

Native Microorganism Xanthine oxidase

Cat. No. DIA-218

Lot. No. (See product label)

Introduction

Description

Xanthine oxidase is a form of xanthine oxidoreductase, a type of enzyme that generates reactive oxygen species. These enzymes catalyze the oxidation of hypoxanthine to xanthine and can further catalyze the oxidation of xanthine to uric acid. These enzymes play an important role in the catabolism of purines in some species, including humans.

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

EC 1.1.3.22; Xanthine oxidase; XO; XAO

Product Information

Source

Microorganism

Appearance

Reddish brown amorphous powder, lyophilized

EC Number

EC 1.1.3.22

CAS No.

9054-84-6

Molecular Weight

approx. 160 kDa

Activity

Gradell 10U/mg-solid or more

Contaminants

Catalase < 5% Adenosine deaminase < $1.0 \times 10^{-3}\%$ Uricase < $1.0 \times 10^{-3}\%$
Phosphatase < $1.0 \times 10^{-3}\%$ Purine-nucleoside phosphorylase < $5.0 \times 10^{-3}\%$

Isoelectric point

4.0±0.1

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

Michaelis Constant

$4.5 \times 10^{-5}\text{M}$ (Xanthine), $7.6 \times 10^{-5}\text{M}$ (Hypoxanthine)

Inhibitors

Reducing agents, Hg^{++} , Ag^+ , MIA

Stabilizers

Sodium glutamate, BSA

Storage and Shipping Information

Stability

Stable at -20°C for at least year