Creative Enzymes®

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	GradeIII 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 gluta-mate, etc.)

Storage and Shipping Information

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