Creative Enzymes®

Native Hansenula sp. Alcohol Oxidase

Cat. No. NATE-0046

Lot. No. (See product label)

Introduction

Description	In enzymology, an alcohol oxidase (EC 1.1.3.13) is an enzyme that catalyzes the chemical reaction:a primary alcohol + O2↔ an aldehyde + H2O2. Thus, the two substrates of this enzyme are primary alcohol and O2, whereas its two products are 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. 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 is yeasts, such as Candida, Pichia, and Hansenula. It is useful to study protein translocation into peroxisomes.
Synonyms	EC 1.1.3.13; 9073-63-6; alcohol oxidase; ethanol oxidase; Alcohol:oxygen oxidoreductase

Product Information

Source	Hansenula sp.
Form	vacuum-dried powder
EC Number	EC 1.1.3.13
CAS No.	9073-63-6
Molecular Weight	~600 kDa
Activity	> 0.6 units/mg solid
pH Stability	pH Range: 5.5-8.5
Optimum pH	8.5
Inhibitors	1,4-butynediol (irreversible), propargyl alcohol (irreversible), cyclopropanol, cyclopropanone (suicide substrate), formaldehyde, H2O2, hydroxylamine, KBr, KCN, methanol (substrate inhibitor), NaN3, PCMB, propynal, urea, 4-chloromercuribenzoic acid
Unit Definition	One unit will oxidize 1.0 μmole of methanol to formaldehyde per min at pH 7.5 at 25°C.

Storage and Shipping Information

Stability	−20°C