

## Trehalose-6-phosphate hydrolase from Escherichia coli, Recombinant

Cat. No. NATE-1231

Lot. No. (See product label)

### Introduction

**Description** In enzymology, an alpha,alpha-phosphotrehalase (EC 3.2.1.93) is an enzyme that catalyzes the chemical reaction: alpha,alpha-trehalose 6-phosphate + H<sub>2</sub>O ↔ D-glucose + D-glucose 6-phosphate. Thus, the two substrates of this enzyme are alpha,alpha'-trehalose 6-phosphate and H<sub>2</sub>O, whereas its two products are D-glucose and D-glucose 6-phosphate. This enzyme belongs to the family of hydrolases, specifically those glycosidases that hydrolyse O- and S-glycosyl compounds. This enzyme participates in starch and sucrose metabolism.

**Synonyms** α,α-Trehalose-6-phosphate phosphoglucohydrolase; α,α-phosphotrehalase; phosphotrehalase; alpha,alpha-trehalose-6-phosphate phosphoglucohydrolase; alpha,alpha-phosphotrehalase

### Product Information

**Source** Escherichia coli str. K-12 substr. W3110

**Form** Supplied in 3.2 M ammonium sulphate

**EC Number** EC 3.2.1.93

**CAS No.** 54576-93-1

**Molecular Weight** 67657.8 Da

**Purity** >95 % as judged by SDS-PAGE

**Activity** 252.4 U/mg

**Concentration** 3472.9 U/ml

**Optimum pH** ~ 6.0

**Optimum temperature** > 37°C

**Unit Definition** One unit is defined as the amount of enzyme required to release 1μmol of pNP per minute from pNP-α-D-glucopyranoside (5 mM) in 50 mM sodium acetate buffer, pH 6.0, containing 1 mg/mL BSA and 1 M sodium chloride, at 37 °C, and using an extinction coefficient of 18000 M<sup>-1</sup>cm<sup>-1</sup>. The enzyme should be diluted in 1 mg/mL BSA.

### Usage and Packaging

**Preparation Instructions** Agitate vial sufficiently to fully homogenise enzyme precipitate before use.

### Storage and Shipping Information

**Storage** Store at 4°C (shipped at room temperature)