

NAD Synthetase from *B. subtilis*, Recombinant

Cat. No. NATE-1244

Lot. No. (See product label)

Introduction

Description In enzymology, a NAD⁺ synthase (EC 6.3.1.5) is an enzyme that catalyzes the chemical reaction: ATP + deamido-NAD⁺ + NH₃ ⇌ AMP + diphosphate + NAD⁺. The 3 substrates of this enzyme are ATP, deamido-NAD⁺, and NH₃, whereas its 3 products are AMP, diphosphate, and NAD⁺. This enzyme belongs to the family of ligases, specifically those forming carbon-nitrogen bonds as acid-D-ammonia (or amine) ligases (amide synthases). This enzyme participates in nicotinate and nicotinamide metabolism and nitrogen metabolism.

Synonyms EC 6.3.1.5; 9032-69-3; NAD⁺ synthetase; NAD⁺ synthase; nicotinamide adenine dinucleotide synthetase; diphosphopyridine nucleotide synthetase

Product Information

Species *B. subtilis*

Source *E. coli*

Form Liquid. In 50mM TRIS-HCl, pH 8, containing 75mM sodium chloride, 5% glycerol and 5mM DTT.

Molecular Weight ~30.4kDa

Purity > 98% (SDS-PAGE)

Activity ~0.3 U/mg protein

Concentration 0.5mg/ml (Lot specific)

Unit Definition One unit is defined as the amount of enzyme that synthesizes 1μmol NAD per min.

Storage and Shipping Information

Storage Store at -20°C. After opening, prepare aliquots and store at -80°C. Avoid freeze/thaw cycles.

Stability Stable for at least 6 months after receipt when stored at -80°C.