

Glycerol-3-phosphate oxidase from Microorganism

Product Information

Cat#	DIA-200
Abbr	L- α -glycerophosphate oxidase (Microorganism)
Similar	Glycerol-3-phosphate oxidase
Source	Microorganism
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 + O ₂ \leftrightarrow glycerone phosphate + H ₂ O ₂ . Thus, the two substrates of this enzyme are sn-glycerol 3-phosphate and O ₂ , whereas its two products are glycerone phosphate and H ₂ O ₂ . 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.
Appearance	Yellowish amorphous powder, lyophilized
Form	Freeze dried powder
Enzyme Commission Number	EC 1.1.3.21
Activity	15 U/mg-solid or more (containing approx. 60% of stabilizers)
CAS No.	9046-28-0
Contaminants	Lactate oxidase < 2.0 \times 10 ⁻⁴ % Phosphatase < 1.0 \times 10 ⁻³ %
Isoelectric point	4.6 \pm 0.1
pH Stability	5.0-7.5 (25°C, 60min)
Michaelis Constant	2.3 \times 10 ⁻³ M (L- α -Glycerophosphate)
Optimum pH	6.5-7.0

Glycerol-3-phosphate oxidase from Microorganism

Optimum temperature	40°C
Thermal stability	below 45°C (pH 6.5, 10min)
Stability	Stable at -20°C for at least 6 months
Stabilizers	Sucrose, FAD
Inhibitors	SH-reagents, ionic detergents, metal ions, etc.
Synonyms	L- α -glycerophosphate oxidase; sn-glycerol-3-phosphate: oxygen 2-oxidoreductase; glycerol phosphate oxidase; glycerol-1-phosphate oxidase; glycerol phosphate oxidase; L-alpha-glycerophosphate oxidase; alpha-glycerophosphate oxidase; L-alpha-glycerol-3-phosphate oxidase; EC 1.1.3.21