

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 in 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-butanediol (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