

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 Gradelll 10U/mg-solid or more (containing approx. 20% of stabilizers)

Contaminants Catalase < 1.0×10²%

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 2.84×10⁻³M (Choline), 5.33×10⁻³M (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

