

## 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**  $4.0 \pm 0.1$

**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,  $\text{Hg}^{++}$ ,  $\text{Ag}^+$ , MIA

**Stabilizers** Sodium glutamate, BSA

### Storage and Shipping Information

**Stability** Stable at -20°C for at least year