

Trehalose-6-phosphate hydrolase from *Bacillus subtilis*, Recombinant

Cat. No. NATE-1230

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 + H₂O ↔ D-glucose + D-glucose 6-phosphate. Thus, the two substrates of this enzyme are alpha,alpha'-trehalose 6-phosphate and H₂O, 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

Bacillus subtilis subsp. *subtilis* str. 168

Form

Supplied in 3.2 M ammonium sulphate

EC Number

EC 3.2.1.93

CAS No.

54576-93-1

Molecular Weight

68727.7 Da

Purity

>95 % as judged by SDS-PAGE

Activity

78.3 U/mg

Concentration

556.3 U/ml

Optimum pH

~ 6.0

Optimum temperature

> 37°C

Unit Definition

One unit is defined as the amount of enzyme required to release 1 μmol 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⁻¹cm⁻¹. 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)