Creative Enzymes®

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 reaction2 L-ascorbate + O2 ↔ 2 dehydroascorbate + 2 H2O. Thus, the two substrates of this enzyme are L-ascorbate and O2, whereas its two products are dehydroascorbate and H2O.
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: O2 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	3.0×10-4M(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