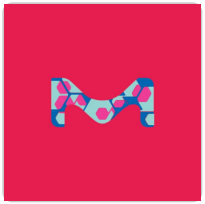

Toutes les photos (1)

Documents

FDS

COO/COA

Fiche des caractéristiques

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P4105 Sigma-Aldrich®

Pyruvate Oxidase from *Aerococcus* sp.

(0)

lyophilized powder, ≥35 units/mg protein (biuret)

Synonyme(s):
Pyruvate: oxygen oxidoreductase (phosphorylating)

Numéro CAS:	9001-96-1	**Numéro de classification (Commission des enzymes):**	1.2.3.3 (BRENDA, IUBMB)
Numéro EC:	232-644-5	**Numéro MDL:**	MFCD00132148
NACRES:	NA.54		

Référence	Conditionnement	Disponibilité		Prix	Quantité
P4105-25UN	25 UNITS	Only 1 left in stock (more on the way)	Détails...	153,00 €	− +
P4105-100UN	100 UNITS	Only 1 left in stock (more on the way)	Détails...	255,00 €	− +

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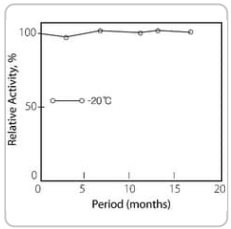
Sigma-Aldrich

550701-M

Pyruvate Oxidase, *Aerococcus viridans*

Native pyruvate oxidase from Aerococcus viridans. Catalyzes the oxidation of pyruvate to acetylphosphate...

Consulter le prix et la disponibilité



Sigma-Aldrich

P4591

Pyruvate Oxidase from microorganisms

lyophilized powder, ≥1.5 U/mg

Consulter le prix et la disponibilité

PROPRIÉTÉS

Source biologique	bacterial (*Aerococcus* spp.)
Niveau de qualité	200
Forme	lyophilized powder
specific activity	≥35 units/mg protein (biuret)
Temp. de stockage	−20°C

Application

Pyruvate Oxidase (PoxB) converts pyruvate directly to acetate and CO_2. It is used to study pyruvate metabolism. It is used to study aerobic metabolism of bacterium, such as *Lactobacillus plantarum*and *Streptococcus pneumoniae*.

Pyruvate Oxidase from *Aerococcus* sp. has been used in the amplex Red-based fluorescence assay for pyruvate. It is suitable for use in the preparation of biosensor for determination of thiamine (vitamin B1), and as a component in the constant part of the multi-enzyme biocatalytic cascade for the determination of biomarkers for traumatic brain injury (TBI) and soft tissue injury (STI).

Actions biochimiques/physiologiques

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.

Pyruvate Oxidase oxidises pyruvate to form acetate, hydrogen peroxide and carbon dioxide. Pyruvate oxidase requires flavin adenine dinucleotide (FAD), thiamine pyrophosphate (TPP) and magnesium as cofactors for its catalytic activity. Thiamine activates pyruvate oxidase activity.

Définition de l'unité

One unit will produce 1.0 µmole of H_2O_2 per min during the conversion of pyruvate and phosphate to acetylphosphate and CO_2 at pH 6.7 at 37 °C.

Forme physique

Lyophilized powder containing buffer salt and sugar

Code de la classe de stockage
11 - Combustible Solids

WGK
WGK 3

Flash Point(F)
Not applicable

Point d'éclair C
Not applicable

Équipement de protection individuelle
Eyeshields, Gloves, type N95 (US)

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)

Rechercher

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

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Plus De Documents

Enzyme Explorer

FDS

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G8255

Glutamic-Pyruvic Transaminase from porcine heart

lyophilized powder, ≥75 units/mg protein

Consulter le prix et la disponibilité

Sigma-Aldrich

P8375

Peroxidase from horseradish

Type VI, essentially salt-free, lyophilized powder, ≥250 units/mg solid (using pyrogallol)

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ARTICLES REVUS PAR DES PAIRS

Activation of pyruvate oxidase by monomeric and micellar amphiphiles.

R Blake et al.
The Journal of biological chemistry, 253(6), 1963-1971 (1978-03-25)

Pyruvate oxidase (EC 1.2.3.3) was isolated and characterized from Lactobacillus plantarum. The enzyme catalyzes the oxidative decarboxylation of pyruvate in the presence of phosphate and oxygen, yielding acetyl phosphate, carbon dioxide, and hydrogen peroxide. This pyruvate oxidase is a flavoprotein

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Multi-enzyme logic network architectures for assessing injuries: digital processing of biomarkers

Halamek J, et al.
Molecular Biosystems, 6(12), 2554-2560 (2010)

Concerted action of lactate oxidase and pyruvate oxidase in aerobic growth of Streptococcus pneumoniae: role of lactate as an energy source.

Hiroaki Taniai et al.
Journal of bacteriology, 190(10), 3572-3579 (2008-03-18)

Streptococcus pneumoniae was shown to possess lactate oxidase in addition to well-documented pyruvate oxidase. The activities of both H(2)O(2)-forming oxidases in wild-type cultures were detectable even in the early exponential phase of growth and attained the highest levels in the

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Physiological role of pyruvate oxidase in the aerobic metabolism of Lactobacillus plantarum.

B Sedewitz et al.
Journal of bacteriology, 160(1), 462-465 (1984-10-01)

Under aerobic growth conditions Lactobacillus plantarum produced acetic acid in addition to lactic acid. It was found that lactic acid was predominantly produced at first, and then when the carbohydrate was nearly exhausted, lactic acid was metabolized further to acetic

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Penicillin – Streptomycin – Neomycin Solution Stabilized

formulated to contain ~5,000 units penicillin, 5 mg streptomycin and 10 mg neomycin/mL, 0.1 µm filtered,...

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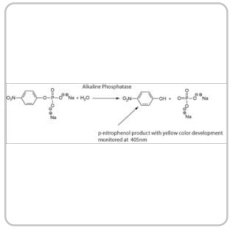

Sigma-Aldrich

P4069

Phosphatase, Alkaline from *Escherichia coli*

buffered aqueous glycerol solution, 20-50 units/mg protein (in glycine buffer)

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Évaluations

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