

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