

## Native Cucurbita sp. L-ascorbate oxidase

Cat. No. DIA-124

Lot. No. (See product label)

### Introduction

#### Description

In enzymology, a L-ascorbate oxidase (EC 1.10.3.3) is an enzyme that catalyzes the chemical reaction  $2 \text{ L-ascorbate} + \text{O}_2 \leftrightarrow 2 \text{ dehydroascorbate} + 2 \text{ H}_2\text{O}$ . Thus, the two substrates of this enzyme are L-ascorbate and  $\text{O}_2$ , whereas its two products are dehydroascorbate and  $\text{H}_2\text{O}$ .

#### Applications

This enzyme is useful for enzymatic determination of ascorbic acid and for eliminating the interference of ascorbic acid in clinical analysis.

#### Synonyms

ascorbase; ascorbic acid oxidase; ascorbate oxidase; ascorbic oxidase; ascorbate dehydrogenase; L-ascorbic acid oxidase; AAO; L-ascorbate:  $\text{O}_2$  oxidoreductase; AA oxidase; EC 1.10.3.3; 9029-44-1; L-ascorbate oxidase

### Product Information

#### Source

Cucurbita sp.

#### Appearance

Light blue amorphous powder, lyophilized

#### Form

Light blue lyophilized powder.

#### EC Number

EC 1.10.3.3

#### CAS No.

9029-44-1

#### Activity

40U/mg

#### Contaminants

Catalase  $< 1.0 \times 10^{-1} \%$  Phosphatase  $< 2.0 \times 10^{-2} \%$

#### pH Stability

pH 6.0-10.0 (25°C, 20hr)

#### Optimum pH

6

#### Thermal stability

below 45°C (pH 7.0, 30min)

#### Michaelis Constant

$3.0 \times 10^{-4} \text{M}$  (Ascorbate)

#### Specificity

The enzyme oxidizes ascorbic acid and several ascorbic acid derivatives.

#### Inhibitors

cyanide,  $\text{Na}_2\text{S}$ , diethyldithiocarbamate (Na)

#### Unit Definition

One unit causes the decrease of one micromole of ascorbic acid per minute under the conditions described below.

### Storage and Shipping Information

#### Storage

Store in tightly closed containers, desiccated, protected from light, at -20°C.

#### Stability

Stable at -20°C for at least one year