

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