Creative Enzymes®

Native Microorganisms Pyruvate Oxidase

Cat. No. NATE-0613

Lot. No. (See product label)

Introduction

Description	Pyruvate Oxidase consists of four subunits with identical molecular weights. PoxB reacts with certain aldehydes and phosphate can be replaced by arsenate. Oxygen as well as several artificial compounds can function as electron acceptors. Pyruvate Oxidase is activated by phospholipids as well as monomeric and micellar amphiphiles.
Applications	Pyruvate Oxidase (PoxB) converts pyruvate directly to acetate and CO2. It is used to study pyruvate metabolism. It is used to study aerobic metabolism of bacterium, such as Lactobacillus plantarumand Strept oc occus pneumoniae. Pyruvate Oxidase is used for enzymatic determination of pyruvate, GOT, and GPT in clinical analysis.
Synonyms	pyruvate oxidase; EC 1.2.3.3; pyruvic oxidase; phosphate-dependent pyruvate oxidase; 9001-96-1; Pyruvate:oxygen oxidoreductase (phosphorylating); PoxB

Product Information

Source	Microorganisms
Form	Lyophilized powder containing FAD and sugar as stabilizer
EC Number	EC 1.2.3.3
CAS No.	9001-96-1
Molecular Weight	mol wt ~260 kDa
Activity	> 1.5 units/mg; > 35 units/mg protein (biuret)
Isoelectric point	4.3
pH Stability	pH 5.7-6.5 (25°C, 20hr)
Optimum pH	5.7
Thermal stability	below 45°C (pH 6.0, 15min)
Optimum temperature	65°C
Michaelis Constant	3.4 X 10-4M (Pyruvate)
Inhibitors	Fe++,Zn++,Cu++,Ag+,Hg++
Unit Definition	One unit will produce 1.0 µmole of H2O2 per min during the conversion of pyruvate and phosphate to acetylphosphate and CO2 at pH 5.7 at 37°C.

Storage and Shipping Information

Storage	−20°C