

Native *Hansenula* sp. Alcohol Oxidase

Product Information

Cat#	NATE-0046
Abbr	Alcohol Oxidase, Native (<i>Hansenula</i> sp.)
Alias	alcohol oxidase; ethanol oxidase
Similar	Alcohol Oxidase
Source	<i>Hansenula</i> sp.
Description	In enzymology, an alcohol oxidase (EC 1.1.3.13) is an enzyme that catalyzes the chemical reaction: a primary alcohol + O ₂ ↔ an aldehyde + H ₂ O ₂ . Thus, the two substrates of this enzyme are primary alcohol and O ₂ , whereas its two products are aldehyde and H ₂ O ₂ . This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with oxygen as acceptor. It employs one cofactor, FAD.
Applications	Alcohol oxidase is used to catalyze the oxidation of short-chain, primary, aliphatic alcohols to their respective aldehydes. It may be used to study methanol metabolism in yeasts, such as <i>Candida</i> , <i>Pichia</i> , and <i>Hansenula</i> . It is useful to study protein translocation into peroxisomes.
Form	vacuum-dried powder
Enzyme Commission Number	EC 1.1.3.13
Activity	> 0.6 units/mg solid
CAS No.	9073-63-6
Molecular Weight	~600 kDa
pH Stability	pH Range: 5.5-8.5
Unit Definition	One unit will oxidize 1.0 μmole of methanol to formaldehyde per min at pH 7.5 at 25°C.
Optimum pH	8.5

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Stability	-20°C
Inhibitors	1,4-butyne diol (irreversible), propargyl alcohol (irreversible), cyclopropanol, cyclopropanone (suicide substrate), formaldehyde, H ₂ O ₂ , hydroxylamine, KBr, KCN, methanol (substrate inhibitor), NaN ₃ , PCMB, propynal, urea, 4-chloromercuribenzoic acid
Synonyms	EC 1.1.3.13; 9073-63-6; alcohol oxidase; ethanol oxidase; Alcohol:oxygen oxidoreductase