

## Native Pediococcus sp. Glycerol 3-phosphate Oxidase

Cat. No. NATE-0315

Lot. No. (See product label)

## Introduction

**Description** In enzymology, a glycerol-3-phosphate oxidase (EC 1.1.3.21) is an enzyme that

catalyzes the chemical reaction:sn-glycerol 3-phosphate + O2↔ glycerone phosphate + H2O2. Thus, the two substrates of this enzyme are sn-glycerol 3-phosphate and O2, whereas its two products are glycerone phosphate and H2O2. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with oxygen as acceptor. This enzyme participates in

glycerophospholipid metabolism. It employs one cofactor, FAD.

**Applications** This enzyme is useful for enzymatic determination of triglyceride when coupled

with lipoprotein lipase and glycerokinase in clinical analysis.

**Synonyms** EC 1.1.3.21; glycerol phosphate oxidase; glycerol-1-phosphate oxidase; glycerol

phosphate oxidase; L- $\alpha$ -glycerophosphate oxidase;  $\alpha$ -glycerophosphate oxidase; L- $\alpha$ -glycerol-3-phosphate oxidase; Glycerol 3-phosphate Oxidase; 9046-28-0; sn-Glycerol 3-phosphate:oxygen 2-oxidoreductase; L-Glycerol 3-phosphate Oxidase;

**GPO** 

## **Product Information**

**Source** Pediococcus sp.

**Form** Lyophilized powder containing stabilizers

**EC Number** EC 1.1.3.21

**CAS No.** 9046-28-0

Molecular Weight ~76 kDa (gel filtration)

**Activity** 40-80 units/mg solid

*Isoelectric point* 4.1-/+0.1

**pH Stability** 6.5-8.5 (25°C, 20hr)

*Optimum pH* 35-40°C

**Thermal stability** below 40°C (pH 7.0, 15min)

**Michaelis Constant** 3.2x10-3M (L- $\alpha$ -Glycerophosphate), 6.8 x 10-3M (D, L-form)

*Inhibitors* Ionic detergents (SDS, LBS, etc.), Hg++, Ag+

 Unit Definition
 One unit will oxidize 1.0 μmole of L-glycerol 3-phosphate to dihydroxyacetone

phosphate with the formation of H2O2 per min at 37°C, at the appropriate pH.

## Storage and Shipping Information

**Storage** 2-8°C

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