

## Glycerol-3-phosphate oxidase from Microorganism

### Product Information

<b>Cat#</b>	DIA-200
<b>Abbr</b>	L- $\alpha$ -glycerophosphate oxidase (Microorganism)
<b>Similar</b>	Glycerol-3-phosphate oxidase
<b>Source</b>	Microorganism
<b>Description</b>	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 <sub>2</sub> $\leftrightarrow$ glycerone phosphate + H <sub>2</sub> O <sub>2</sub> . Thus, the two substrates of this enzyme are sn-glycerol 3-phosphate and O <sub>2</sub> , whereas its two products are glycerone phosphate and H <sub>2</sub> O <sub>2</sub> . 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.
<b>Applications</b>	This enzyme is useful for enzymatic determination of triglyceride when coupled with lipoprotein lipase and glycerokinase in clinical analysis.
<b>Appearance</b>	Yellowish amorphous powder, lyophilized
<b>Form</b>	Freeze dried powder
<b>Enzyme Commission Number</b>	EC 1.1.3.21
<b>Activity</b>	15 U/mg-solid or more (containing approx. 60% of stabilizers)
<b>CAS No.</b>	9046-28-0
<b>Contaminants</b>	Lactate oxidase < 2.0 $\times$ 10 <sup>-4</sup> %   Phosphatase < 1.0 $\times$ 10 <sup>-3</sup> %
<b>Isoelectric point</b>	4.6 $\pm$ 0.1
<b>pH Stability</b>	5.0-7.5 (25°C, 60min)
<b>Michaelis Constant</b>	2.3 $\times$ 10 <sup>-3</sup> M (L- $\alpha$ -Glycerophosphate)
<b>Optimum pH</b>	6.5-7.0

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**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- $\alpha$ -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