Creative Enzymes®

Native Diaphorase (NADPH) from Bacillus megaterium

Cat. No. NATE-1154

Lot. No. (See product label)

Introduction

Description	In enzymology, a NADPH dehydrogenase (EC 1.6.99.1) is an enzyme that catalyzes the chemical reaction: NADPH + H+ + acceptor ↔ NADP+ + reduced acceptor. The 3 substrates of this enzyme are NADPH, H+, and acceptor, whereas its two products are NADP+ and reduced acceptor. This enzyme belongs to the family of oxidoreductases, specifically those acting on NADH or NADPH with other acceptors.
Applications	Useful for enzymatic determination of reduced NADP.
Synonyms	NADPH:acceptor oxidoreductase; NADPH2 diaphorase; NADPH diaphorase; OYE; diaphorase; dihydronicotinamide adenine dinucleotide phosphate dehydrogenase; NADPH-dehydrogenase; NADPH-diaphorase; NADPH2-dehydrogenase; old yellow enzyme; reduced nicotinamide adenine dinucleotide phosphate dehydrogenase; TPNH dehydrogenase; TPNH-diaphorase; triphosphopyridine diaphorase; triphosphopyridine nucleotide diaphorase; NADPH2 dehydrogenase; NADPH: (acceptor) oxidoreductase; NADPH dehydrogenase; EC 1.6.99.1

Product Information

Source	Bacillus megaterium
Appearance	Yellowish amorphous powder, lyophilized
Form	Freeze dried powder
EC Number	EC 1.6.99.1
CAS No.	9001-68-7
Molecular Weight	48 kDa (gel filtration)
Activity	More than 5 U/mg solid
Contaminants	Myokinase < 0.50%
Isoelectric point	3
pH Stability	6.5–9.0
Optimum pH	7.0–9.0
Thermal stability	Stable at 60°C and below
Michaelis Constant	NADPH 2.9 × 10-4M
Activators	FMN, FAD
Unit Definition	One unit is defined as the amount of enzyme which oxidizes 1 μmole of NADPH to NADP+ per minute at 30°C under the conditions specified in the assay procedure.

Storage and Shipping Information

Storage	At least one year at -20°C