

Bilirubin Oxidase

Bilirubin is a class of linear tetrapyrrole derivatives and is one of the metabolites of iron porphyrin compounds in the human body. Bilirubin oxidase is a commonly used tool enzyme that catalyzes the oxidation of bilirubin to produce biliverdin, which is used in clinical diagnostics to determine serum bilirubin and total bilirubin levels.

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Product Overview

- Description

In enzymology, a bilirubin oxidase (EC 1.3.3.5) is an enzyme that catalyzes the chemical reaction: $2\text{bilirubin} + \text{O}_2 \rightarrow 2\text{biliverdin} + 2\text{H}_2\text{O}$. Thus, the two substrates of this enzyme are bilirubin and O_2 , whereas its two products are biliverdin and H_2O . This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-CH group of donor and with oxygen as acceptor.

- Product Information

Product Name	Bilirubin oxidase from Microorganism
Cat No.	NATE-1713
EC No.	EC 1.3.3.5
CAS No.	80619-01-8
Source	Microorganism
Form	Blue powder, lyophilized
Activity	>500 U/mg or >20 U/mg
Storage	Store at -20°C
Michaelis Constant	1.2×10-4 M (Bilirubin, pH 8.0)
pH Stability	7.5
Optimum temperature	37°C
Thermal stability	< 50°C (pH 7.0, 30 min)

- Application

Various liver diseases can cause bilirubin metabolic disorders. Increasing bilirubin will lead to the appearance of jaundice. Therefore, bilirubin concentration is an important indicator of liver function. Bilirubin oxidase can be used in clinical diagnosis for jaundice disease and is expected to be used for neonatal jaundice and hyperbilirubinemia treatment.

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