Creative Enzymes®

Native Leuconostoc mesenteroides Dextran Sucrase

Cat. No. NATE-0669

Lot. No. (See product label)

Introduction

Description	Dextransucrases are glucansucrases that are able to produce dextran, a glucose polymer linked mainly through α1-6 bonds. However, α1-3, α1-6, α1-4 and α1-2 bonds are also found, in both the main chain and the branching linkages. The peptide has approximately 1600 amino acids. The aspartic acid in position 551 is essential for catalytic activity, while glutamic acid 589 and aspartic acid 662 complement the catalytic triad. The activity of dextransucrase is decreased by EDTA, and is restored by the addition of calcium ions. Zinc, cadmium, lead, mercury and copper ions are inhibitory to various degrees.
Applications	Dextran sucrase from Leuconostoc mesenteroides has been used in a study to investigate the functional and structural characterization of α-(1→2) branching sucrase derived from DSR-E glucansucrase. Dextran sucrase from Leuconostoc mesenteroides has also been used in a study to investigate the bioengineering of Leuconostoc mesenteroides glucansucrases. The enzyme from Creative Enzymes has been used to prepare immobilized sphere for the production of dextran from sucrose.
Synonyms	EC 2.4.1.5, sucrose 6-glucosyltransferase; SGE; CEP; sucrose-1,6-α-glucan glucosyltransferase; sucrose:1,6-α-D-glucan 6-α-D-glucosyltransferase; 9032-14-8

Product Information

Source	Leuconostoc mesenteroides
Form	Lyophilized powder containing dextran, MES buffer salts and CaCl2
EC Number	EC 2.4.1.5
CAS No.	9032-14-8
Activity	> 100 units/mg protein
Buffer	H2O: soluble 0.9-1.1 mg/mL, clear to slightly hazy, colorless to light yellow
Unit Definition	One unit will liberate 1.0 μmole of fructose per min at 37°C, pH 5.4.

Storage and Shipping Information

Storage	−20°C