

## Native *Leuconostoc mesenteroides* Dextran Sucrase

Cat. No. NATE-0669

Lot. No. (See product label)

### Introduction

**Description** Dextranases are glucanases that are able to produce dextran, a glucose polymer linked mainly through  $\alpha$ 1-6 bonds. However,  $\alpha$ 1-3,  $\alpha$ 1-6,  $\alpha$ 1-4 and  $\alpha$ 1-2 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 dextranase 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  $\alpha$ -(1 $\rightarrow$ 2) branching sucrase derived from DSR-E glucanase. Dextran sucrase from *Leuconostoc mesenteroides* has also been used in a study to investigate the bioengineering of *Leuconostoc mesenteroides* glucanases. 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- $\alpha$ -glucan glucosyltransferase; sucrose:1,6- $\alpha$ -D-glucan 6- $\alpha$ -D-glucosyltransferase; 9032-14-8

### Product Information

**Source** *Leuconostoc mesenteroides*

**Form** Lyophilized powder containing dextran, MES buffer salts and CaCl<sub>2</sub>

**EC Number** EC 2.4.1.5

**CAS No.** 9032-14-8

**Activity** > 100 units/mg protein

**Buffer** H<sub>2</sub>O: soluble 0.9-1.1 mg/mL, clear to slightly hazy, colorless to light yellow

**Unit Definition** One unit will liberate 1.0  $\mu$ mole of fructose per min at 37°C, pH 5.4.

### Storage and Shipping Information

**Storage** -20°C