Creative Enzymes®

Oxalate Decarboxylase from Bacillus subtilis, recombinant

Cat. No. NATE-1688

Lot. No. (See product label)

Introduction

Description	Oxalate decarboxylase (OxdC, EC4.1.1.2) is a manganese-containing enzyme, which decomposes oxalic acid and oxalate. With OxdC catalysis, oxalate is split into formate and CO2. This enzyme belongs to the family of lyases, specifically the carboxy-lyases, which cleave carbon-carbon bonds. The systematic name of this enzyme class is oxalate carboxy-lyase (formate-forming). This enzyme is also called oxalate carboxy-lyase. The enzyme is composed of two cupin domains, each of which contains a Mn (II) ion. This enzyme participates in glyoxylate and dicarboxylate metabolism. This enzyme has been recognized for diagnostics in diverse biotechnological applications such as the clinical assay of oxalate in blood and urine, therapeutics, process industry, and agriculture to lower oxalate levels in foods and the environment. The recombinant protein made from the Bacillus Subtilis sequence includes OxdC with N-terminal His-tag.
Synonyms	Oxalate carboxy-lyase; EC 4.1.1.2; Oxalate decarboxylase; OxdC

Product Information

Species	Bacillus subtilis
Source	E. coli
Form	Liquid
Formulation	In 50 mM NaOAC, pH 5.5. The activation was stopped by addition of 10 mM MMTS, which can be removed under reducing conditions.
EC Number	EC 4.1.1.2
CAS No.	9024-97-9
Molecular Weight	45.9 kDa
Purity	> 98% by SDS-PAGE
Activity	150U/mg
Concentration	2 mg/mL
Unit Definition	One unit is the amount of enzyme that generates 1.0 μmole of NADH at 37°C. Specific activity was expressed as U/mg protein.

Storage and Shipping Information

Storage	Stable for 1 year at -20°C. For long term storage, aliquot and store at -70°C. Avoid repeated freezing and thawing cycles.