

Native Microbial Xanthine Oxidase

Cat. No. NATE-0733

Lot. No. (See product label)

Introduction

Description

Xanthine oxidase is a molybdenum-containing enzyme that is found in the cytosol, and may be strongly inhibited by flavonoids. It plays a vital role in the metabolism of some drugs, as well as purines and pyrimidines. It is also known to be a biological source of reactive oxygen species. Xanthine oxidase was shown to be involved in the reduction of cytochrome c by the generation of superoxide anions following the oxidation of xanthine. These free radicals are responsible for reducing cytochrome c.

Applications

This enzyme is useful for enzymatic determination of inorganic phosphorus, 5'-nucleotidase and adenosine deaminase when coupled with Purine-nucleoside phosphorylase and uricase.

Synonyms

Xanthine oxidase; XO; xanthine oxidoreductase; EC 1.17.3.2; 9002-17-9; XOD; Xanthine:oxygen oxidoreductase; hypoxanthine oxidase; hypoxanthine:oxygen oxidoreductase; Schardinger enzyme; hypoxanthine-xanthine oxidase; xanthine:O₂ oxidoreductase; xanthine:xanthine oxidase

Product Information

Source

Microbial

Form

Lyophilized powder containing BSA and sodium glutamate as stabilizers

EC Number

EC 1.17.3.2.

CAS No.

9002-17-9

Molecular Weight

mol wt ~160 kDa

Activity

> 7 units/mg solid

pH Stability

pH 6.5-9.0 (25°C, 15hr)

Optimum pH

7.5-8.0

Thermal stability

below 55°C (pH 8.0, 30min)

Optimum temperature

65°C

Inhibitors

Reducing agents, Hg⁺⁺, Ag⁺, MIA

Unit Definition

One unit will convert 1.0 μmole of xanthine to uric acid per min at pH 7.5 at 25°C. Approx. 50% of the activity is obtained with hypoxanthine as substrate.

Storage and Shipping Information

Storage

-20°C