

Native *Alcaligenes* sp. Choline Oxidase

Cat. No. DIA-184

Lot. No. (See product label)

Introduction

Description In enzymology, a choline oxidase (EC 1.1.3.17) is an enzyme that catalyzes the chemical reaction: choline + O₂ ⇌ betaine aldehyde + H₂O₂. Thus, the two substrates of this enzyme are choline and O₂, whereas its two products are betaine aldehyde and H₂O₂. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with oxygen as acceptor.

Applications This enzyme is useful for enzymatic determination of phospholipids when coupled with phospholipase D and for choline esterase-activity in clinical analysis.

Synonyms choline oxidase; EC 1.1.3.17

Product Information

Source	Alcaligenes sp.
Appearance	Yellowish amorphous powder, lyophilized
Form	Freeze dried powder
EC Number	EC 1.1.3.17
CAS No.	9028-67-5
Molecular Weight	approx. 95 kDa
Activity	Grade III 10U/mg-solid or more (containing approx. 20% of stabilizers)
Contaminants	Catalase < 1.0×10 ² %
Isoelectric point	4.1±0.1
pH Stability	pH 7.0-9.0 (30°C, 2 hr)
Optimum pH	8.0-8.5
Thermal stability	below 37°C (pH 7.5, 10min)
Optimum temperature	40-45°C
Michaelis Constant	2.84×10 ⁻³ M (Choline), 5.33×10 ⁻³ M (Betaine aldehyde)
Structure	One mol of FAD is covalently bound to mol of the enzyme
Inhibitors	p-Chloromercuribenzoate, Cu ⁺⁺ , Co ⁺⁺ , Hg ⁺⁺ , Ag ⁺
Stabilizers	EDTA, bovine serum albumin, amino acids (glycine, sodium glutamate, etc.)

Storage and Shipping Information

Stability Stable at -20°C for at least 6 months

Stability

Stable at 20 °C for at least 6 months