

Pyruvate oxidase preparations without inorganic phosphate

Cat. No. POPGZ-0001

Lot. No. (See product label)

Introduction

Description	A microbial pyruvate oxidase preparation supplied without inorganic phosphate. The enzyme catalyzes the oxidative decarboxylation of pyruvate and is suitable for controlled biochemical reaction systems.
Applications	Biochemical research and pyruvate-dependent enzymatic assays.
Synonyms	Pyruvate oxidase, microorganisms; PoxB; phosphate-dependent pyruvate oxidase

Product Information

Source	Microorganisms
Appearance	Light yellow to yellow solid
Form	Solid
EC Number	1.2.3.3
CAS No.	9001-96-1
Activity	≥35 U/mg protein
Specific Activity	≥35 U/mg protein
Thermal stability	Activity declines after 10 min of incubation at temperatures above 30°C.
Optimum temperature	38°C initial activity optimum in 50 mM phosphate buffer
Specificity	Highest activity toward pyruvate; lower activity has been reported with methylglyoxal and acetaldehyde.
Activators	Thiamine pyrophosphate (TPP) FAD Divalent cation, such as Mn ²⁺
Inhibitors	EDTA, 10 mM: 11% inhibition KCN, 10 mM: 25% inhibition No activity change reported with NaN ₃ (10 mM), iodoacetamide (1 mM), or p-hydroxymercuribenzoate (1 mM).
Buffer	No inorganic phosphate included
Function	Oxidative decarboxylation of pyruvate.
Substrates	Pyruvate; methylglyoxal; acetaldehyde
Quality	Preparation without inorganic phosphate
Reaction	Pyruvate + phosphate + O ₂ → acetyl phosphate + CO ₂ + H ₂ O ₂
Notes	The enzyme is phosphate-dependent even though inorganic phosphate is not included in the supplied preparation. No complete standardized assay protocol or unit definition was provided on the source page.

Usage and Packaging

Package	100 U
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Package

100 U

Preparation Instructions

The preparation does not contain inorganic phosphate. Supply an appropriate phosphate source through the reaction buffer when carrying out the canonical phosphate-dependent pyruvate oxidase reaction.

Storage and Shipping Information

Storage

Store under the conditions specified in the batch certificate of analysis.