Creative Enzymes®

Native Streptococcus thermophilus Glycerol 3-phosphate Oxidase

Cat. No. NATE-0316

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	GPO has been used for sensitive metabolite assays of starch and lipid synthesis, pyrophosphate, ATP, ADP, and most glycolytic intermediates in Arabidopsis seeds. GPO is part of the dihydroxyacetone phosphate:glycerol-3-phosphate cycle in the bloodstream form of Trypanosoma brucei.
Synonyms	EC 1.1.3.21; glycerol phosphate oxidase; glycerol-1-phosphate oxidase; glycerol phosphate oxidase; L-α-glycerophosphate oxidase; α-glycerophosphate oxidase; L-α-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	Streptococcus thermophilus
Form	lyophilized powder
EC Number	EC 1.1.3.21
CAS No.	9046-28-0
Activity	> 35 units/mg solid
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 pH 7.0 at 37°C.

Storage and Shipping Information

Storage	−20°C