

## Native Alcaligenes sp. Choline Oxidase

### Product Information

<b>Cat#</b>	DIA-184
<b>Similar</b>	Choline Oxidase
<b>Source</b>	Alcaligenes sp.
<b>Description</b>	In enzymology, a choline oxidase (EC 1.1.3.17) is an enzyme that catalyzes the chemical reaction: choline + O <sub>2</sub> → betaine aldehyde + H <sub>2</sub> O <sub>2</sub> . Thus, the two substrates of this enzyme are choline and O <sub>2</sub> , whereas its two products are betaine aldehyde 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.
<b>Form</b>	Freeze dried powder
<b>Activity</b>	Gradelll 10U/mg-solid or more (containing approx. 20% of stabilizers)
<b>CAS No.</b>	9028-67-5
<b>Isoelectric point</b>	4.1±0.1
<b>Synonyms</b>	choline oxidase; EC 1.1.3.17
<b>Enzyme Commission Number</b>	EC 1.1.3.17
<b>pH Stability</b>	pH 7.0-9.0 (30°C, 2 hr)
<b>Michaelis Constant</b>	2.84×10 <sup>-3</sup> M (Choline), 5.33×10 <sup>-3</sup> M(Betaine aldehyde)
<b>Optimum pH</b>	8.0-8.5
<b>Optimum temperature</b>	40-45°C
<b>Thermal stability</b>	below 37°C (pH 7.5, 10min)
<b>Stability</b>	Stable at-20°C for at least 6 months
<b>Stabilizers</b>	EDTA, bovine serum albumin, amino acids (glycine, sodium glutamate, etc.)



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<b>Inhibitors</b>	p-Chloromercuribenzoate, Cu <sup>++</sup> , Co <sup>++</sup> , Hg <sup>++</sup> , Ag <sup>+</sup>
<b>Contaminants</b>	Catalase < 1.0×10 <sup>2</sup> %
<b>Abbr</b>	Choline Oxidase ( <i>Alcaligenes</i> sp.)
<b>Applications</b>	This enzyme is useful for enzymatic determination of phospholipids when coupled with phospholipase D and for choline esterase-activity in clinical analysis.
<b>Appearance</b>	Yellowish amorphous powder, lyophilized
<b>Structure</b>	One mol of FAD is covalently bound to mol of the enzyme
<b>Molecular Weight</b>	approx. 95 kDa