxidation of reduced di-and triphosphopyridine nucleotides. It contains one mole of FAD per mole of enzyme. The enzyme found in rat liver catalyzes the oxidation of NADH and NADPH by various dyes and quinones. The molecular weight is found to be approximately 48 kDa Da. The pH optimum of the enzyme purified from rat liver is found to be 5.0. It is a cytosolic enzyme that catalyzes the two-electron reduction of various quinones. It catalyzes the conversion of vitamin K to vitamin K hydroquinone for utilization in the post-translational γ-glutamyl carboxylation reactions. These reactions are necessary for several proteins involved in blood coagulation.
Applications	Use the diaphorase activity of NAD(P)H Dehydrogenase (quinone) for the determination of NAD(P)H and many dehydrogenases when coupled with various dyes which act as hydrogen acceptors from NAD(P)H, e.g. tetrazolium salts.
Synonyms	menadione reductase; phylloquinone reductase; quinone reductase; dehydrogenase, reduced nicotinamide adenine dinucleotide (phosphate, quinone); DT-diaphorase; menadione oxidoreductase; NAD (P)H dehydrogenase; NAD (P)H menadione reductase; NAD (P)H-quinone dehydrogenase; NAD (P)H-quinone oxidoreductase; NAD (P)H: (quinone-acceptor)oxidoreductase

Product Information

Species	Porcine
Source	Porcine heart
Appearance	Yellow suspension in ammonium sulfate, 3.2 mol/l
CAS No.	9032-20-6
Activity	>25 U/mg
Concentration	10±1 mg/ml
pH Stability	5.5-6.5

Storage and Shipping Information

Stability	At +2 to +8°C within specification range for 12 months.