

## sucrose-1,6- $\alpha$ -glucan 3(6)- $\alpha$ -glucosyltransferase

Cat. No. EXWM-2350

Lot. No. (See product label)

### Introduction

**Description** The enzyme was characterized from the dental caries bacterium *Streptococcus mutans*. It transfers glucosyl residues from sucrose to either the 6- or the 3-positions of glucose residues in glucans, producing a highly-branched extracellular D-glucan polymers that promote attachment of the bacteria to teeth. Three types of the enzyme have been described; the insoluble polymers produced by GTF-I and GTF-SI contain 85%  $\alpha(1\rightarrow3)$  bonds and 15%  $\alpha(1\rightarrow6)$  bonds, while the soluble polymers produced by GTF-S contain only 30% of  $\alpha(1\rightarrow3)$  bonds and 70%  $\alpha(1\rightarrow6)$  bonds. cf. EC 2.4.1.5, dextranucrase.

**Synonyms** water-soluble-glucan synthase (misleading); GTF-I; GTF-S; GTF-SI; sucrose-1,6- $\alpha$ -glucan 3(6)- $\alpha$ -glucosyltransferase; sucrose:1,6- $\alpha$ -D-glucan 3- $\alpha$ - and 6- $\alpha$ -glucosyltransferase; sucrose:1,6-, 1,3- $\alpha$ -D-glucan 3- $\alpha$ - and 6- $\alpha$ -D-glucosyltransferase; sucrose:1,6- $\alpha$ -D-glucan 3(6)- $\alpha$ -D-glucosyltransferase; gtfB (gene name); gtfC (gene name); gtfD (gene name)

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 2.4.1.125

**CAS No.** 81725-87-3

**Reaction** (1) sucrose + [(1 $\rightarrow$ 6)- $\alpha$ -D-glucosyl] $_n$  = D-fructose + [(1 $\rightarrow$ 6)- $\alpha$ -D-glucosyl] $_{n+1}$ ; (2) sucrose + [(1 $\rightarrow$ 6)- $\alpha$ -D-glucosyl] $_n$  = D-fructose + (1 $\rightarrow$ 3)- $\alpha$ -D-glucosyl[(1 $\rightarrow$ 6)- $\alpha$ -D-glucosyl] $_n$

**Notes** This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

### Storage and Shipping Information

**Storage** Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.