

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 O_2 , whereas its two products are dehydroascorbate and H_2O .

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: 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 < 1.0×10^{-1} % Phosphatase < 2.0×10^{-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 3.0×10^{-4} M (Ascorbate)

Specificity The enzyme oxidizes ascorbic acid and several ascorbic acid derivatives.

Inhibitors cyanide, Na_2S , 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