Creative Enzymes®

Native Microorganism Purine-nucleoside phosphorylase

Cat. No. DIA-216

Lot. No. (See product label)

Introduction

Description In enzymology, a purine-nucleoside phosphorylase (EC 2.4.2.1) is an enzyme that catalyzes the chemical reaction: purine nucleoside + phosphate ↔ purine + alpha-D-ribose 1-phosphate. Thus, the two substrates of this enzyme are purine nucleoside and phosphate, whereas its two products are purine and alpha-D-ribose 1-phosphate. This enzyme belongs to the family of glycosyltransferases, specifically the pentosyltransferases.

Applications This enzyme is useful for enzymatic determination of inorganic phosphorus, 5'-nucleotidase and adenosine deaminase when coupled with xanthine oxidase and uricase.

Synonyms EC 2.4.2.1; inosine phosphorylase; PNPase; PUNPI; PUNPII; inosine-guanosine phosphorylase; nucleotide phosphatase; purine deoxynucleoside phosphorylase; purine deoxyribonucleoside phosphorylase; purine nucleoside phosphorylase; purine ribonucleoside phosphorylase; purine-nucleoside: phosphate ribosyltransferase

Product Information

Source	Microorganism
Appearance	White amorphous powder, lyophilized
EC Number	EC 2.4.2.1
CAS No.	9030-21-1
Molecular Weight	approx. 120 kDa
Activity	GradeⅢ 15U/mg-solid or more
Contaminants	Catalase < 20% 5'-Nucleosidase < 1.0×10^{-3}% Adenosine deaminase < 1.0×10^{-3}% ATPase < 1.0×10^{-2}%
Isoelectric point	4.1±0.1
pH Stability	pH 6.0-9.0 (30°C, 16hr)
Optimum pH	7.5-8.0
Thermal stability	below 60°C (pH 7.7, 30min)
Optimum temperature	65°C
Michaelis Constant	6.4×10^{-5}M (Inosine), 3.2×10^{-4}M (Pi)
Inhibitors	p-Chloromercuribenzoate, SDS, Hg^{++}, Ag^{+}
Stabilizers	K-Gluconate, mannitol, EDTA

Storage and Shipping Information

Stability	Stable at-20°C for at least 12 months